

Texas Register

Volume 18, Number 46, June 15, 1993

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Texas Register



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How to Use the Texas Register

Information Available: The 10 sections of the *Texas Register* represent various facets of state government. Documents contained within them include:

Governor - Appointments, executive orders, and proclamations.

Attorney General - summaries of requests for opinions, opinions, and open records decisions.

Secretary of State - opinions based on the election laws.

Texas Ethics Commission - summaries of requests for opinions and opinions.

Emergency Sections - sections adopted by state agencies on an emergency basis.

Proposed Sections - sections proposed for adoption.

Withdrawn Sections - sections withdrawn by state agencies from consideration for adoption, or automatically withdrawn by the Texas Register six months after the proposal publication date.

Adopted Sections - sections adopted following a 30-day public comment period.

Open Meetings - notices of open meetings.

In Addition - miscellaneous information required to be published by statute or provided as a public service.

Specific explanation on the contents of each section can be found on the beginning page of the section. The division also publishes cumulative quarterly and annual indexes to aid in researching material published.

How to Cite: Material published in the *Texas Register* is referenced by citing the volume in which the document appears, the words "TexReg" and the beginning page number on which that document was published. For example, a document published on page 2402 of Volume 18 (1993) is cited as follows: 18 TexReg 2402.

In order that readers may cite material more easily, page numbers are now written as citations. Example: on page 2 in the lower-left hand corner of the page, would be written "18 TexReg 2 issue date," while on the opposite page, page 3, in the lower right-hand corner, would be written "issue date 18 TexReg 3."

How to Research: The public is invited to research rules and information of interest between 8 a.m. and 5 p.m. weekdays at the *Texas Register* office, Room 245, James Earl Rudder Building, 1019 Brazos, Austin. Material can be found using *Texas Register* indexes, the *Texas Administrative Code*, section numbers, or TRD number.

Texas Administrative Code

The *Texas Administrative Code (TAC)* is the official compilation of all final state agency rules published in the *Texas Register*. Following its effective date, a rule is entered into the *Texas Administrative Code*. Emergency rules, which may be adopted by an agency on an interim basis, are not codified within the *TAC*. West Publishing Company, the official publisher of the *TAC*, releases cumulative supplements to each printed volume of the *TAC* twice each year.

The *TAC* volumes are arranged into Titles (using Arabic numerals) and Parts (using Roman numerals).

Act of the Secretary of State does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment or the provision of services.

The Titles are broad subject categories into which the agencies are grouped as a matter of convenience. Each Part represents an individual state agency. The *Official TAC* also is available on WESTLAW, West's computerized legal research service, in the TX-ADC database.

To purchase printed volumes of the *TAC* or to inquire about WESTLAW access to the *TAC* call West: 1-800-328-9352.

The Titles of the *TAC*, and their respective Title numbers are:

1. Administration
4. Agriculture
7. Banking and Securities
10. Community Development
13. Cultural Resources
16. Economic Regulation
19. Education
22. Examining Boards
25. Health Services
28. Insurance
31. Natural Resources and Conservation
34. Public Finance
37. Public Safety and Corrections
40. Social Services and Assistance
43. Transportation

How to Cite: Under the *TAC* scheme, each section is designated by a *TAC* number. For example in the citation 1 TAC §27.15:

1 indicates the title under which the agency appears in the *Texas Administrative Code*; *TAC* stands for the *Texas Administrative Code*; §27.15 is the section number of the rule (27 indicates that the section is under Chapter 27 of Title 1; 15 represents the individual section within the chapter).

How to update: To find out if a rule has changed since the publication of the current supplement to the *Texas Administrative Code*, please look at the *Table of TAC Titles Affected*. The table is published cumulatively in the blue-cover quarterly indexes to the *Texas Register* (January 22, April 16, July 13, and October 12, 1993). In its second issue each month the *Texas Register* contains a cumulative *Table of TAC Titles Affected* for the preceding month. If a rule has changed during the time period covered by the table, the rule's *TAC* number will be printed with one or more *Texas Register* page numbers, as shown in the following example.

TITLE 40. SOCIAL SERVICES AND ASSISTANCE
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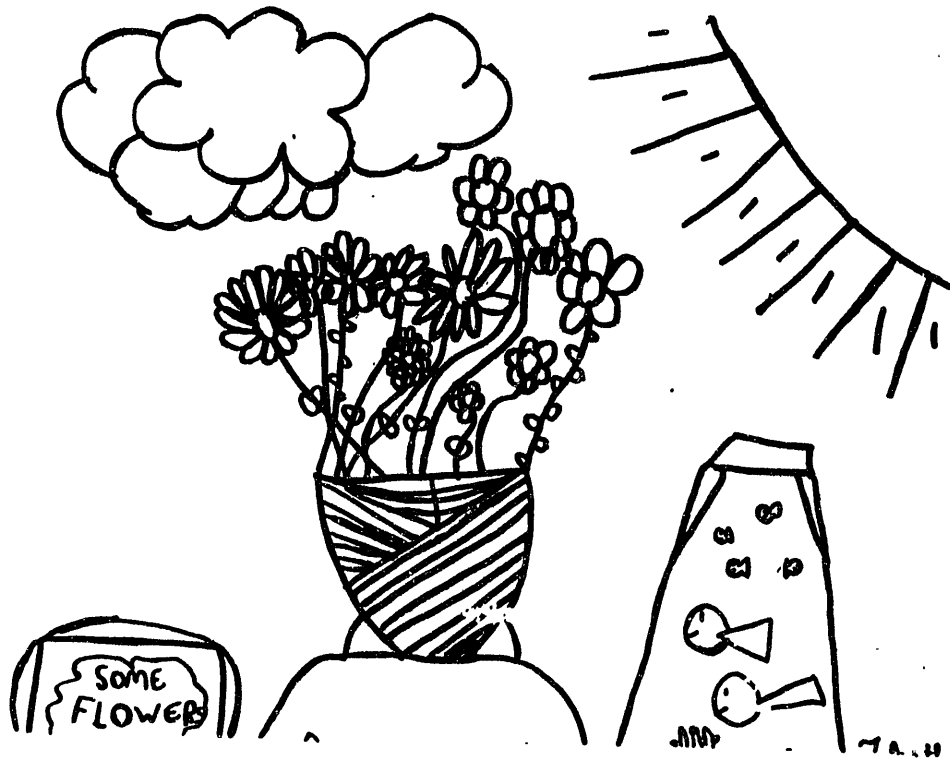
The *Table of TAC Titles Affected* is cumulative for each volume of the *Texas Register* (calendar year).

Update by FAX: An up-to-date *Table of TAC Titles Affected* is available by FAX upon request. Please specify the state agency and the *TAC* number(s) you wish to update. This service is free to *Texas Register* subscribers. Please have your subscription number ready when you make your request. For non-subscribers there will be a fee of \$2.00 per page (VISA, MasterCard). (512) 463-5561.

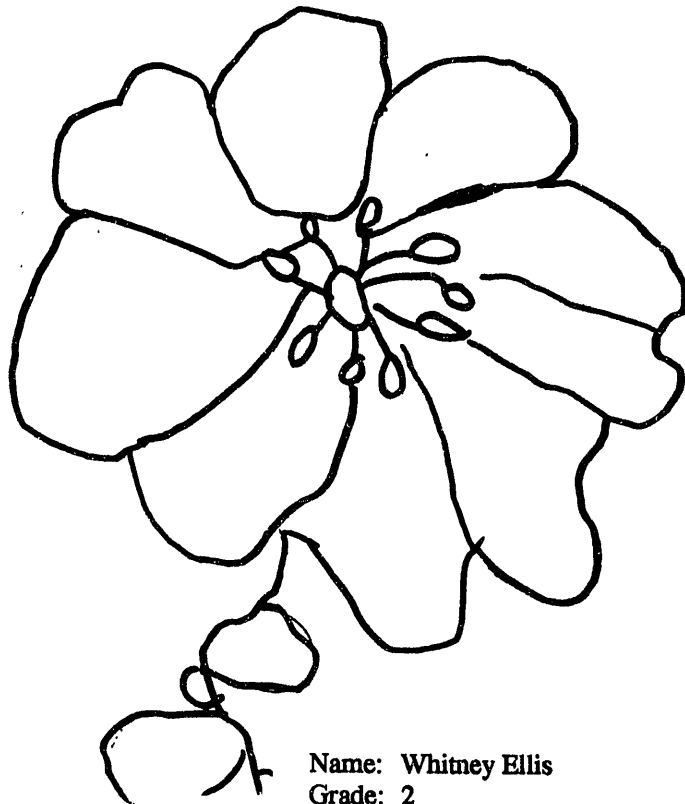
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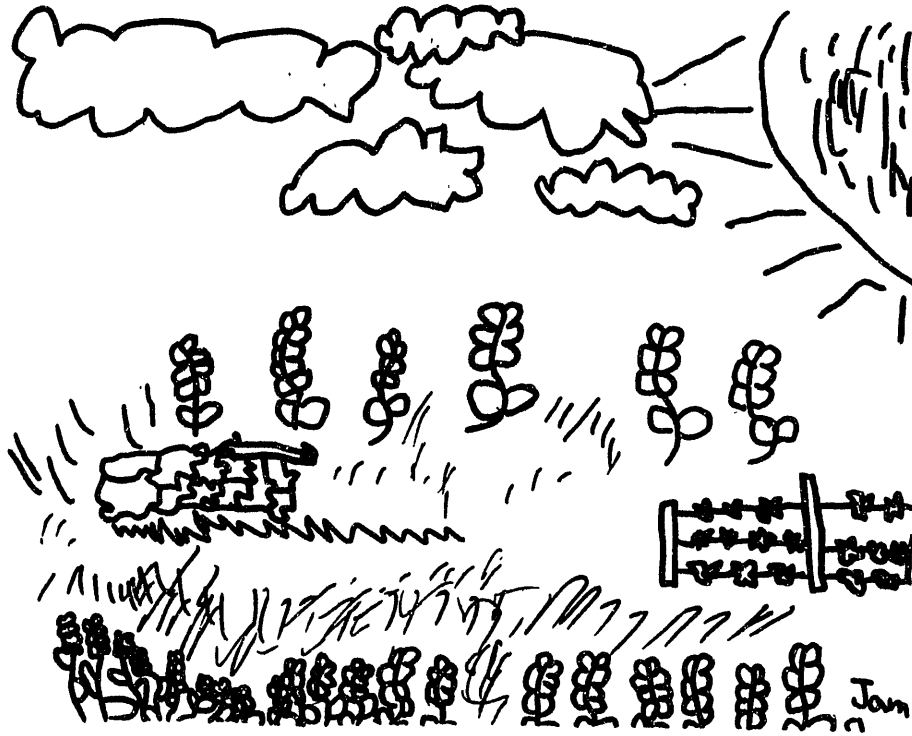
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31 TAC §293.131	3766
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Grade: 2
School: Montgomery Elementary, Carrollton-Farmers Branch ISD



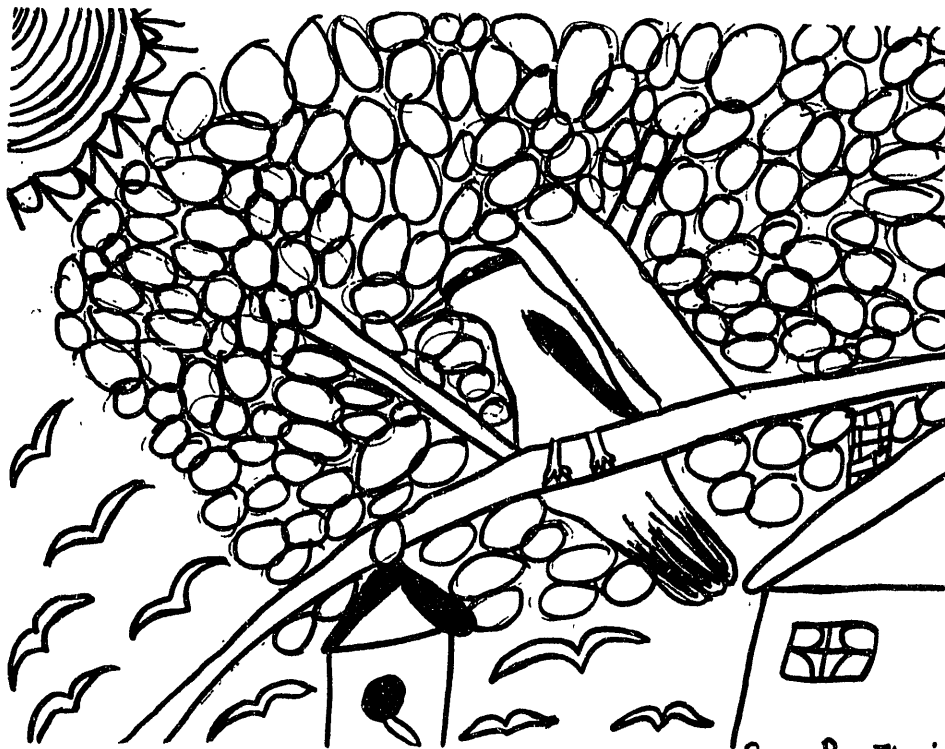
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Grade: 2
School: Montgomery Elementary, Carrollton-Farmers Branch ISD



Name: James Stephens

Grade: 2

School: Montgomery Elementary, Carrollton-Farmers Branch ISD



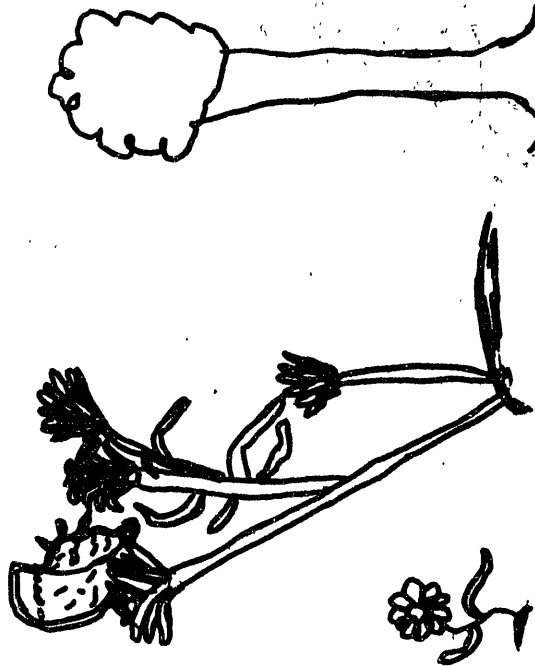
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Grade: 2

School: Montgomery Elementary, Carrollton-Farmers Branch ISD

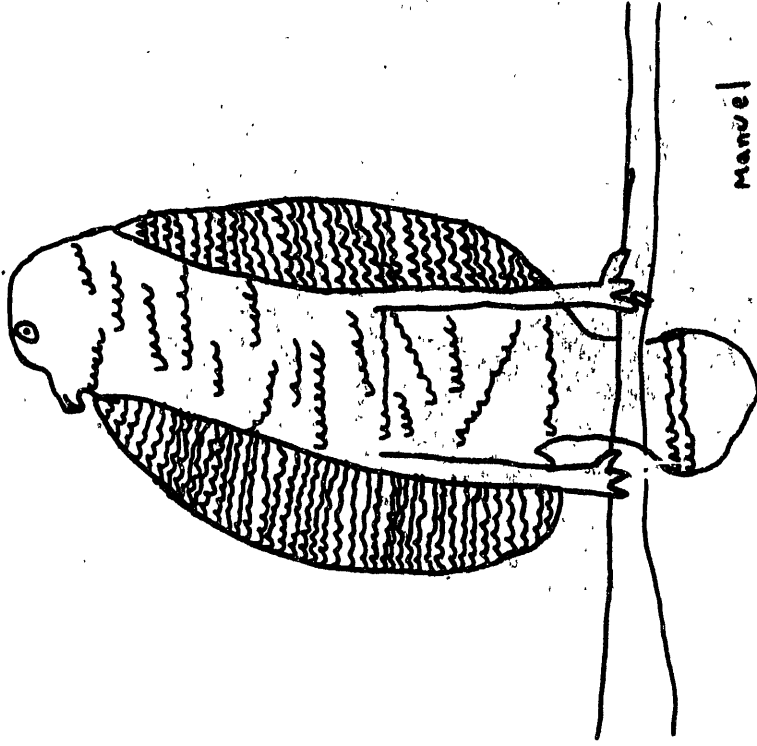


Stephanie woolf.



Name: Stephanie Woolf
Grade: 2

School: Montgomery Elementary, Carrollton-Farmers Branch ISD

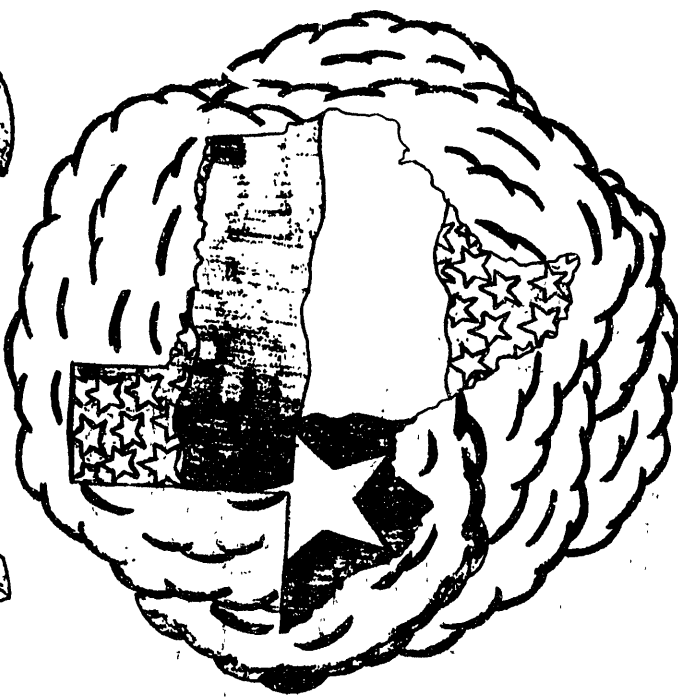


Manuel Marquez

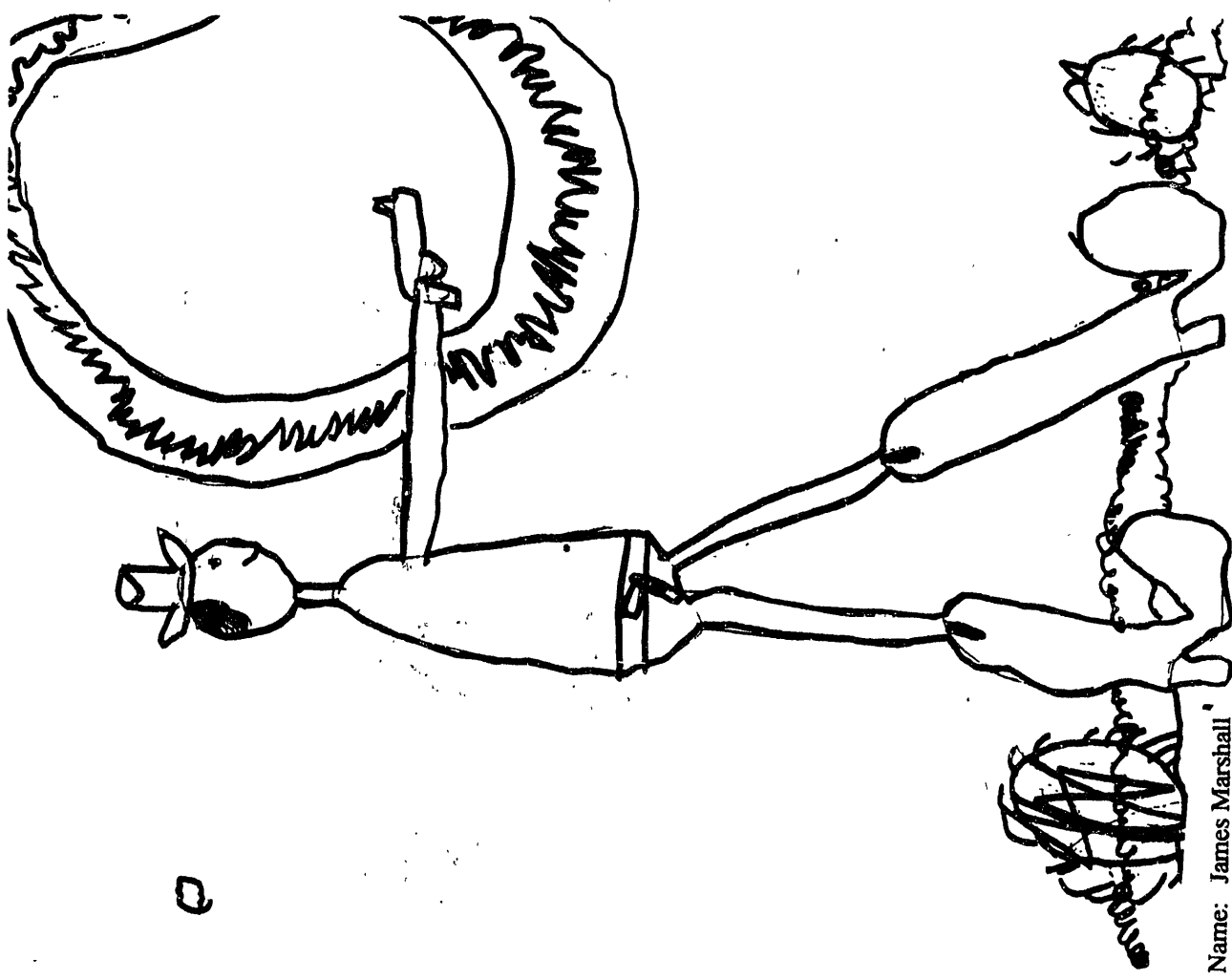
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Grade: 2

School: Montgomery Elementary, Carrollton-Farmers Branch ISD

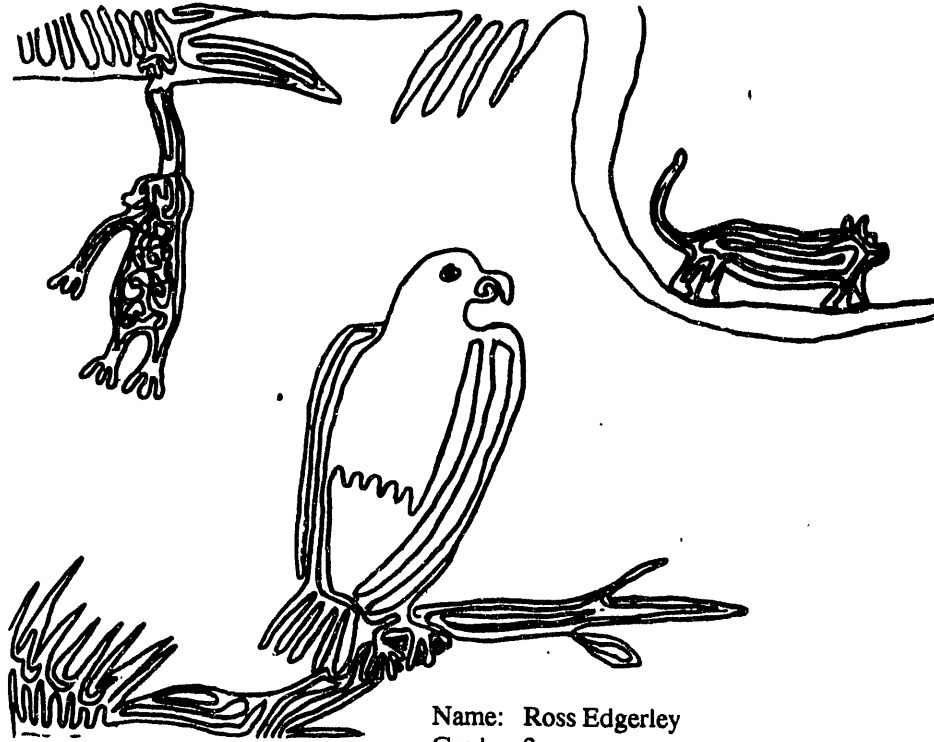
TEXAS



Name: Eric Figueroa
Grade: 6
School: Montgomery Elementary, Carrollton-Farmers Branch ISD



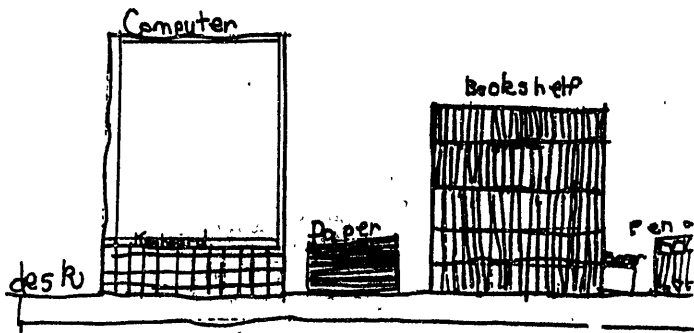
Name: James Marshall
Grade: 2
School: Montgomery Elementary, Carrollton-Farmers Branch ISD



Name: Ross Edgerley
Grade: 3
School: Montgomery Elementary, Carrollton-Farmers Branch ISD

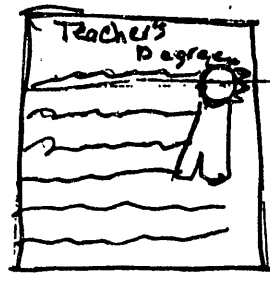
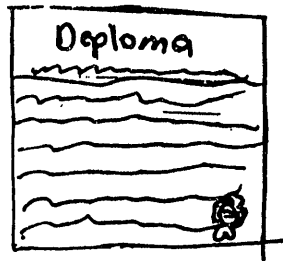


Name: Keiko Hattori
Grade: 4
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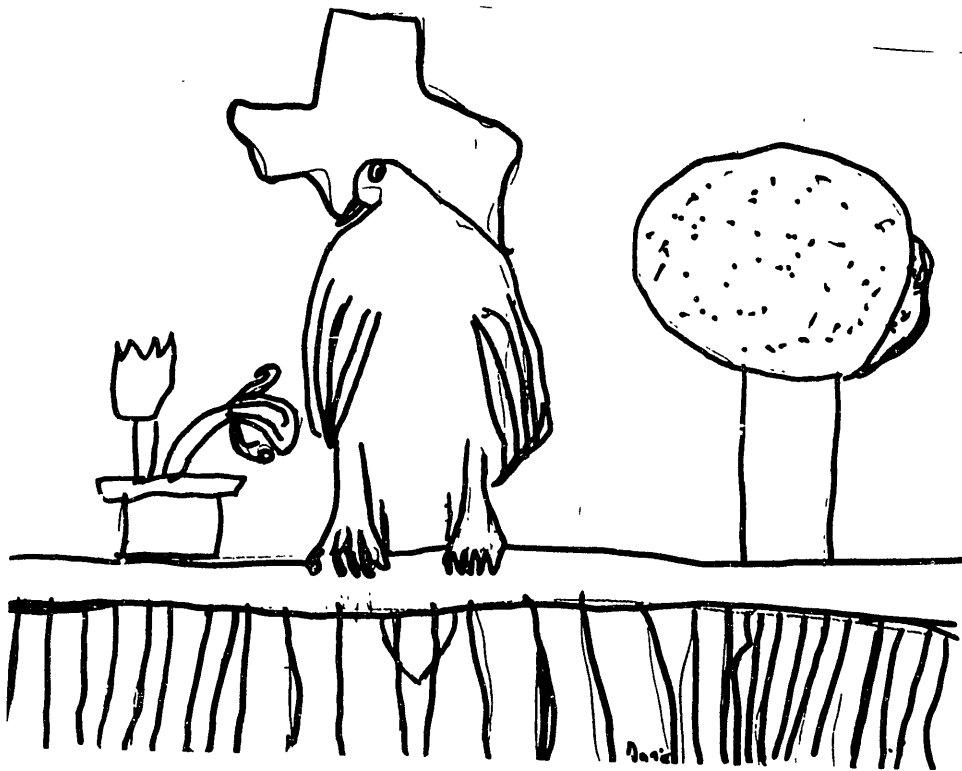
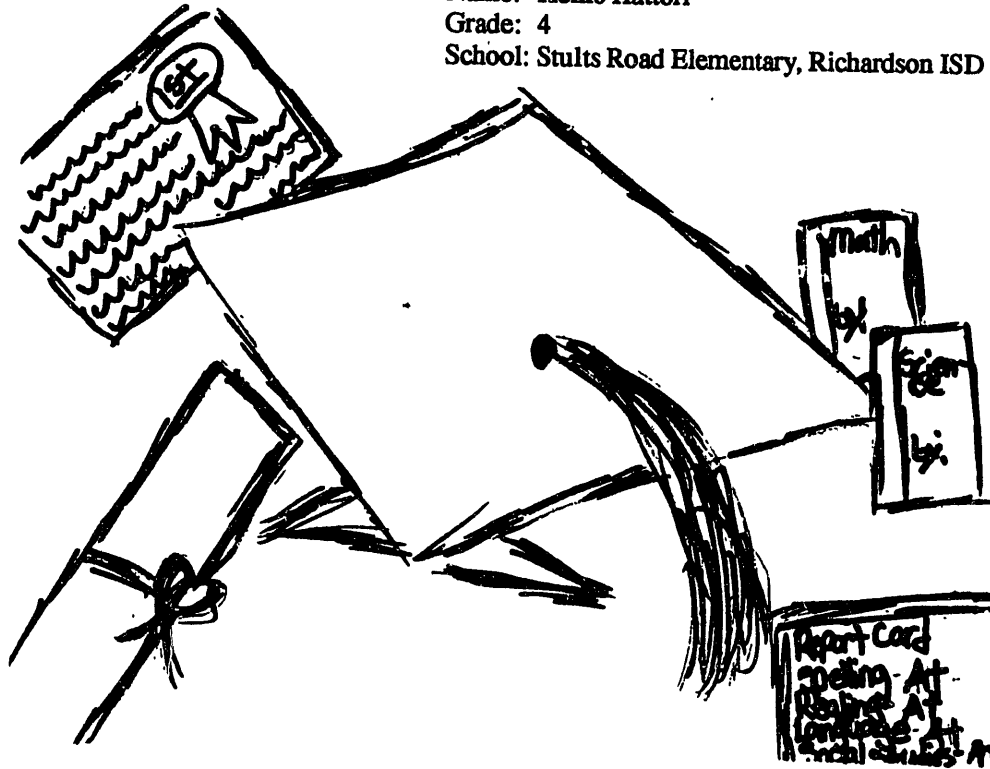


Name: Brazgette Malone
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 Mrs. Murray 4th grade class
 Brazgette 10
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Name: Shinique Brooks
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Name: Keiko Hattori
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Emergency Sections

An agency may adopt a new or amended section or repeal an existing section on an emergency basis if it determines that such action is necessary for the public health, safety, or welfare of this state. The section may become effective immediately upon filing with the *Texas Register*, or on a stated date less than 20 days after filing, for no more than 120 days. The emergency action is renewable once for no more than 60 days.

Symbology in amended emergency sections. New language added to an existing section is indicated by the use of bold text. [Brackets] indicate deletion of existing material within a section.

TITLE 4. AGRICULTURE Part I. Texas Department of Agriculture

Chapter 5. Quarantines

• 4 TAC §5.63

The Texas Department of Agriculture adopts on an emergency basis an amendment to §5.63. The addition of Merced and Stanislaus counties in the state of California is necessary to prevent the shipment of sweet potatoes from these counties into the weevil-free areas of Texas. If these counties are not immediately quarantined, there is the likelihood of the introduction of the sweet potato weevil, an insect pest that is dangerous to the interests of horticulture and agriculture in this state. Specifically, the sweet potato weevil poses a serious threat to the sweet potato industry in Texas. The sweet potato weevil is one of the most devastating, contagious, and persistent pests known to the sweet potato industry.

The emergency quarantined established under this section shall remain in effect for 30 days unless re-established following notice and immediate hearing. The department will hold a hearing to determine whether this amendment to the regulated areas shall remain in effect.

The department has determined that an emergency exists to include these regulated areas in California.

The amendment is adopted on an emergency basis pursuant to the Texas Agriculture Code, Chapter 71, Subchapter A, §71.004, which provides the Texas Department of Agriculture with the authority to establish an emergency quarantine when the department determines that a public emergency exists in which there is the likelihood of the introduction or dissemination of an insect pest or plant disease that is dangerous to the interests of horticulture and agriculture in Texas. Section 71.004(c) also authorizes the department to adopt rules as necessary to prevent the introduction or spread of a dangerous pest or disease. This amendment is also being proposed under

§71.001, which authorizes the department to establish quarantines against out-of-state pests.

§5.63. *Regulated Areas.* The regulated areas are as follows:

(1)-(7) (No change.)

(8) California, Merced County and Stanislaus County.

Issued in Austin, Texas, on June 4, 1993.

TRD-9323975

Dolores Alvarado-Hibbs
Chief Administrative Law
Judge
Texas Department of
Agriculture

Effective date: June 7, 1993

Expiration date: July 8, 1993

For further information, please call: (512) 463-7583

◆ ◆ ◆



Roy

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Grade: 3

School: Montgomery Elementary, Carrollton-Farmers Branch ISD

Proposed Sections

Before an agency may permanently adopt a new or amended section, or repeal an existing section, a proposal detailing the action must be published in the *Texas Register* at least 30 days before any action may be taken. The 30-day time period gives interested persons an opportunity to review and make oral or written comments on the section. Also, in the case of substantive sections, a public hearing must be granted if requested by at least 25 persons, a governmental subdivision or agency, or an association having at least 25 members.

Symbology in proposed amendments. New language added to an existing section is indicated by the use of **bold text**. [Brackets] indicate deletion of existing material within a section.

TITLE 4. AGRICULTURE Part I. Texas Department of Agriculture

Chapter 5. Quarantines

Sweet Potato Weevil Quarantine

• 4 TAC §5.63

(Editor's Note: The Texas Department of Agriculture proposes for permanent adoption the amended section it adopts on an emergency basis in this issue. The text of the amended section is in the Emergency Rules section of this issue.)

The Texas Department of Agriculture proposes an amendment to §5.63, concerning sweet potato weevil quarantine. The proposed amendment to §5.63 adds Merced and Stanislaus counties in the state of California. The proposed amendment prohibits sweet potatoes shipped from these counties into weevil-free areas of Texas.

Danny Johnson, coordinator for nursery/floral and quarantines has determined that for the first five-year period the rule is in effect there will be no fiscal implications for state or local government as a result of enforcing or administering the rule.

Mr. Johnson also has determined that for each year of the first five years the rule is in effect the public benefit anticipated as a result of enforcing the rule will be the prevention of the introduction of the sweet potato weevil into weevil-free areas of Texas. It will also decrease the need to use chemicals to control weevils, which can harm the environment. There is no anticipated economic cost to persons or small businesses.

Comments on the proposal may be submitted to David Davis, Director for Plant Quality, Texas Department of Agriculture, P.O. Box 12847, Austin, Texas 78711.

The amendment is proposed under the Texas Agriculture Code, §71.001, which provides the Texas Department of Agriculture with the authority to establish quarantines against out-of-state diseases and pests.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on June 4, 1993.

TRD-9323974

Dolores Alvarado Hibbs
Chief Administrative Law
Judge
Texas Department of
Agriculture

Earliest possible date of adoption: July 16, 1993

For further information, please call: (512) 463-7583

TITLE 31. NATURAL RESOURCES AND CONSERVATION

Part III. Texas Air Control Board

Chapter 117. Control of Air Pollution From Nitrogen Compounds

The Texas Air Control Board (TACB) proposes amendments to §117.105 and §117.205, the repeal of §117.540 and §117.550, and new §§117.540, 117.550 and 117.580, concerning Control of Air Pollution From Nitrogen Compounds. The proposed changes have been developed in response to requirements by the United States Environmental Protection Agency (EPA) and the 1990 Federal Clean Air Act (FCAA) Amendments to apply reasonably available control technology (RACT) requirements to major sources of nitrogen oxides (NO_x) in the following ozone nonattainment counties: Brazoria, Chambers, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, and Waller counties.

These changes are part of a series of proposed revisions to Chapter 117. Since the proposed changes to §117.540 and §117.550 are extensive, the staff has determined that it would be administratively more efficient to propose concurrently the repeal of existing §117.540 and §117.550 and the addition of new §117.540 and §117.550.

The proposed changes to §117.105 and §117.205, relating to Emission Specifications, clarify that credit may not be taken for Best Available Control Technology (BACT) limits which are more stringent than RACT limits, and limit the application of boiler or heater BACT limits for the RACT limit to cases in which the boiler or heater BACT limit was 0.12 pound NO_x per million Btu heat input.

The proposed new §117.540, concerning Phased RACT, specifies procedures to facilitate approval of requests for extensions past the May 31, 1995, compliance date for installing NO_x controls in compliance with TACB Regulation VII, "Control of Air Pollution from Nitrogen Compounds." The proposed changes require specific information ("replicable procedures") to be provided in the

petition to the Executive Director for phased RACT. TACB is seeking these changes to avoid the need for case-by-case EPA approval of extensions to the May 31, 1995, compliance date.

The proposed new §117.550, concerning Permit Requirements, renames §117.550 as "General Construction Permits for NO_x RACT Projects," and establishes a general permit procedure for permitting NO_x abatement equipment required to be installed as a result of TACB Chapter 117. Proposed §117.550 specifies certain conditions under which the general permit is applicable.

New §117.580, concerning Source Caps, establishes an alternate method of demonstrating compliance with the emission limitations of TACB Chapter 117 by means of a source cap. The source cap allows for activity levels, including equipment shutdowns, to be factored into a source's NO_x reduction requirements.

Lane Hartsock, Deputy Director of Air Quality Planning, has determined that for the first five-year period the rules are in effect the estimated annual cost to state and local governments associated with additional review of compliance plans is expected to be minimal.

Mr. Hartsock also has determined that for each year of the first five years the rules are in effect the public benefit anticipated as a result of enforcing the sections will be satisfaction of FCAA Amendments and EPA requirements, and NO_x emission reductions in ozone nonattainment areas which are necessary for the timely attainment of the ozone standard. There will be no effect on small businesses. Economic costs to persons required to implement the proposed modified emission specifications are expected to be minimal, since the difference between the applicable permit limits and the RACT limits are small. Persons subject to the proposed revisions to the Administrative Provisions are expected to experience a reduction in economic costs associated with rule compliance, since these changes add flexibility in acceptable methods of reducing emissions, allow for additional time to comply with the requirements, and reduce the need for obtaining construction permits as a consequence of the rule. There are no costs anticipated beyond 1996.

A public hearing on this proposal will be held on June 30, 1993, at 2:00 p. m. in the City of Houston, Pollution Control Building Auditorium located at 7411 Park Place Boulevard, Houston.

Staff members will be available to discuss the proposal 30 minutes prior to the hearing

Public comments, both oral and written, on the proposed changes are invited at the hearings. The hearings are structured for the receipt of oral or written comments by interested persons. Interrogation or cross examination is not permitted.

Written comments not presented at the hearings may be submitted to the TACB Central Office in Austin through July 2, 1993. Material received by the Regulation Development Division by 4:00 p.m. on that date will be considered by the Board prior to any final action on the proposed revisions. Copies of the proposed revisions are available at the Regulation Development Division of the TACB Air Quality Planning Annex located at 12118 North IH-35, Park 35 Technology Center, Building A, Austin, Texas 78753, and at all TACB regional offices. For further information, contact Randy Hamilton at (512) 908-1512.

Persons with disabilities who have special communication or other accommodation needs who are planning to attend the hearings should contact the agency at (512) 908-1815. Requests should be made as far in advance as possible.

Subchapter B. Combustion at Existing Major Sources Utility Electric Generation

• 31 TAC §117.105

The amendment is proposed under the Texas Health and Safety Code (Vernon 1990), the Texas Clean Air Act (TCAA), §382.017, which provides TACB with the authority to adopt rules consistent with the policy and purposes of the TCAA.

§117.105. Emission Specifications.

(a)-(l) (No change.)

(m) For purposes of this subchapter, the more stringent of any permit NO_x emission limit under a permit issued pursuant to Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification) and the NO_x emission limits of subsections (a)-(i) of this section shall apply, except that gas-fired boilers and heaters operating under a permit issued after March 3, 1982, with an emission limit of 0.12 pound NO_x per million Btu heat input (LHV), shall be limited to that rate for the purposes of this subchapter.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on June 7, 1993.

TRD-9323969 Lane Hartsock
Deputy Director, Air Quality
Planning
Texas Air Control Board

Proposed date of adoption: August 31, 1993

For further information, please call: (512) 908-1451

Commercial, Institutional, and Industrial Sources

• 31 TAC §117.205

The amendment is proposed under the Texas Health and Safety Code (Vernon 1990), Texas Clean Air Act (TCAA), §382.017, which provides TACB with the authority to adopt rules consistent with the policy and purposes of the TCAA.

§117.205. Emission Specifications.

(a)-(g) (No change.)

(h) For purposes of this subchapter, the more stringent of any permit NO_x emission limit under a permit issued pursuant to Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification) and the emission limits of subsections (a)(3)-(c) of this section shall apply, except that gas-fired boilers and heaters operating under a permit issued after March 3, 1982, with an emission limit of 0.12 pound NO_x per million Btu heat input (LHV), shall be limited to that rate for the purposes of this subchapter.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on June 7, 1993.

TRD-9323970 Lane Hartsock
Deputy Director, Air Quality
Planning
Texas Air Control Board

Proposed date of adoption: August 31, 1993

For further information, please call: (512) 908-1451

Subchapter D. Administrative Provisions

• 31 TAC §117.540, §117.550

(Editor's note: The text of the following sections proposed for repeal will not be published. The sections may be examined in the offices of the Texas Air Control Board or in the Texas Register office, Room 245, James Earl Rudder Building, 1019 Brazos Street, Austin.)

The repeals are proposed under the Texas Health and Safety Code (Vernon 1990), Texas Clean Air Act (TCAA), §382.017, which

provides TACB with the authority to adopt rules consistent with the policy and purposes of the TCAA.

§117.540. Phased Reasonable Available Control Technology (RACT).

§117.550. Permit Requirements.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on June 7, 1993.

TRD-9323971 Lane Hartsock
Deputy Director, Air Quality
Planning
Texas Air Control Board

Proposed date of adoption: August 31, 1993

For further information, please call: (512) 908-1451

• 31 TAC §§117.540, 117.550, 117.580

The new rules are proposed under the Texas Health and Safety Code (Vernon 1990), the Texas Clean Air Act (TCAA), §382.017, which provides TACB with the authority to adopt rules consistent with the policy and purposes of the TCAA.

§117.540. Phased Reasonably Available Control Technology (RACT).

(a) The owner or operator affected by the provisions of this chapter who believes that compliance by May 31, 1995, is not practicable may submit a petition for phased RACT. The process for submitting a petition and receiving approval shall be based on the following.

(1) The petition shall be submitted with the applicable initial control plan required in §117.109 of this title (relating to Initial Control Plan Procedures), §117.209 of this title (relating to Initial Control Plan Procedures), §117.309 of this title (relating to Control Plan Procedures), or §117.409 of this title (relating to Control Plan Procedures); or as soon as possible after determination by the owner or operator that compliance by May 31, 1995, is not practicable.

(2) The owner or operator of the proposed unit shall submit information to the Texas Air Control Board (TACB) and a copy to the U.S. Environmental Protection Agency (EPA) Regional Office in Dallas which will demonstrate all of the following:

(A) compliance by May 31, 1995, is impracticable due to the unavailability of nitrogen oxides abatement equipment, engineering services, or construction labor; system unreliability; or other techno-

logical and economic factors (such as costs of additional outages necessitated by compliance with the emission specifications of this part by May 31, 1995, as demonstrated by comparison to costs of actual historical and planned outages) as TACB determines are appropriate;

(B) there is a proposed stage-by-stage program for compliance and clearly specified compliance milestones for each unit; and

(C) there is a commitment to implement the portion of the phased RACT petition that can be implemented by May 31, 1995;

(D) the final compliance date specified in the petition shall be as soon as practicable, but in no case later than August 31, 1996;

(E) the petition for phased RACT shall contain the following information:

(i) the name, location, and nameplate capacity of the unit for which the petition is requested;

(ii) a list of the company names, addresses, and telephone numbers of vendors who are qualified to provide the services and equipment capable of meeting the applicable emission limitation under this chapter and who have been contacted to obtain the required services and equipment. A copy of the request for bids along with the dates of contact shall also be provided to show a good-faith effort to obtain the required services and equipment necessary to meet the requirements of this chapter by May 31, 1995;

(iii) certification from each of the vendors listed in clause (ii) of this subparagraph that they cannot provide the necessary services and install the appropriate equipment in time for the unit to comply by May 31, 1995. Such certification shall include the reasons why the services cannot be provided and why the equipment cannot be installed in a timely manner;

(iv) a legally binding contract with a qualified vendor, signed by an authorized officer of the company, showing a detailed design, installation, and testing schedule for the required services and equipment designed to meet the applicable emission limitation, with a completion date no later than August 31, 1996. Any commercially sensitive financial information or trade secrets should be excised from the contract;

(v) the following additional information, if not included in the

contract referenced in clause (iv) of this subparagraph:

(I) material and energy balance summaries, power and other consumption requirements, including those for air, steam, and cooling water;

(II) cost information, derived from equipment specifications and normal engineering practice, including the equipment provided and the services necessary for installation and excluding commercially sensitive financial information;

(III) scheduling information, including installation and test schedules;

(vi) to demonstrate that the installation and availability of NO_x emission control equipment are substantially contributing factors in causing system reliability problems, the following information:

(I) standard load or production forecasts, based on standard forecasting models for the industry to which the subject unit belongs, applied to the period May 31, 1993-May 30, 1995;

(II) outage schedule for all units in the utility grid or other operating system to which the subject unit belongs. An "operating system" shall refer to a group of like units for which, if one or more of the subject units were temporarily removed from service, the optimum rates of firing, production, or other general indicators of performance of the remaining units could not be maintained, resulting in problems with system reliability;

(III) specific reasons why an outage for the purpose of installing NO_x emission control equipment cannot be scheduled by May 31, 1995.

(3) The Executive Director shall approve a petition for phased RACT if the Executive Director determines that compliance is not practicable by May 31, 1995, because of the unavailability of nitrogen oxides abatement equipment, engineering services, or construction labor; system unreliability; or other technological and economic factors (such as costs of additional outages necessitated by compliance with the emission specifications of this title by May 31, 1995, as demonstrated by comparison to costs of actual historical and planned outages) as TACB determines is appropriate.

(4) Any person affected by the Executive Director's decision may appeal

the decision to the Board within 30 days after the date of the decision. Such appeal is to be taken by written notification to the Executive Director. Section 103.71 of this title (relating to Request for Action by the Board) should be consulted for the method of requesting Board action on the appeal. Approved petitions for phased RACT may be revised by the Executive Director upon a showing of just cause by the applicant.

(5) Approval of a phased RACT schedule by TACB does not waive any applicable federal requirements or eliminate the need for approval by EPA.

(6) The holder of an approved phased RACT determination shall comply with each specified compliance milestone and each date for compliance provided in the approved petition, as well as any other condition established in the approval.

(b) The Executive Director shall initiate a reevaluation of the final compliance dates specified in this undesignated head one year after the adoption of this chapter. The Executive Director shall evaluate the practicability of all sources complying with §117.105 of this title (relating to Emission Specifications), §117.107 of this title (relating to Alternative System-Wide Emission Specifications), §117.205 of this title (relating to Emission Specifications), §117.207 of this title (relating to Alternative Plant-Wide Emission Specifications), §117.305 of this title (relating to Emission Specifications), and §117.405 of this title (relating to Emission Specifications), by May 31, 1995. The Executive Director shall base the evaluation on the information contained in the control plans required by §117.109 of this title, §117.209 of this title, §117.309 of this title, and §117.409 of this title. In evaluating the practicability of compliance by May 31, 1995, the Executive Director shall take into consideration the availability of nitrogen oxides abatement equipment, engineering services, or construction labor; the system reliability of all affected units; or other technological and economic factors (such as costs of additional outages necessitated by compliance with the emission specifications of this title by May 31, 1995, as demonstrated by comparison to costs of actual historical and planned outages) as TACB determines is appropriate. Within 15 months after adoption of this part, the Executive Director shall publish notice in the *Texas Register* the intent to either retain or extend by rulemaking the final compliance dates of this undesignated head.

§117.550. General Construction Permits for Nitrogen Oxides (NO_x) Reasonably Available Control Technology (RACT) Projects.

(a) In lieu of complying with the permitting requirements of Chapter 116 of

this title (relating to Control of Air Pollution by Permits for New Construction or Modification), any person who installs nitrogen oxides (NO_x) abatement equipment or implements a NO_x control technique in order to comply with the requirements of this chapter shall be entitled to a general permit under the following conditions.

(1) The change must not result in an increase of the unit's or the facility's production capacity, as documented in accordance with §117.119 of this title (relating to Notification, Recordkeeping, and Reporting Requirements), §117.219 of this title (relating to Notification, Recordkeeping, and Reporting Requirements), §117.319 of this title (relating to Notification, Recordkeeping, and Reporting Requirements), and §117.419 of this title (relating to Notification, Recordkeeping, and Reporting Requirements), as applicable, except in the following cases.

(A) For gas turbines, any increase in capacity must be a direct result of the requirement to implement controls on existing units required to meet emission limitations required by §117.105 of this title (relating to Emission Specifications), §117.107 of this title (relating to Alternative System-Wide Emission Specifications), §117.205 of this title (relating to Emission Specifications), §117.207 of this title (relating to Alternative Plant-Wide Emission Specifications), and must not exceed 14% of existing capacity for each affected existing turbine.

(B) For permitted equipment other than gas turbines, any increase in capacity must be a direct result of the requirement to implement controls on existing units previously permitted in accordance with the requirements of Chapter 116 of this title that are required to meet emission limitations required by §117.105 of this title, §117.107 of this title, §117.205 of this title, §117.207 of this title, §117.305 of this title, or §117.405 of this title. Such units must remain in compliance with all terms and limitations of their permits and cannot utilize the increase in production capacity without satisfying the permitting requirements of Chapter 116 of this title.

(C) For grandfathered equipment other than gas turbines, any increase in capacity must be a direct result of the requirement to implement controls on existing units, for which information regarding actual grandfather rates has been provided in the Initial Control Plan, that are required to meet emission limitations required by §117.105 of this title, §117.107 of this title, §117.205 of this title, §117.207 of this title, §117.305 of this title, or §117.405 of this title. The "actual grandfather rate" is the

maximum annual emission rate or data that are related to emissions (e.g., production, fuel firing, throughput, sulfur content, etc. as appropriate) at which the emission unit actually operated and emitted prior to September 1, 1971, for 12 consecutive months. Such grandfathered units cannot exceed the actual grandfather rate for the unit and cannot utilize the increase in production capacity without satisfying the permitting requirements of Chapter 116 of this title.

(2) Any emission increase of an air contaminant other than NO_x must be a direct result of and incidental to installing NO_x abatement equipment or implementing a NO_x control technique and must comply with the emission specifications of §117.105 of this title, §117.107 of this title, §117.205 of this title, §117.207 of this title, §117.305 of this title, §117.405 of this title, or §117.121, 117.221, 117.321, or 117.421 of this title (relating to Alternative Case Specific Specifications), as applicable.

(3) If installation of NO_x abatement equipment or implementation of a NO_x control technique will result in a significant net increase in emissions of any criteria pollutant, a person claiming a general permit shall submit information sufficient to demonstrate that the following conditions will be met:

(A) considering the NO_x reductions that will result from implementation of the requirements of this part, the emissions increase shall not cause or contribute to a violation of any national ambient air quality standard;

(B) the emissions increase shall not cause or contribute to a violation of any Prevention of Significant Deterioration (PSD) of Air Quality regulation increment; and

(C) the emissions increase shall not cause or contribute to a violation of a visibility limitation. For purposes of this title, "significant net increase" means an increase of emissions equal to or greater than the amount specified in the MAJOR MODIFICATION column of Table I of §101.1 of this title (relating to Definitions).

(4) Emission increases eligible for a general permit must:

(A) be quantified in the initial compliance plan; and

(B) be tested as required by §117.111 of this title (relating to Initial Demonstration of Compliance), §117.211 of this title (relating to Initial Demonstration of Compliance), §117.311 of this title (relating to Initial Demonstration of Compli-

ance), and §117.411 of this title (relating to Initial Demonstration of Compliance), as applicable.

(5) Notice of the intent to be covered by the general permit must be accompanied by a CO minimization plan, describing efforts to be taken to minimize increases in CO emissions that will result from installing NO_x abatement equipment or implementing a NO_x control technique.

(6) Notice of the intent to be covered by a general permit shall be filed with the Agency before a general permit can be claimed. Such notice should be filed on or before the date for filing an initial control plan as required by §117.109 of this title (relating to Initial Control Plan Procedures), §117.209 of this title (relating to Initial Control Plan Procedures), §117.309 of this title (relating to Control Plan Procedures), and §117.409 of this title (relating to Control Plan Procedures), as applicable. Information required under paragraph (3) of this subsection must be submitted no later than 14 days prior to the commencement of construction for the installation of NO_x abatement equipment or implementation of a NO_x control technique.

(b) Unless notified by the Executive Director to the contrary, any person who submits notice of the intent to be covered by the general permit is authorized to emit the increase in the quantity of pollutants emitted or change in the type of pollutants emitted under the terms and conditions of this permit 14 days after the date that the notice of intent is postmarked, if all required submissions have been made. The Executive Director may deny coverage under this permit at any time upon a determination that the terms and conditions of this permit are not being met and may require submittal of a permit or permit amendment application for a permit under Chapter 116 of this title. Emissions covered by a general permit must comply with all rules and regulations of the Texas Air Control Board.

(c) For purposes of compliance with the PSD and nonattainment new source review provisions of Chapter 116 of this title, an increase that satisfies the requirements for a general permit shall not constitute a physical change or a change in the method of operation. For purposes of compliance with the Standards of Performance for New Stationary Sources regulations promulgated by the U.S. Environmental Protection Agency at 40 Code of Federal Regulations (CFR) 60.14, an increase that satisfies the requirements for a general permit shall satisfy the requirements of 40 CFR 60.14(e)(5).

(d) All representations made in association with a notice of intent to claim a general permit become conditions upon which the NO_x abatement equipment cov-

ered by the general permit shall be constructed and operated or the NO_x control technique implemented. It shall be unlawful for any person to vary from such representations if the change in conditions will affect that person's right to claim a general permit under this section. Any change in conditions such that a person is no longer eligible to claim a general permit under this section requires submission of a permit or permit amendment application for a permit under Chapter 116 of this title.

§117.580. Source Cap.

(a) An owner or operator may achieve compliance with the emission limits of §117.205 of this title (relating to Emission Specifications) by achieving equivalent nitrogen oxides (NO_x) emission reductions obtained by compliance with a source cap emission limitation in accordance with the

requirements of this section. Each unit at a source which would otherwise be subject to the NO_x emission limits of §117.205 of this title must be included in the source cap.

(b) The source cap allowable mass emission rate shall be calculated from the emissions limits of §117.205 of this title, as follows:

$$\text{Daily allowable NO}_x \text{ emission cap} = \sum_{i=1-N} R_i \times \frac{\text{Actual annual heat input}}{365}$$

where: i = each emission unit in the emission cap

N = the total number of emission units in the emission cap

R_i = The lowest of the Reasonably Available Control Technology (RACT) limit of §117.205(a)(3)-(c) of this title, the Best Available Control Technology (BACT) limit for any unit subject to a permit issued pursuant to Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification), or actual emission rate, (lb NO_x/MMBtu).

Actual annual heat input = Actual historical average annual heat input as certified to the TACB.

(c) The owner or operator of each unit included in the emission cap shall install, calibrate, maintain, and operate a continuous exhaust NO_x monitor, carbon monoxide (CO) monitor, an O₂ (or carbon dioxide) diluent monitor, and a totalizing fuel flow meter to measure NO_x, CO, and O₂ (or CO₂) emissions and fuel use for each unit in the source cap. The continuous emissions monitoring systems shall meet all installation and quality assurance requirements of §117.213(b) of this title (relating to Continuous Demonstration of Compliance), and all requirements of §117.219 of this title (relating to Notification, Recordkeeping and Reporting Requirements).

(d) The owner or operator of any units subject to a source cap shall maintain daily records indicating the NO_x emissions from each source and the total fuel usage for each unit and include a total NO_x emissions summation and total fuel usage for all units under the source cap on a daily basis. Records shall also be retained in accordance with §117.219 of this title.

(e) The owner or operator of any units operating under this provision shall report any exceedance of the source cap emission limit within 48 hours to the appropriate regional office. The owner or operator shall then follow up within 15 working days of the exceedance with a written report which includes an analysis of the cause for the exceedance with appropriate data to demonstrate the amount of emissions in excess of the applicable limit and the necessary corrective actions taken by the company to assure future compliance. Additionally, the owner or operator shall submit quarterly reports for the monitoring systems in accordance with §117.219 of this title.

(f) The owner or operator shall demonstrate initial compliance with the source cap in accordance with the schedule specified in §117.520 of this title (relating to Compliance Schedule for Commercial, Institutional, and Industrial Combustion Sources).

(g) The owner or operator who submits a compliance plan using a source cap must specifically identify all sources that

will be included in the source cap. All units subject to the emissions specifications of §117.205 of this title must be included in the cap. The owner or operator at its option may include any of the entire classes of exempted units of §117.207(f) of this title (relating to Alternate Plant-Wide Emission Specifications) in a source cap compliance plan. Such units shall be required to reduce emissions by an additional amount calculated in accordance with the U.S. Environmental Protection Agency's proposed Economic Incentive Program rules for offset ratios for trades between RACT and non-RACT sources, as published in the February 23, 1993, *Federal Register* (58 FR 11110).

(h) A unit which has operated since November 15, 1990, and has since been permanently retired or decommissioned and rendered inoperable, may be included in the source cap emission limit under the following conditions:

(1) the unit must have actually operated since November 15, 1990;

(2) for purposes of calculating the source cap emission limit, the applicable emission limit for retired units shall be in accordance with subsection (b) of this section;

(3) the actual heat input and maximum capacity shall be prorated based upon actual number of days of operation from January 1, 1991, to December 31, 1992;

(4) the unit must be shutdown and rendered inoperable prior to the final compliance date of §117.520 of this title;

(5) the owner or operator must certify the unit's operational level and maximum rated capacity; and

(6) a unit which has been shutdown and rendered inoperable but not permanently retired may be included in the plant-wide source cap. Before resuming operation of such a unit, however, the owner or operator must apply for and receive a permit or permit amendment which includes a revised control plan for the entire source which complies with all requirements of this chapter;

(7) emission reductions from shutdowns or curtailments that have been made permanently state or federally enforceable before the effective date of the rule cannot be included in the baseline for establishing the cap.

(i) An owner or operator who chooses to use the source cap option must include in the initial control plan required to be filed under §117.209 of this title (relating to Initial Control Plan Procedures) a plan for initial compliance. The owner or operator shall include in the initial control plan the identification of the election to use the source cap procedure as specified in this section to achieve compliance with this section. An owner or operator who chooses to use the source cap option must include in the final control plan procedures of §117.215 of this title (relating to Final Control Plan Procedures), the information necessary under this section to demonstrate final compliance with the source cap means of compliance.

(j) For the purposes of determining compliance with the source cap emission limit, the contribution of each affected unit that is operating during a startup, shutdown, maintenance, or upset period shall be calculated from the NO_x emission rate, as measured by the initial demonstration of compliance, for that unit.

(k) Any exceedance of the source cap emission limit shall constitute an exceedance for each unit subject to the source cap emission limit.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

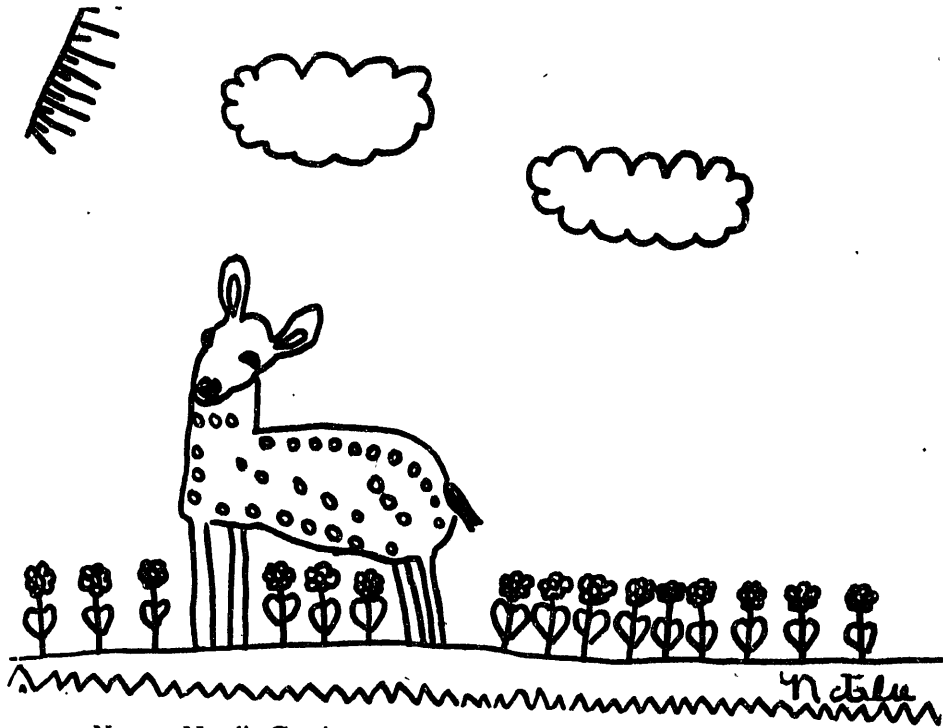
Issued in Austin, Texas, on June 7, 1993.

TRD-8323972 Lane Hartsock
Deputy Director, Air Quality
Planning
Texas Air Control Board

Proposed date of adoption: August 31, 1993

For further information, please call: (512) 908-1451

◆ ◆ ◆



Name: Natalie Garcia

Grade: 2

School: Montgomery Elementary, Carrollton-Farmers Branch ISD



Name: Michelle Mendoza

Grade: 2

School: Montgomery Elementary, Carrollton-Farmers Branch ISD

Withdrawn Sections

An agency may withdraw proposed action or the remaining effectiveness of emergency action on a section by filing a notice of withdrawal with the *Texas Register*. The notice is effective immediately upon filing or 20 days after filing. If a proposal is not adopted or withdrawn six months after the date of publication in the *Texas Register*, it will automatically be withdrawn by the office of the Texas Register and a notice of the withdrawal will appear in the *Texas Register*.

TITLE 16. ECONOMIC REGULATIONS

Part I. Railroad Commission of Texas

Chapter 9. Liquefied Petroleum Gas Division

Subchapter A. General Applicability and Requirements

- 16 TAC §§9.2, 9.4, 9.15, 9.28, 9.29

The Railroad Commission of Texas has withdrawn from consideration for permanent adoption proposed amendments to §9.2, 9.4, 9.15, 9.28, and 9.29, which appeared in the January 1, 1993, issue of the *Texas Register* (18 TexReg 19). The effective date of this withdrawal is June 8, 1993.

Issued in Austin, Texas, on June 8, 1993

TRD-9324013 Mary Ross McDonald
Assistant Director, Legal
Division, Gas
Utilities/LP Gas
Railroad Commission of
Texas

Effective date: June 8, 1993

For further information, please call: (512) 463-7008

Subchapter B. Basis Rules

- 16 TAC §9.33, §9.69

The Railroad Commission of Texas has withdrawn from consideration for permanent adoption proposed amendments to §9.33 and §9.69, which appeared in the January 1, 1993, issue of the *Texas Register* (18 TexReg 23). The effective date of this withdrawal is June 8, 1993.

Issued in Austin, Texas, on June 8, 1993

TRD-9324014 Mary Ross McDonald
Assistant Director, Legal
Division, Gas
Utilities/LP Gas
Railroad Commission of
Texas

Effective date: June 8, 1993

For further information, please call: (512) 463-7008

- 16 TAC §9.36

The Railroad Commission of Texas has withdrawn from consideration for permanent adoption a proposed repeal to §9.36, which appeared in the January 1, 1993, issue of the *Texas Register* (18 TexReg 24). The effective date of this withdrawal is June 8, 1993.

Issued in Austin, Texas, on June 8, 1993

TRD-9324015 Mary Ross McDonald
Assistant Director, Legal
Division, Gas
Utilities/LP Gas
Railroad Commission of
Texas

Effective date: June 8, 1993

For further information, please call: (512) 463-7008

The Railroad Commission of Texas has withdrawn from consideration for permanent adoption a proposed new §9.36, which appeared in the January 1, 1993, issue of the *Texas Register* (18 TexReg 24). The effective date of this withdrawal is June 8, 1993.

Issued in Austin, Texas, on June 8, 1993

TRD-9324016 Mary Ross McDonald
Assistant Director, Legal
Division, Gas
Utilities/LP Gas
Railroad Commission of
Texas

Effective date: June 8, 1993

For further information, please call: (512) 463-7008

Subchapter G. Division V

- 16 TAC §§9.171-9.175, 9.184, 9.187

The Railroad Commission of Texas has withdrawn from consideration for permanent adoption proposed amendments to §§9.171-9.175, 9.184, and 9.187, which appeared in the January 1, 1993, issue of the *Texas Register* (18 TexReg 25). The effective date of this withdrawal is June 8, 1993.

Issued in Austin, Texas, on June 8, 1993

TRD-9324017 Mary Ross McDonald
Assistant Director, Legal
Division, Gas
Utilities/LP Gas
Railroad Commission of
Texas

Effective date: June 8, 1993

For further information, please call: (512) 463-7008

Chapter 13. Regulations for Compressed Natural Gas (CNG) Fuel Systems

Subchapter A. Scope and Definitions

- 16 TAC §13.3, §13.4

The Railroad Commission of Texas has withdrawn from consideration for permanent adoption proposed amendments to §13.3 and §13.4, which appeared in the January 1, 1993, issue of the *Texas Register* (18 TexReg 27). The effective date of this withdrawal is June 8, 1993.

Issued in Austin, Texas, on June 8, 1993

TRD-9324018 Mary Ross McDonald
Assistant Director, Legal
Division, Gas
Utilities/LP Gas
Railroad Commission of
Texas

Effective date: June 8, 1993

For further information, please call: (512) 463-7008

Subchapter B. General Rules for CNG Equipment Qualifications

- 16 TAC §§13.24-13.27, 13.30, 13.31, 13.35

The Railroad Commission of Texas has withdrawn from consideration for permanent adoption proposed amendments to §§13.24-13.27, 13.30, 13.31, and 13.35, which appeared in the January 1, 1993, issue of the *Texas Register* (18 TexReg 28). The effective date of this withdrawal is June 8, 1993.

Issued in Austin, Texas, on June 8, 1993

TRD-9324019 Mary Ross McDonald
Assistant Director, Legal
Division, Gas
Utilities/LP Gas
Railroad Commission of
Texas

Effective date: June 8, 1993

For further information, please call: (512) 463-7008

**Subchapter C. Classification,
Registration, and Examina-
tion**

• 16 TAC §13.74

The Railroad Commission of Texas has with-
drawn from consideration for permanent
adoption a proposed amendment to §13.74,
which appeared in the January 1, 1993, issue
of the *Texas Register* (18 TexReg 31). The
effective date of this withdrawal is June 8,
1993.

Issued in Austin, Texas, on June 8, 1993

TRD-9324020 Mary Ross McDonald
Assistant Director, Legal
Division, Gas
Utilities/LP Gas
Railroad Commission of
Texas

Effective date: June 8, 1993

For further information, please call: (512)
463-7008



**Subchapter D. CNG Compres-
sion, Storage, and Dispens-
ing System**

• 16 TAC §13.102

The Railroad Commission of Texas has with-
drawn from consideration for permanent
adoption a proposed amendment to §13.102,
which appeared in the January 1, 1993, issue
of the *Texas Register* (18 TexReg 32). The
effective date of this withdrawal is June 8,
1993.

Issued in Austin, Texas, on June 8, 1993

TRD-9324021 Mary Ross McDonald
Assistant Director, Legal
Division, Gas
Utilities/LP Gas
Railroad Commission of
Texas

Effective date: June 8, 1993

For further information, please call: (512)
463-7008



Adopted Sections

An agency may take final action on a section 30 days after a proposal has been published in the *Texas Register*. The section becomes effective 20 days after the agency files the correct document with the *Texas Register*, unless a later date is specified or unless a federal statute or regulation requires implementation of the action on shorter notice.

If an agency adopts the section without any changes to the proposed text, only the preamble of the notice and statement of legal authority will be published. If an agency adopts the section with changes to the proposed text, the proposal will be republished with the changes.

TITLE 1. ADMINISTRATION

Part IV. Office of the Secretary of State

Chapter 78. Athlete Agents

Administrative Penalties

• 1 TAC §78.60

The Office of the Secretary of State adopts new §78.60 concerning the assessment of administrative penalties, without changes to the proposed text as published in the April 30, 1993, issue of the *Texas Register* (18 TexReg 2841).

Adoption of the new rule will provide individuals and companies with a clarification of the procedure for determining the amount of an administrative penalty that is assessed under the Athlete Agents Act, §9, Texas Civil Statutes, Article 8871 (Vernon Supplement 1993).

No comments were received regarding adoption of the new rule.

The new rule is adopted under Texas Civil Statutes, Article 8871, §11, which provide the secretary of state with the authority to prescribe and adopt rules necessary to carry out the administration and enforcement of the Athlete Agents Act.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on June 9, 1993.

TRD-9324069

Audrey Selden
Assistant Secretary of
State
Office of the Secretary of
State

Effective date: June 30, 1993

Proposal publication date: April 30, 1993

For further information, please call: (512) 463-5570



TITLE 28. INSURANCE

Part II. Texas Workers' Compensation Commission

Chapter 126. Benefits-General Provisions Applicable to All Benefits

• 28 TAC §126.7

The Texas Workers' Compensation Commission adopts the repeal of §126.7, concerning Injured Employee's Choice of Doctor without changes to the proposed text as published in the January 26, 1993, issue of the *Texas Register* (18 TexReg 459).

Repeal of this section is required by the expiration of Texas Civil Statutes, Article 8308-4.62 on December 31, 1992.

No public comments were received regarding adoption of the repeal.

The repeal is adopted under Texas Civil Statutes, Article 8308-2.09(a), which authorize the commission to adopt rules necessary to administer the Act.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on June 8, 1993.

TRD-9324006

Susan Cory
General Counsel
Texas Workers'
Compensation
Commission

Effective date: July 1, 1993

For further information, please call: (512) 440-3592



Chapter 126. General Provisions Applicable to All Benefits

• 28 TAC §126.8, §126.9

The Texas Workers' Compensation Commission adopts new §126.8 and §126.9, concerning Commission-Approved Doctor List and Choice of Treating Doctor and Liability for Payment, with changes to the text as published in the January 26, 1993, issue of the *Texas Register* (18 TexReg 460). Section

126.8 establishes criteria, in addition to the criteria specified in Texas Civil Statutes, Article 8308-4.63, for the addition of doctors to the list of commission-approved doctors and for the removal of doctors from the list. Section 126.9 establishes how the employee selects a treating doctor and what the doctor and injured employee must do to be in compliance with the requirements of the Act and commission rules.

These sections are required by Texas Civil Statutes, Article 8308-4.63.

Changes to the text of §126.8 involve the addition of the phrase "or commission orders" to the end of subsection (d)(1) and (6). While the commission did not receive any public comment on §126.8, these changes were made based on comments received on the companion rule, §126.9, and the commission responses to those comments.

Changes to the text of §126.9 made in response to public comments include:

deletion of the words "an interlocutory" and "supersedes this order" from subsection (f) and insertion of the words "superseded by a subsequent" in front of "order";

adding "within ten days after receiving the order" to the end of the first sentence of subsection (g);

adding the phrase "or health care provider at the doctor's direction" to subsection (h) prior to the word "if:";

deleting "as provided in subsection (h) of this section," "treatment provided after the date the commission relieves the carrier of liability," and "doctor" from subsection (i) while adding the phrases "medical treatments or services" after "may be billed for," "health care provider" in place of the deleted word "doctor," and "medical treatments or" in front of "services" in the last line of subsection (i); and

adding subsection (j) to describe how the health care provider and the injured employee will know who is liable for payment.

Comments opposing the sections were received from the Alliance of American Insurers and from an attorney who represents injured employees. Those comments and responses follow.

Recommend alternative language in §126.9(d), "on a form prescribed by the commission or another writing containing the same information as the form prescribed by the commission."

The commissioners disagree. The form prescribed by the commission will be handled in the manner that most forms are handled, with commission approval of alternate forms on a case-by-case basis.

Recommend allowing an agreement for change of doctors to occur between the carrier and injured employee without commission intervention.

Recommend allowing an informal change of treating doctor process with notification through the TWCC-64.

The commissioners disagree with both of these comments for the same reason. The intent of the Act was to establish and maintain control of medical treatment by the treating doctor. To accomplish that intent, the Act specifies a formal process where the commission will grant authority to select an alternate doctor. The Act, §4.63(d) specifies, "The commission will prescribe criteria by which the commission will grant the employee authority to select an alternate doctor."

Recommend adding the following reasons for approving a change in doctors to the list in §126.9(e): (a) the employee's condition is not improving with continued treatment from the doctor; (b) the doctor does not schedule frequent appointments with the employee; or (c) the doctor believes that the employee may be more appropriately treated by another doctor.

The commissioners disagree. The rule is not a complete laundry list of reasons for allowing a change in treating doctor which is why §126.9(e) states that the reasons for approving a change "include, but are not limited to," those reasons listed. Each injured employee is different and will require case-by-case consideration for changing treating doctors.

Specifically: reason (a) may not be a valid reason to change doctors because it appears to describe an employee who has reached maximum medical improvement; reason (b) may not be a valid reason to change doctors because many conditions do not require frequent appointments to improve the employee's condition; and reason (c) may not be a valid reason to change doctors because it describes the process contemplated in the Act where the treating doctor may have other doctors treat the injured employee while maintaining oversight of the treatment by all doctors.

Recommend clarification of §126.9(f) by adding, "if a change is approved, shall include an order to pay for reasonable and necessary treatment provided by the approved doctor unless and a later order of the commission supersedes this order."

The commissioners agree in part. Using the more generic reference to a later order of the commission in place of interlocutory order allows more flexibility in addressing possible errors. The words "reasonable and necessary" do not need to be inserted because the Act establishes that all payment for health care must be for reasonable and necessary care. The phrase "an interlocutory order" is deleted and the text changed to provide for superseding by a subsequent order.

This comment also leads to the need to change subsection (g) to establish a time frame within which either the employee or carrier may dispute the commission decision regarding a request to change doctors.

Recommend changing §126.9(i) to read, "If the carrier is relieved of liability for the costs of health care, by a final order of the commission, a doctor or other health care provider acting under orders of the doctor can bill the employee for treatment or supplies provided after the date the commission finally relieves the carrier of liability; provided that the doctor or other health care provider had no knowledge of the violation by the employee at the time the services or supplies were rendered."

The commissioners disagree with the recommendation that the employee only be subject to direct billing after an order of the commission becomes final. Once the carrier is relieved of liability, the health care provider must either be allowed to bill the employee or, if the health care provider was aware of the employee's violation, told that treatment provided after the date of the hearing decision may not be billed to either the carrier or the employee. To further clarify this point, a new subsection (j) is added to specify that the commission shall tell the carrier, doctor, and employee when a carrier is relieved of liability, the time period it applies to and whether the health care provider can bill the employee. This clarifies the procedure the commission will use to allow a health care provider to bill someone other than the carrier.

The commissioners agree to substitute "health care provider" for the word "doctor". While the reference to "health care furnished by the doctor" implicitly includes health care providers, as described in §4.65 and §8.42 of the Act, this change will remove the confusion which the public comment reflects regarding the commission's intent.

The commissioners agree that the rule should address more than medical treatments. To be consistent with the Act, the commission will use the phrase "medical treatments or services" in this subsection.

Recommend alternative language in §126.9(h), "the commission shall" to ensure fairness. The use of the more liberal "may" still subjects carriers to potential payments to physicians even though the employee may have clearly violated paragraphs (1) or (2). If a judge at the Benefit Contested Case Hearing finds an employee violated subsection (h)(1) and/or (2), there should be no discretion for the judge to order payment by the carrier.

The commissioners disagree. Using "may" allows the commission to exercise discretion in relieving the carrier of liability. An inadvertent violation by an employee should not necessarily relieve the carrier of liability. The facts of each case must be examined to determine whether the carrier should be relieved of liability and using "may" requires a conscious decision to be made.

The new sections are adopted under Texas Civil Statutes, Article 8308-2. 09(a), which authorize the commission to adopt rules nec-

essary to administer the Act, and Article 8308-4.63, which require the commission to develop a program to add and remove doctors from the list of approved doctors and further requires the commission to establish a process for injured employees to change doctors.

§126.8. Commission-Approved Doctor List.

(a) On or after January 1, 1993, except in emergency situations, injured employees must receive medical treatment from a doctor on the commission-approved doctor list (the list). This list initially includes all doctors licensed in Texas on or after January 1, 1993, and doctors licensed in other jurisdictions who have been added to the list by the commission.

(b) Doctors licensed in other jurisdictions may ask to be added to the list by submitting a written request containing information prescribed by the commission. Unless the doctor has been deleted from the list by the commission, a carrier shall not withhold reimbursement to doctors licensed in other jurisdictions when the only reason for nonpayment is that the doctor is not presently on the list.

(c) Each month, the division of medical review (the division) will provide insurance carriers, through designated Austin representatives, with the names of:

- (1) doctors deleted from the list;
 - (2) doctors reinstated to the list;
- and
- (3) doctors added to the list from other jurisdictions.

(d) Doctors may be deleted from the list for the following:

- (1) sanctions imposed by the commission against the doctor for violations of the Act, commission rules, or commission orders;
- (2) sanctions by Medicare or Medicaid for substandard medical care, overcharging, or overutilization of medical services;
- (3) substantial differences between the doctor's charges, fees, diagnoses, or treatments and those the commission finds to be fair and reasonable;
- (4) revocation or suspension of a doctor's license by the appropriate licensing authority;
- (5) limitations or restrictions on the professional license or disciplinary actions taken by the appropriate licensing authority;

- (6) criminal conviction which indicates an unwillingness or inability to provide quality treatment or to abide by the Act, commission rules, or commission orders; or

(7) other activities which warrant deletion.

(e) The division shall notify a doctor by certified mail, return receipt requested, of the division's intent to recommend to the commissioners that the doctor be deleted from the list. Within 20 days after receiving the notice, a doctor may request a hearing as provided by Texas Civil Statutes, Article 8308-4.63 and Article 6252-13a (the Administrative Procedure and Texas Register Act), and §145.3 of this title (relating to Requesting a Hearing). If a request for hearing is received, the commission shall hold a hearing as provided in Chapter 145 of this title (related to Dispute Resolution-Hearings Under the Administrative Procedure and Texas Register Act). If no request for hearing is filed within the time allowed, the division's recommendation will be reviewed by the commissioners at a public meeting and a decision made to either delete or maintain the doctor on the list.

(f) As described in Article 8308-2.09(f) and §145.24 of this title (relating to Special Provisions for Imposing Sanctions Pursuant to the Act, §2.09(f)), only the commissioners may delete a doctor from the list. The commission shall notify the doctor by issuing an order of deletion which describes the effects of the deletion on the doctor and the doctor's patients subject to workers' compensation. This order shall be delivered to the doctor by certified mail, return receipt requested, with a copy to the licensing authority and copies to those injured employees the commission is aware are being treated by that doctor. After receipt, the doctor shall also inform any injured employees, seeking treatment under the Act, of the doctor's deletion from the list and that the injured employee may not, except in an emergency, receive care. Failure to inform the injured employees in the form and format prescribed by the commission may subject the doctor to administrative penalties of up to \$10,000 and other sanctions as provided by the Act.

(g) To be reinstated, a doctor deleted from the list must apply for reinstatement in the form and manner prescribed by the commission through the Medical Review Division in Austin. If, in the division's opinion, the doctor has all the appropriate unrestricted licenses to practice at the time of reinstatement, has overcome the conditions which resulted in deletion, and should be reinstated, the division shall recommend that the commissioners reinstate the doctor to the list.

(h) If, in the division's opinion, the doctor has not met the requirements for reinstatement, or for other reasons should not be reinstated, the division shall notify the doctor by certified mail, return receipt

requested, of the division's intent to recommend to the commissioners that the doctor not be reinstated to the list. Within 20 days after receiving the notice, a doctor may request a hearing as provided in subsection (e) of this section.

§1269. Choice of Treating Doctor and Liability for Payment.

(a) The injured employee is entitled to the employee's initial choice of treating doctor from the list of doctors approved by the Texas Workers' Compensation Commission. As of January 1, 1993, any change in treating doctor after the initial choice requires approval from the commission. The term "doctor," as used in this section, has the meaning defined in Article 8308-1.03(17).

(b) The commission shall include, with the information mailed to the employee as required by §5.09 of the Act, the requirements related to the selection of a treating doctor from the commission-approved doctor list and to changing treating doctors as described in this section.

(c) The first doctor who provides health care to an injured employee shall be known as the injured employee's initial choice of treating doctor. The following do not constitute an initial choice of treating doctor:

(1) a doctor salaried by the employer;

(2) a doctor recommended by the carrier or employer, unless the injured employee continues, without good cause as determined by the commission, to receive treatment from the doctor for a period of more than 60 days; or

(3) any doctor providing emergency care unless the injured employee receives treatment from the doctor for other than follow-up care related to the emergency treatment.

(d) If an injured employee wants to change treating doctors, other than exceptions as described in Article 8308-4.64 or removal of the doctor from the list, the employee shall submit to the field office handling the claim, reasons why the current treating doctor is unacceptable. Unless medical necessity exists for an immediate change, the submission shall be in writing on a form prescribed by the commission. If the need for an immediate change exists, then the injured employee may notify the field office by telephone. Injured employees who change doctors because the doctor is removed from the list or for one of the exceptions listed in Article 8308-4.64 shall immediately notify the commission of the change in the form and format prescribed by the commission.

(e) Reasons for approving a change in treating doctor include but are not limited to:

(1) the reasons listed in Article 8308-4.63(d); and

(2) the selected doctor chooses not to be responsible for coordinating injured employee's health care as described in §133.3 of this title (relating to Responsibilities of Treating Doctor).

(f) The commission shall issue an order approving or denying a change of doctor request. This order shall be issued within ten days after receiving the request and, if a change is approved, shall include an order for the insurance carrier to pay for treatment provided by the approved doctor unless superseded by a subsequent order.

(g) With good cause, the injured employee or carrier may dispute the order regarding a change to an alternate treating doctor within ten days after receiving the order. That dispute will be handled through the dispute resolution process described in Chapters 140-143 of this title (relating to Dispute Resolution/General Provisions, Benefit Review Conference, Benefit Contested Case Hearing, and Review by the Appeals Panel).

(h) The commission may, after holding a benefit contested case hearing as provided by Chapter 142 of this title (relating to Benefit Contested Case Hearing), relieve the carrier of liability for health care furnished by a doctor or health care provider at the doctor's direction if:

(1) the doctor chosen by the employee is not on the list at the time the medical treatments or services are rendered; or

(2) the employee failed to comply with commission rules regarding a change in treating doctor.

(i) If the carrier is relieved of liability for the costs of health care, the employee may be billed for medical treatments or services provided the health care provider billing the employee had no knowledge of the violation by the employee at the time the medical treatments or services were rendered.

(j) The commission shall relieve the carrier of liability by an order which identifies the health care provider(s) and expressly states the time period for which the carrier is relieved of liability and whether the health care provider may submit the bill to the employee for those treatments or services. Provided, however, that a doctor removed from the list may not seek reimbursement under workers' compensation for treatments or services rendered.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel

and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on June 8, 1993.

TRD-9324004

Susan Cory
General Counsel
Texas Workers'
Compensation
Commission

Effective date: July 1, 1993

Proposal publication date: January 26, 1993

For further information, please call: (512) 440-3592

TITLE 31. NATURAL RESOURCES AND CONSERVATION

Part IX. Texas Water Commission

Chapter 293. Water Districts

The Texas Water Commission (Commission) adopts the repeal of §§293.41, 293.61, 293.62, 293.82, and 293.95, concerning bond-related document filings, and changes in construction work plans; amendments to §§293.6, 293.14, 293.18, 293.32-293.34, 293.43-48, 293.50, 293.51, 293.56, 293.57, 293.59, 293.70, 293.81, 293.83-293.87, 293.91, 293.92, 293.94-293.96 and 293.131, concerning district creations, director qualifications, review and approval of engineering projects, issuance of bonds, change orders, use of surplus funds and escrowed funds, changes in approved bond interest rate, financial and other reporting requirements, and district dissolutions, and new §§293.41, 293.61, 293.62, 293.82, 293.88, 293.95, 293.97 and 293.171-293.177, concerning bond related document filings, construction related document filings, changes in project scope or plans, extensions of time to sell bonds and the processing of impact fee applications.

Sections 293.18, 293.33, 293.44, 293.46, 293.48, 293.50, 293.51, 293.56, 293.59, 293.82, 293.91, 293.96, 293.97, and 293.176 were adopted with changes to the proposed text as published in the March 26, 1993, issue of the *Texas Register* at (18 TexReg 1896). Sections 293.6, 293.14, 293.32, 293.34, 293.41, 293.43, 293.45-293.48, 293.57, 293.61, 293.62, 293.70, 293.81, 293.83-293.86, 293.92, 293.94, 293.95, 293.131, 293.171-293.175, and 293.177 are adopted without changes and will not be republished. An amendment to §293.88 and new §293.87 were published in the March 30, 1993, issue of the *Texas Register* (18 TexReg 2126) and were adopted without changes and will not be republished.

The Commission received comments concerning §293.44 and §293.176 and has clarified cross-references and corrected minor errors and sentence structure deficiencies in the proposal.

The notice form in §293.18 contains a grammatical clarification to the justiciable interest language.

The reference to "Appendix A" in §293.33 is deleted to match the corresponding title of the form listed in §293.34.

A commenter submitted alternative language to §293.44(a)(14)-(18) which, as a whole, expands the obligations of districts regarding developer reimbursements. The language expands the use of bond proceeds to repairs and other non-capital uses and in some instances affords no time limitations for this expanded use of bond proceeds. The commission disagrees with the appropriateness of this language. The proposed rules offer a fair mechanism for developer reimbursements. The commission has modified §293.44(a)(16) to allow those developers who made advances to districts in good faith prior to the adoption of these rules to seek reimbursement under the existing policy.

After further consideration the commission has elected to retain the permissive verb currently found in §293.46(1)(5). The flexibility allowed by this term is preferred.

The forms addressed in §293.48 were misreferenced. The references have been corrected to correspond to their respective provisions found in §293.56 and §293.57.

Punctuation marks have been added to §293.50(b) to improve sentence structure.

Typographical errors have been corrected in §293.51. A typographical error in the letter of credit form set forth in §293.56 has been corrected.

A connecting word inadvertently omitted from §293.59 has been inserted.

The certification requirement found in §293.82 has been clarified. The commission proposed replacement language for the phrase "an increase" in §293.82(b). The proposed language "a change" was published correctly; however, the brackets for the terms proposed for deletion were not published. The inclusion of all the subject language renders the subsection confusing. Therefore, the commission adopts §293.82(b) as it should have been published.

Section 293.91 contains corrections to citation form and a connecting word needed to correct the sentence structure.

A typographical error in §293.96 has been corrected.

Section 293.97 was proposed as a new section. The published version of this section reflects a partial sentence in brackets denoting deletion. Since the section is new, the bracketed language was unnecessary and the commission has deleted the subject partial sentence.

A commenter suggested the addition of language which clarifies the overlapping fees provisions found in §293.176. The commission generally agrees with this comment and has included most of the suggested and other clarifying language. Another comment was received concerning the impact fees sections (§§293.171-293.177) generally. The commenter requested language requiring local governments (municipalities) located within a district to agree, by resolution, to accept a district's land use plan, or in the

alternative, for the local government to develop a land use plan encompassing the city and provide a copy to the district for inclusion in the district wide impact fee calculation. This type of requirement is inappropriate since it is beyond the commission's jurisdiction and has not been added to these rules.

Comments were received from the following groups/companies: Vinson & Elkins, Brushy Creek Municipal Utility District, Reed-Stowe & Company, and the Law Offices of Ronald J. Freeman.

General Provisions

• 31 TAC §293.6

The amendment is adopted under the Texas Water Code §§5.103, 5.105, and 5.235, which provides the Texas Water Commission with the authority to adopt any rules necessary to carry out the powers and duties under the provisions of the Texas Water Code and other laws of this state, to establish and approve all general policy of the commission, and to collect statutory fees from persons filing various applications with the commission.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on June 9, 1993.

TRD-9324027

Mary Ruth Holder
Director, Legal Division
Texas Water Commission

Effective date: June 30, 1993

Proposal publication date: March 26, 1993

For further information, please call: (512) 463-8069

Creation of Water Districts

• 31 TAC §293.14, §293.18

The amendments are adopted under the Texas Water Code, §§5.103, 5.105, and 5.235, which provides the Texas Water Commission with the authority to adopt any rules necessary to carry out the powers and duties under the provisions of the Texas Water Code and other laws of this state, to establish and approve all general policy of the commission, and to collect statutory fees from persons filing various applications with the commission.

§293.18. *Form of Notice of a Public Hearing on the Creation of a Water District.* The following form should be used to provide notice of the public hearing on the creation of a water district.

TO: ALL PERSONS INTERESTED IN THE PETITION FOR CREATION OF

DISTRICT,
OF _____ COUNTY, TEXAS
Notice is hereby given that a public hearing
will be held at _____ o'clock, ____m.,
on _____, 19____, before
the Texas Water Commission (the "Com-
mission"), in room _____ of the Stephen
F. Austin State Office Building, 1700 North
Congress Avenue, Austin, Travis County,
Texas, upon a Petition for the Organization
of _____ District (the
"Petition") relating to the proposed
_____ District of
_____ County, Texas

(the "District"). The Petition is filed and the
hearing is held under the authority of Chap-
ter _____, Subchapter _____, Texas
Water Code, 31 Texas Administrative Code
§§293.11-293.14 and under the Rules of
Procedure of the Commission. The Petition
reflects that it has been signed by land-
owners within the proposed District who
collectively represent a majority in value of
the owners of land therein, as required by
§_____, Texas Water Code.

The nature and purpose of the Petition is for
the organization, creation and establishment
of the District as a _____
district under the provisions of Article XVI,
Section 59, Texas Constitution, and Chapter
_____, Texas Water Code, as amended,
which District shall have the purposes pro-
vided for in Section _____, Texas Water
Code, and the powers provided for in Sec-
tion _____, Texas Water Code. The gen-
eral nature of the work to be done is the
purchase, construction, acquisition, owner-
ship, operation, repair, improvement and
extension of a waterworks and sanitary
sewer system for domestic and commercial
purposes, and a drainage system to control,
abate and amend harmful excesses of waters
and to reclaim and drain overflowed lands
within said District, all as more particularly
described in an engineer's report filed si-
multaneously with the filing of the Petition,
to which report reference is hereby made
for a more detailed description of the Dis-
trict's proposed facilities. Such report esti-
mates that the cost of all such
improvements will be \$_____.

The territory to be included within the pro-
posed District is set forth in the following
metes and bounds description designated as
Exhibit "A" hereto, and is depicted in the
following vicinity map designated as Ex-
hibit "B" hereto.

Any affected person may request an eviden-
tiary hearing. Affected persons appearing at
the hearing may request to be granted party
status and thereby have the opportunity to
present evidence and cross-examine
witnesses of the other parties concerning the
petition, the necessity and feasibility of the
proposed District's project, and the benefits
to accrue. All parties will be given an op-
portunity to negotiate a settlement prior to
the hearing on the merits. No person or
entity will be admitted as a party to the

proceeding unless the person or entity
complies with the Commission's Rules of
Procedure which require a showing of a
justiciable interest and attendance at the
hearing either in person or by a qualified
representative.

This agency hereby certifies that the rule as
adopted has been reviewed by legal counsel
and found to be a valid exercise of the agen-
cy's legal authority.

Issued in Austin, Texas, on June 9, 1993.

TRD-9324028 Mary Ruth Holder
Director, Legal Division
Texas Water Commission

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Proposal publication date: March 26, 1993

For further information, please call: (512)
463-8069

Appointment of Directors

• 31 TAC §§293.32-293.34

The amendments are adopted under the
Texas Water Code, §§5.103, 5.105, and
5.235, which provides the Texas Water Com-
mission with the authority to adopt any rules
necessary to carry out the powers and duties
under the provisions of the Texas Water
Code and other laws of this state, to establish
and approve all general policy of the commis-
sion, and to collect statutory fees from per-
sons filing various applications with the
commission.

§293.33. *Commission Appointment of Di-
rectors.* Requests for Appointment shall
be accompanied by the following:

(1) a petition signed by a land-
owner within the district requesting appoint-
ment of temporary directors or directors to
fill one or more vacancies on the board;

(2) evidence of each former di-
rector's failure or refusal to qualify or serve
for each vacancy on the board to be filled;

(3) requests for consideration of
appointment as director in the form shown
in §293.34 of this title (relating to Form of
Affidavit for Appointment as Director) for
those persons desiring consideration as di-
rector for vacant positions;

(4) a filing fee of \$100; and

(5) any other information as the
executive director may require.

This agency hereby certifies that the rule as
adopted has been reviewed by legal counsel
and found to be a valid exercise of the agen-
cy's legal authority.

Issued in Austin, Texas, on June 9, 1993

TRD-9324029 Mary Ruth Holder
Director, Legal Division
Texas Water Commission

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Proposal publication date: March 26, 1993

For further information, please call: (512)
463-8069

Issuance of Bonds

• 31 TAC §293.41

The repeal is adopted under the Texas Water
Code, §§5.103, 5.105, and 5.235, which pro-
vides the Texas Water Commission with the
authority to adopt any rules necessary to
carry out its powers and duties under the
provisions of the Texas Water Code and
other laws of this state, to establish and ap-
prove all general policy of the commission,
and to collect statutory fees from persons
filing various applications with the commis-
sion.

This agency hereby certifies that the rule as
adopted has been reviewed by legal counsel
and found to be a valid exercise of the agen-
cy's legal authority

Issued in Austin, Texas, on June 9, 1993.

TRD-9324036 Mary Ruth Holder
Director, Legal Division
Texas Water Commission

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Proposal publication date: March 26, 1993

For further information, please call: (512)
463-8069

Issuance of Bonds

• 31 TAC §§293.41, 293.43-293.48, 293.50, 293.51, 293.56, 293.57, 293.59

The new and amended sections are adopted
under the Texas Water Code (Vernon 1992),
§§5.103, 5.105, and 5.235 which provide the
Texas Water Commission with the authority
to adopt any rules necessary to carry out the
powers and duties under the provisions of the
Texas Water Code and other laws of this
state, to establish and approve all general
policy of the commission, and to collect statu-
tory fees from persons filing various applica-
tions with the commission.

§293.44. *Special Considerations.*

(a) Developer projects. The follow-
ing provisions shall apply unless the com-
mission, in its discretion, determines that
application to a particular situation renders
an inequitable result.

(1) A developer project is a dis-
trict engineering project which provides wa-
ter, sewer or drainage service for property
owned by a developer, as defined by the
Texas Water Code, §50.026(d).

(2) Except as permitted
pursuant to subsection (a)(8) of this section,
the costs of joint facilities that benefit the
district and others should be shared on the
basis of benefits received. Generally, the
benefits are the design capacities in the joint

facilities for each participant. Proposed cost sharing for conveyance facilities should account for both flow and inflow locations.

(3) The cost of clearing and grubbing of district facilities easements that will also be used for other facilities that are not eligible for district expenditures, such as roads, gas lines, telephone lines, etc., should be shared equally by the district and the developer, except where unusually wide road or street rights-of-way or other unusual circumstances are present, as determined by the commission. The district's share of such costs is further subject to any required developer contribution pursuant to §293.47 of this title (relating to Thirty Percent of District Construction Costs to be Paid by Developer). The applicability of the competitive bidding statutes and/or regulations shall be determined by the amount of the estimated district share, including any required developer contribution; provided, however, that in instances where such clearing and grubbing construction contracts are let and awarded in the developer's name and the developer's aggregate reimbursable share of such costs, including any required developer contribution, exceeds 50% of the total construction contract costs, the competitive bidding statutes and/or regulations are not considered to be applicable.

(4) A district may finance the cost of spreading and compacting of fill in areas that require the fill for development purposes, such as in abandoned ditches or floodplain areas, only to the extent necessary to dispose of the spoil material (fill) generated by other projects of the district.

(5) The cost of any clearing and grubbing in areas where fill is to be placed should not be paid by the district unless the district can demonstrate a net savings in the costs of disposal of excavated materials when compared to the estimated costs of disposal off site.

(6) When a developer changes the plan of development requiring the abandonment or relocation of existing facilities, the district may pay the cost of either the abandoned facilities or the cost of replacement facilities, but not both.

(7) When a developer changes the plan of development requiring the redesign of facilities that have been designed, but not constructed, the district may pay the cost of the original design or the cost of the redesign, but not both.

(8) A district shall not finance the pro rata share of oversized water, sewer or drainage facilities to serve areas outside the district unless:

(A) such oversizing:

(i) is required by or represents the minimum approvable design sizes

prescribed by local governments or other regulatory agencies for such applications;

(ii) does not benefit out-of-district land owned by the developer;

(iii) does not benefit out-of-district land currently being developed by others; and

(iv) the district agrees to use its best efforts to recover such costs if a future user outside the district desires to use such capacity; or

(B) the district has entered into an agreement with the party being served by such oversized capacity which provides adequate payment to the district to pay the cost of financing, operating and maintaining such oversized capacity; or

(C) the district has entered into an agreement with the party to be served or benefitted in the future by such oversized capacity, which provides for contemporaneous payment by such future user of the incremental increase in construction and engineering costs attributable to such oversizing and which, until the costs of financing, construction, operation, and maintenance of such oversized facilities are prorated according to paragraph (2) of this subsection, provides that:

(i) the capacity or usage rights of such future user shall be restricted to the design flow or capacity of such oversized facilities multiplied by the fractional engineering and construction costs contemporaneously paid by such future user; and

(ii) such future user shall pay directly allocable operation and maintenance costs proportionate to such restricted capacity or usage rights.

(9) Railroad, pipeline, or underground utility relocations that are needed because of road crossings should not be financed by the district; however, if such relocations result from a simultaneous district project and road crossing project, then such relocation costs should be shared equally.

(10) Engineering studies, such as topographic surveys, soil studies, fault studies, boundary surveys, etc., that contain information that will be used both for district purposes and for other purposes, such as roadway design, foundation design, land purchases, etc., should be shared equally by the district and the developer, unless unusual circumstances are present as determined by the commission.

(11) Land planning, zoning, and development planning costs should not be paid by the district, except for conceptual land use plans required to be filed with a city as a condition for city consent to creation of the district.

(12) The cost of constructing lakes or other facilities that are part of the developer's amenities package should not be paid by the district. The cost of combined lake and detention facilities should be shared with the developer on the basis of the volume attributable to each use, and land costs should be shared on the same basis, unless the district can demonstrate a net savings in the cost of securing fill and construction materials from such lake or detention facilities, when compared to the costs of securing such fill or construction materials off-site.

(13) Bridge and Culvert Crossings shall be financed in accordance with the following provisions.

(A) The costs of bridge and culvert crossings needed to accommodate the development's road system shall not be financed by a district unless such crossing consists of a single culvert with a cross sectional area of not more than nine square feet. The districts share shall be subject to the developer's 30% contribution as may be required by §293.47 of this title.

(B) Drainage Districts and Levee Improvement Districts which were confirmed and operating pursuant to the Water Code, Chapters 56 and 57, respectively, prior to September 1, 1989, may fund the costs of bridge and culvert crossings larger than those specified in subparagraph (A) of this paragraph which are necessary as a result of required channel improvements subject to the following limitations:

(i) the crossing must be located entirely or partially within the district's boundaries;

(ii) the drainage channel construction or renovation must benefit property within the district's boundaries;

(iii) the costs shall not exceed a pro rata share based on the percent of total drainage area of the channel crossed, measured at the point of crossing, calculated by taking the total cost of such bridge or culvert crossing multiplied by a fraction, the numerator of which is the total drainage area located within the district upstream of the crossing, and the denominator of which is the total drainage area upstream of the crossing;

(iv) the district shall be responsible for not more than 50% of the cost as calculated under this subsection, subject to the developer's 30% contribution as may be required by §293.47 of this title.

(C) The cost of replacement of existing bridges and culverts not con-

structed or installed by the developer, or the cost of new bridges and culverts across existing roads not financed or constructed by the developer, may be financed by the district, except that any costs of increasing the traffic carrying capacity of bridges or culverts shall not be financed by the district.

(14) In evaluating district construction projects, including those described in paragraphs (1) -(12) of this subsection, primary consideration shall be given to engineering feasibility and whether the project has been designed in accordance with good engineering practices, notwithstanding that other acceptable or less costly engineering alternatives may exist.

(15) Bond issue proceeds will not be used to pay or reimburse consultant fees for the following:

(A) special or investigative reports for projects which, for any reason, have not been constructed and, in all probability, will not be constructed;

(B) fees for bond issue reports for bond issues consisting primarily of developer reimbursable and approved by the commission but which are no longer proposed to be issued; or

(C) fees for completed projects which are not and will not be of benefit to the district; provided, however, that the foregoing limitations shall not apply to regional projects or special or investigative reports necessary to properly evaluate the feasibility of alternative district projects.

(16) The district shall not program bond funds to finance operation and administrative costs except for:

(A) deficits incurred during the period of construction prior to the issuance of the subject bonds or the net expenses expected to accrue during the period of construction after the issuance of the subject bonds but in no event shall the total period exceed three years;

(B) deficits incurred for the district's share of operation and administration costs resulting from the district entering into an agreement for the construction of a Water Plant or Waste Water Treatment Plant serving or programmed to serve three thousand equivalent single family connections or more. For purposes of this paragraph, deficits shall be calculated by taking the total operating and administrative cost of the district for the period and subtracting:

(i) revenue received which shall include but not be limited to interest earnings, rates, charges and other fees assessed by the district; and

(ii) revenue which would be received from the assessment of a \$0.25 per/\$100 assessed valuation maintenance tax during the period assuming a 100% collection rate.

(C) Advances made to a district for operation and administrative cost prior to June 1, 1993, if all of the following are true:

(i) a reimbursement agreement was executed with the district in good faith at the time the advance was made; and

(ii) the total reimbursed does not exceed three years of actual operating and administration expenses incurred by the district.

(D) Lease payments associated with lease/purchase agreements for central plant capacity.

(17) In instances where creation costs to be paid from bond proceeds are determined to be excessive, the executive director may request that the developer submit invoices and cancelled checks to determine whether such creation costs were reasonable and customary and necessary for district creation purposes. Such creation costs shall not include planning, platting, zoning, other costs prohibited by paragraphs (10) and (14) of this subsection and other matters not directly related to the district's water, sewage and drainage system, even if required for city consent.

(18) The district shall not purchase, pay for or reimburse the cost of facilities, either completed or incomplete, from which it has not and will not receive benefit, even though such facilities may have been at one time required by a city or other entity having jurisdiction.

(19) The district shall not enter into any binding contracts with a developer which compel the district to become liable for costs above those approved by the Commission.

(20) A district shall not purchase more water supply or wastewater treatment capacity than is needed to meet the foreseeable capacity demands of the District, except in circumstances where:

(A) lease payments or capital contributions are required to be made to entities owning or constructing regional water supply or wastewater treatment facilities to serve the district and others;

(B) such purchases or leases are necessary to meet minimum regulatory standards; or

(C) such purchases or leases are justified by considerations of economic or engineering feasibility.

(b) All projects.

(1) The purchase price for existing facilities not covered by a preconstruction agreement or otherwise not constructed by a developer in contemplation of resale to the district should be established by an independent appraisal by a registered professional engineer hired by the district. The appraised value should reflect the current condition of the facilities and estimated cost of repair, as evidenced by an on-site inspection.

(2) (No change.)

(3) Contract revenue bonds proposed to be issued by districts for facilities providing water, sewer or drainage, pursuant to contracts authorized under Local Government Code, §402.014, or other similar statutory authorization, will be approved by the commission only when the city's pro rata share of debt service on such bonds is sufficient to pay for the cost of the water, sewer or drainage facilities proposed to serve areas located outside the boundaries of the service area of the issuing district.

(4) (No change.)

§293.50. *Developer Interest Reimbursement.*

(a) A developer may be reimbursed by a district for interest accrued for a period of up to two years after the final payment by the developer on approved construction pay estimates, professional fees and attendant nonconstruction costs paid by a developer for providing facilities in anticipation of sale to such district. If final payment on a construction contract is 95% complete, the initiation of the two year interest accrual period will be six months from the date the contract is 95% complete, unless the developer can demonstrate a genuine contractual dispute with the contractor, or other extenuating reasons, as determined by the commission. The interest rate shall not exceed the net effective interest rate on the bonds sold, or the interest rate actually paid by the developer for loans obtained for this purpose, whichever is less. If a developer uses its own funds rather than borrowed funds, the net effective interest rate on the bonds sold shall be applied.

(b) If reimbursement for accrued interest for a period of more than two years after the completion date allowed in (a) of this subsection is requested by a district, and if no interest reimbursement has occurred, additional accrued interest up to five years from the completion date of the construction contracts including related professional fees and nonconstruction costs may

be allowed if deemed feasible by the commission, and if:

(1)-(2) (No change.)

(c) (No change.)

(d) If otherwise determined to be feasible by the commission, time limitations on accrued developer interest shall not apply to:

(1) wastewater treatment facilities serving or projected to serve 2,000 acres or more;

(2)-(4) (No change.)

(5) drainage channels, levees and other flood control facilities and stormwater detention facilities meeting the requirements of §293.52 of this title (relating to Storm Water Detention Facilities) and §293.53 of this title (relating to District Participation in Regional Drainage Systems) which are serving or are programmed to serve 2,000 acres or more.

(e) These time limitations on accrued developer interest also apply to advances made for organizational costs, repair costs and lease payments for central plant capacity associated with lease/purchase agreements.

§293.51. Land and Easement Acquisition.

(a) Water, Sanitary Sewer, Storm Sewer, and Drainage Facilities Easements. All easements required within a district's boundaries for water lines, sanitary sewer lines, storm sewer lines, drainage channels, sanitary control at water plants, and noise and odor control at wastewater treatment plants shall be dedicated to the public by the developer without reimbursement from the district. If any easements are required for such facilities on land not owned by a developer in the district, the district may acquire such land at its appraised market value, and may also pay legal, engineering, surveying or court fees and expenses incurred in acquiring such land, and §293.47 of this title (relating to 30% of District Construction Costs To be Paid by Developer) shall not apply to such acquisition.

(b) Plants, Lift, or Pump Stations, Detention Ponds and Levee Sites. All land needed by a district for plants, lift or pump stations, detention/retention ponds, or levees may be acquired in fee simple or by easement from any person, including the developer, in accordance with this section, and §293.47 of this title (relating to 30% of District Construction Costs To be Paid by Developer) shall not apply to such acquisition. If a district acquires such a site from a developer within the district or subsequent owner of developer reimbursables, the price shall be determined by adding to the price paid by the developer for such land or easement in a bona fide transaction between

unrelated parties the developer's actual carrying charges (taxes and interest paid to the date of acquisition by the district); provided, however, if the executive director determines that such price appears to exceed the fair market value of such land or easement, he may require an appraisal to be obtained by the district from a qualified independent appraiser and payment to the seller may be limited to the fair market value of such land as shown by the appraisal; if the seller acquired the land after the improvements to be financed by the district were constructed, the price shall be limited to the fair market value of such land or easement established without the improvements being constructed; or if the seller acquired the land more than five years before the creation of the district and the records relating to the actual price paid and the actual carrying charges are impossible or difficult to obtain, the district, upon executive director approval, may purchase such site at fair market value based on an appraisal prepared by a qualified, independent appraiser. If the land or easement needed by the district is being acquired based on the appraised value, the application to the commission for approval to purchase such site must contain a request by the district to acquire the site in such manner and must explain the reason the seller is unable to provide price and carrying cost records. If the land or easement needed by the district is being acquired from an entity other than a developer or subsequent owner of developer reimbursables in the district, the district may pay the fair market value established by a qualified, independent appraiser, and may also pay legal, engineering, surveying, or court fees and expenses incurred in acquiring such land or easement.

(c) Joint Stormwater Detention/Water Amenity Facilities. If a detention or retention pond is also being used as an amenity by the developer, payment to the developer shall be limited to that cost that is associated only with the drainage function of the facility. The land costs of combined water amenity and detention facilities should be shared with the developer on the basis of the volume of water storage attributable to each use.

(d) Land or Easements Outside the District's Boundaries. Land or easements needed for any district facilities outside the district's boundaries may be purchased by the district as part of the district project at a price not to exceed the fair market value thereof. The district may also pay legal, engineering, surveying or court fees and expenses spent in acquiring such land. If the land or easements are purchased from a developer who owns land within the district, the price paid by the district shall be determined in accordance with subsection (b) of this section and such purchase price shall be subject to the provisions of §293.47

of this title unless the facilities constructed in, on, or over such land, easements or rights-of-way are, exempt from such contribution or the district is exempt from such contribution under the terms of §293.47 of this title.

(e) When one or more upstream districts need land or easements through one or more downstream district(s) each upstream district may pay its pro rata share for its needs if none of the acquisitions is or will be required for partial or full development of the downstream district(s). If the out-of-district land or easement is required for a drainage channel downstream of the district and a portion of such land or easement is or will be needed by another district(s), whether upstream or downstream, for development, the district shall only pay for its proportionate share of the land costs based upon the acreage of the drainage area contributing drainage to such drainage channel at full development. However, in the event there is no developer in another district(s) to dedicate the district's pro rata share of the required land, the district may pay the entire cost to acquire such land, but the commission shall order the other district(s) to reimburse the district at such time as development occurs in the other district that requires such drainage right-of-way.

(f) Regional Facilities. A district may use bond proceeds to acquire the entire site for any regional plant, lift or pump station, detention pond, drainage channel, or levee if the commission determines that regionalization will be promoted and the district will recover the appropriate pro rata share of the site costs, carrying costs and bond issuance costs from future participants. The district may pay the fair market value based on an appraisal for such regional site and also may pay legal, engineering, surveying, or court fees and expenses incurred in acquiring such land. The commission shall, by separate order, order other districts participating in such regional facility to reimburse the acquiring district a proportionate share of such site costs, carrying costs and bond issuance costs at such time as development occurs in such other districts requiring such regional site.

(g) Prior to the district purchasing or obligating district funds for the purchase of sites for water plants, wastewater plants or lift or pump stations, the district must have a registered professional engineer certify that the site is suitable for the purposes for which it intended and identify what areas will need to be designated as buffer zones to satisfy all entities with jurisdictional authority.

§293.56. Requirements for Letters of Credit (LOC).

(a) Any LOC submitted as a financial guarantee for combined amounts greater than \$10, 000 and less than \$250,000 pursuant to these rules must be from financial institutions which meet the following qualifications:

(1) Qualifications for Banks:

(A) must be federally insured;

(B) Sheshunoff rating must be ten or better; and

(C) total assets must be at least 50 million dollars.

(2) Qualifications for Savings and Loan Associations:

(A) must be federally insured; and

(B) tangible capital must be at least:

(i) 1.5% of total assets if total assets are fifty million dollars or more; or

(ii) tangible capital must be at least 3.0% of total assets if total assets are less than 50 million dollars; and

(C) Sheshunoff rating must be 30 or better.

(b) any LOC submitted as a financial guarantee for combined amounts greater than \$250,000 pursuant to these rules must be from financial institutions which meet the following qualifications.

(1) Qualifications for Banks:

(A) must be federally insured;

(B) Sheshunoff rating must be 30 or better; and

(C) total assets must be at least 75 million dollars.

(2) Qualifications for Savings and Loan Associations.

(A) must be federally insured;

(B) tangible capital must be at least:

(i) 3.0% of total assets and total assets must be 75 million dollars or more; or

(ii) tangible capital must be at least 5.0% of total assets if total assets are less than 75 million dollars; and

(C) Sheshunoff rating must be thirty or better.

(c) All LOC's must be valid for a minimum of one year from the date of issuance and should provide that if the letter of credit is:

(1) not renewed for an additional year at least 30 days prior to its date of expiration;

(2) not called upon in its entirety at least 30 days prior to its date of expiration;

(3) not found to be unnecessary by the commission at least 30 days prior to its date of expiration; or

(4) unless the construction project has been completed as certified by the district's engineer at least 30 days prior to its date of expiration; the financial institution shall deposit in a special account in the name of the district, the face amount of the letter of credit. The District shall not commit or expend such funds until the commission has held a hearing authorizing the use of said funds.

(d) All LOC's required pursuant to these rules must be approved by the commission staff.

(e) Form of Letter of Credit. The following form shall be used as a letter of credit for the financial guarantee for utilities construction and/or construction and paving of streets.

ROCK OF GIBRALTAR BANK

LETTER OF CREDIT

GREEN ACRES MUNICIPAL

UTILITY DISTRICT

ONE HOLLOW LOG LANE

MEGALOPOLIS, TEXAS 77000

Irrevocable Credit No. 1

Amount: \$250,000

GENTLEMEN:

You are hereby authorized to value on ROCK OF GIBRALTAR BANK for account of ALL AMERICAN HOMES, INC. up to an aggregate amount of ----- TWO HUNDRED FIFTY THOUSAND AND NO/100 DOLLARS ----- available by your drafts at ----- SITE ----- to be accompanied by the original of this letter of credit and the following documents:

(1) Written statement signed by the President or Vice President of the Board of Directors of Green Acres Municipal Utility District that All American Homes Inc. has failed to construct streets in Knot Holes West Subdivision in accordance with the terms of the Utility/Street And Road Construction Agreement dated December 1, 1980. (Required only for draft Number One), and a written certification(s) by the engineer for Green Acres Municipal Utility District that payment is due to the contractor for construction of streets in Knot Holes

West Subdivision in the amount shown on the draft(s); or

(2) Written statement signed by the President or Vice President of the Board of Directors of Green Acres Municipal Utility District that All American Homes, Inc. has failed to renew or replace this letter of credit within 45 days prior to its expiration date; or

(3) Written statement signed by the President or Vice president of the Board of Directors of Green Acres Municipal Util-

ity District that All American Homes, Inc. has commenced any proceeding, voluntary or involuntary, or that any proceeding has been commenced against All American Homes, Inc. involving bankruptcy, insolvency, reorganization, liquidation or dissolution of All American Homes, Inc., that any receiver has been appointed by All American Homes, Inc., or that All American Homes, Inc. has made a general assignment for the benefit of creditors. Multiple drafts may be presented.

Drafts must be presented to drawee bank not later than May 31, 1983, all drafts must state on their face "DRAWN UNDER ROCK OF GIBRALTAR BANK IRREVOCABLE CREDIT NUMBER ONE".

We hereby engage with you, that all drafts drawn under and in compliance with the terms of this credit will be duly honored, if drawn and presented for payment at our office in Megalopolis, Texas, on or before the expiration date of this credit.

We further engage with you that without further notice, we shall deposit in a special account in the name of the district, the remaining face amount of the letter of credit if the letter of credit is:

(1) not renewed for an additional year at least 30 days prior to its date of expiration;

(2) not called upon in its entirety at least 30 days prior to its date of expiration;

(3) not found to be unnecessary by the Executive Director of the Texas Water Commission at least 30 days prior to its date of expiration; or

(4) unless the construction project has been completed as certified by the district's engineer at least 30 days prior to its date of expiration.

Very truly yours,
Authorized Signature

§293.59. Economic Feasibility of project.

(a) In addition to determining the engineering feasibility of a project, the commission shall also determine the economic feasibility of each proposed bond issue, bond amendment, and extension of time application for a bond issue. The staff of the commission shall use the following sections in making economic feasibility analysis. In its written recommendations to the commission which analyzes the particular application, the staff shall always address the economic feasibility.

(b)-(j) (No change.)

(k) For a district's first bond issue, the following paragraphs apply except that paragraphs (5), (6), (7), (8), and (10) of this subsection are only applicable to a dis-

trict that has a developer as defined by Texas Water Code, §50.026(d).

(1)-(7) (No change.)

(8) For bonds supported by taxes, a written agreement must be executed between the district and the developer and any other landowner and their respective lenders receiving proceeds of the bonds which permanently waives the right to claim agricultural, open-space, timberland or inventory valuation for any land, homes or buildings which they own in the district with respect to taxation by the district. The agreement shall be binding for 30 years on such developer, other landowners, their respective lenders, any related or affiliated entities and their successors and assignees, unless such exemptions were in effect at the time of the commission's approval of the bond issue and such exemptions were shown in the projected tax rate calculations. Such developer, landowners, and lenders shall record covenants running with the land to such effect, which shall not be modified or released without written authorization of the commission, and shall provide recorded copies to the commission prior to the approval of the bond issue.

(9)-(10) (No change.)

(11) Requirements of subsection (k)(6)(A)(C) and (E), and the requirements of subsection (k)(7) of this section shall not apply in the following cases where:

(A) the no-growth debt service tax rate for a district containing 2,000 acres or more providing only drainage facilities does not exceed \$1.30; the no-growth debt service tax rate of a district providing major water and sewage facilities which it finances by the issuance of its bonds to an area containing 2,000 acres or more does not exceed \$1.30, and the combined no-growth debt service tax rate does not exceed \$2.00; and, the developer has completed a substantial amount of major thoroughfare or other infrastructure to serve the district; or

(B)-(C) (No change.)

(D) for the immediately preceding exceptions in paragraph (11)(A) or (C) of this subsection, the developer shall provide a guarantee for its 30% share, if required pursuant to §293.47 of this title (relating to 30% of District Construction Costs To Be Paid by Developer), in the form and manner required by subsection (g) thereof. For the immediately preceding exceptions in paragraph (11)(B) or (C) of this subsection, the developer shall provide a paving guarantee pursuant to §293.48 of this title (relating to Street and Road Construction by Developer).

(I) (No change.)

(m) Except for districts whose primary purpose is to provide service for agricultural uses, the economic feasibility of bond issues supported by benefit assessments shall be analyzed by converting the assessment to an equivalent tax rate per unit of assessment. The calculated equivalent tax rate shall be added into the combined no-growth tax rate defined in subsection (e) and the combined projected tax rate defined in subsection (f) of this section. The commission may compare these equivalent tax rates to those listed in subsection (k)(3) and (4) of this section.

(n) Bond issues supported only by revenue from a defined area shall be analyzed to assure that the defined area meets the requirements of this section independently of the remainder of the issuing district.

(o) A district may request a variance if it does not meet the guidelines contained in subsection (k) and (l) of this section, and a majority of the district's board of directors finds by resolution that the district would be justified in requesting a variance. The district will be responsible for providing sufficient documentation to justify any request for a variance. The commission will only grant variances in exceptional cases and may deny any request for a variance. The Commission shall not grant a variance to the maximum combined projected debt service tax rate or the maximum combined no-growth debt service tax rate specified in subsection (k) of this section for Districts that have a developer and the district is financing 100% of construction costs pursuant to criteria set out in §293.47(a) of this title which would otherwise require 30% developer participation. In determining whether to grant a variance, the following factors shall be considered;

(1)-(7) (No change.)

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on June 9, 1993.

TRD-9324030

Mary Ruth Holder
Director, Legal Division
Texas Water Commission

Effective date: July 1, 1993

Proposal publication date: March 26, 1993

For further information, please call: (512) 463-8069

District Actions if the Commission Approves the Engineering Project and Issuance of Bonds

• 31 TAC §§293.61, §291.62

The repeals are adopted under the Texas Water Code, §§5.103, 5.105, and 5.235, which provides the Texas Water Commission with the authority to adopt any rules necessary to carry out its powers and duties under the provisions of the Texas Water Code and other laws of this state, to establish and approve all general policy of the commission, and to collect statutory fees from persons filing various applications with the commission.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on June 9, 1993.

TRD-9324038 Mary Ruth Holder
Director, Legal Division
Texas Water Commission

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Proposal publication date: March 26, 1993

For further information, please call: (512) 463-8069

◆ ◆ ◆
District Actions if the Commission Approves the Engineering Project and Issuance of Bonds

• 31 TAC §§293.61, 293.62, 293.70

The amendment and new sections are adopted under the Texas Water Code (Vernon 1992), §§5.103, 5.105, and 5.235, which provides the Texas Water Commission with the authority to adopt any rules necessary to carry out the powers and duties under the provisions of the Texas Water Code and other laws of this state, to establish and approve all general policy of the commission, and to collect statutory fees from persons filing various applications with the commission.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

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TRD-9324031 Mary Ruth Holder
Director, Legal Division
Texas Water Commission

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For further information, please call: (512) 463-8069

Other Actions Requiring Commission Consideration of Approval

• 31 TAC §§293.81-293.88

The amendments and new sections are adopted under the Texas Water Code, §§5.103, 5.105, and 5.235, which provides the Texas Water Commission with the authority to adopt any rules necessary to carry out the powers and duties under the provisions of the Texas Water Code and other laws of this state, to establish and approve all general policy of the commission, and to collect statutory fees from persons filing various applications with the commission.

§293.82. *Change in Project Scope or Plans.*

(a) A change in project scope is a change in projects funded or a change in the land use plan used to support the feasibility of a commission-approved bond issue which affects the central water or wastewater needs of the district or the amount of financial guarantees required pursuant to commission rules and that does not require an increase in the commission-approved bond amount. All applications for a change in the project scope shall include:

(1) a copy of a resolution or letter signed by a majority of the governing board, indicating concurrence in the proposed change;

(2) revised land use plan;

(3) revised build-out projections used to support the feasibility of the bond issue, if changed;

(4) revised cash-flow analysis, if revised build-out projections have caused a reduction in projected assessed valuations;

(5) a complete justification for the change;

(6) the number of equivalent utility connections added or deleted by the change;

(7) an engineer's certification as to the availability and sufficiency of water supply and wastewater treatment capacities to serve such additional connections;

(8) a draft of the revised financial guarantee and an agreement between the district and developer, along with an engineer's cost-estimate to complete the required projects if a change in the amount of financial guarantees is necessary to comply with commission rules;

(9) a Market Study Update if one was required at the time of the bond approval and bonds have not been issued and there has been a change in type of development;

(10) plans and specifications approved by all entities having jurisdictional responsibilities; and

(11) other information as the executive director or commission may require.

(b) A change in plans is a change in commission-approved plans and specifications for construction work that is not under contract and that does not require a change in the commission-approved bond amount.

(1) No commission approval is required if the change in plans is \$25,000 or less.

(2) If the change in plans is \$25,000 or less, a copy of the change order signed by the contractor and an authorized representative of the district shall be filed with the executive director within 10 days of the execution date of the change order, together with any revised construction plans and specifications approved by all agencies and entities having jurisdictional responsibilities, i.e., city, county, state, or other, if required.

(3) All applications for change in plans shall include:

(A) a copy of a resolution or letter, signed by the governing board, indicating concurrence in the proposed change (and for drainage districts, an advertisement affidavit indicating the proposed change in plans was published as required by the Texas Water Code, §56.123);

(B) a revised construction plans and specifications approved by all agencies and entities having jurisdictional responsibilities, i.e., city, county, state, and other, if required;

(C) a revised land use plan, if changed;

(D) a detailed explanation for the change;

(E) a detailed cost summary showing additions and/or deletions to the approved plans and specifications and new cost estimate;

(F) a statement indicating amount and source of funding for the change in plans, including how the available funds were generated;

(G) the number of utility connections added or deleted by the change;

(H) an engineer's certification as to the availability and sufficiency of water supply and wastewater treatment capacities to serve such additional connections;

(I) a filing fee in the amount of \$100; and

(J) other information as the executive director or the commission may require.

(4) For purposes of this section, if either the total additions or total deletions contained in the change order exceed \$25,000, even though the net change in the contract price will be \$25,000 or less, approval by the executive director is required.

(c) Copies of all changes in plans, specifications, and supporting documents for all water district projects will be sent directly to the appropriate commission field office, simultaneously with the submittal of the documents to the executive director.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on June 9, 1993.

TRD-9324033 Mary Ruth Holder
Director, Legal Division
Texas Water Commission

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For further information, please call: (512) 463-8069

◆ ◆ ◆
Other Actions Requiring Commission Consideration for Approval

◆ ◆ ◆
• 31 TAC §293.82

The repeal is adopted under the Texas Water Code, §§5.103, 5.105, and 5.235, which provides the Texas Water Commission with the authority to adopt any rules necessary to carry out its powers and duties under the provisions of the Texas Water Code and other laws of this state, to establish and approve all general policy of the commission, and to collect statutory fees from persons filing various applications with the commission

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

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Director, Legal Division
Texas Water Commission

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For further information, please call: (512) 463-8069

Reports

◆ ◆ ◆
• 31 TAC §§293.91, 293.92, 293.94-293.97

The amendments and new sections are adopted under the Texas Water Code, §§5.103, 5.105, and 5.235, which provides the Texas Water Commission with the authority to adopt any rules necessary to carry out its powers and duties under the Water Code and other laws of the State of Texas, to establish and approve all general policy of the commission, and to collect statutory fees from persons filing various applications with the commission.

◆ ◆ ◆
§293.91. Reporting by Districts.

(a) All districts are required to file certain documents and reports with the executive director by the Texas Water Code, Chapter 50, as follows:

(1)-(5) (No change.)

(6) an annual audit report, financial report, or financial dormancy affidavit, as required by subsections (c), (e), and (f) of §293.94 of this title (relating to Annual financial Reporting Requirements); and

(7) an annual filing affidavit, as required by subsection (g) of §293.94 of this title (relating to Annual financial Reporting Requirements), and the Texas Water Code, §50.374(d), certifying that all filings of copies of the annual audit report, an annual financial dormancy affidavit, or annual financial report, as applicable, have been completed.

(b) (No change.)

◆ ◆ ◆
§293.96. Miscellaneous Reports To Be Filed with the Executive Director.

(a) Certified copy of order canvassing results of any maintenance tax elections shall be filed within 30 days after adoption.

(b) Certified copy of water and sewer rate order adopted by the board and any amendments thereto, shall be filed within 30 days of adoption.

◆ ◆ ◆
§293.97. Adoption of Fiscal Year and Operating Budget.

(a) Fiscal year. Within 30 days after a district becomes financially active, the governing board of that district shall adopt a fiscal year by a formal board resolution and so note it in the district's minutes. The president or chairman of the governing board, a member of the board designated by the presiding officer, or the attorney representing the district shall notify the executive director of the adopted fiscal year within 30 days after adoption.

(b) Operating Budget. Prior to the start of a fiscal year, or as soon thereafter as possible, the governing board of each active district shall adopt an operating budget for the upcoming fiscal year. The adopted bud-

get and any subsequent amendments shall be passed and approved by a resolution of the governing board and shall be made a part of the governing board minutes. Budget amendments may be made from time to time in the discretion of the governing board. The adopted budget is not a spending limitation imposed by the commission. However, the governing board may adopt rules to limit the spending authority of the district officers in relation to the budget. A comparison of the actual operating results to the adopted budget, as amended, shall be presented in the annual report of each district. The budgetary comparison statement shall be included either within the audited financial statements or within a supplementary section.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on June 9, 1993.

TRD-9324032 Mary Ruth Holder
Director, Legal Division
Texas Water Commission

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Proposal publication date: March 26, 1993

For further information, please call: (512) 463-8069

◆ ◆ ◆
Reports

◆ ◆ ◆
• 31 TAC §293.95

The repeal is adopted under the Texas Water Code, §§5.103, 5.105, and 5.235, which provides the Texas Water Commission with the authority to adopt any rules necessary to carry out its powers and duties under the provisions of the Texas Water Code and other laws of this state, to establish and approve all general policy of the commission, and to collect statutory fees from persons filing various applications with the commission

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on June 9, 1993.

TRD-9324040 Mary Ruth Holder
Director, Legal Division
Texas Water Commission

Effective date: June 30, 1993

Proposal publication date: March 26, 1993

For further information, please call: (512) 463-8069

◆ ◆ ◆
Dissolution of Districts

◆ ◆ ◆
• 31 TAC §293.131

The amendment is adopted under the Texas Water Code, §§5.103, 5.105, and 5.235, which provides the Texas Water Commission

with the authority to adopt any rules necessary to carry out its powers and duties under the provisions of the Texas Water Code and other laws of this state, to establish and approve all general policy of the commission, and to collect statutory fees from persons filing various applications with the commission.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on June 9, 1993.

TRD-9324034 Mary Ruth Holder
Director, Legal Division
Texas Water Commission

Effective date: June 30, 1993

Proposal publication date: March 26, 1993

For further information, please call: (512) 463-8069

Petition for Approval of Impact Fees

• 31 TAC §§293.171-293.177

The new sections are adopted under the Texas Water Code, §§5.103, 5.105, and 5.235, which provides the Texas Water Commission with the authority to adopt any rules necessary to carry out its powers and duties under the provisions of the Texas Water Code and other laws of this state, to establish and approve all general policy of the commission, and to collect statutory fees from persons filing various applications with the commission.

§293.176. Prior Approval of Overlapping Impact Fees. If a district is required to collect an impact fee for another political subdivision which has complied with the procedures set out in Texas Civil Statutes, Local Government Code, Chapter 395, then the district is not required to seek further approval from the commission of the same fee. A test for applying this section shall be that the district does not retain any portion of said impact fee for its own use, but that it passes all such fees through to the political subdivision which has adopted said impact fee.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on June 9, 1993.

TRD-9324035 Mary Ruth Holder
Director, Legal Division
Texas Water Commission

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For further information, please call: (512) 463-8069

Chapter 334. Underground and Aboveground Storage Tanks

Subchapter M. Reimbursable Cost Guidelines for the Petroleum Storage Tank Reimbursement Program

• 31 TAC §334.560

The Texas Water Commission (Commission) adopts new §334.560, concerning Reimbursable Cost Guidelines for the Commission's Petroleum Storage Tank Reimbursement Program, with changes to the proposed text as published in the March 12, 1993, issue of the *Texas Register* (18 TexReg 1625). This section is adopted to implement by rule necessary guidelines for determining amounts that may be paid from the petroleum storage tank remediation fund to make the most efficient use possible of the money and to provide the most effective protection to the environment and public health and safety.

Section 334.560 contains the Reimbursable Cost Guidelines for the Petroleum Storage Tank Reimbursement Program. The adopted section also provides that the cost guidelines will be used to evaluate and process all claims for costs incurred in the performance of corrective action activities associated with leaking petroleum storage tank (LPST) sites.

Public comment on the proposed section was received in writing during the 30-day comment period and at the seven public meetings from the following groups: Chambers Pump Service, Inc., CURA, East Texas Testing Labs, ERM-Southwest, Inc., Environmental Fuel Systems, G.L. "Hoot" Gibson Construction, Industry Council on the Environment, Landmark Environmental, Marshall and Son Construction, Methodist Hospital, Milier Tank Testing, National Convenience Stores, Parkhill Smith & Cooper, Inc., Petroleum Services, Petroleum Solutions, Inc., Post Economic Development Corporation, Rauhut & Associates, Sussner Environmental Services, Texas Association of Storage Tank Professionals, Texas Automobile Dealers Association, Texas Mid-Continent Oil & Gas Association, Texas Oil Marketers Association, TU Services, Inc., and White's Pump Service.

The commission received comments regarding unit rates, hours allowed for personnel, costs for corrective action activities, equipment prices, and disposal. The commenters stated that the proposed costs are low compared to market rates and some are below actual costs. The commission responds that it believes that the proposed costs, which were determined through a market survey of the petroleum industry composed of owners and operators, contractors, consultants, oil marketers, and PST Task Force members, reasonably reflect the fair market value of costs associated with the cleanup of LPST sites.

A commenter stated that the costs incurred by some owners and operators are lower than for others due to differing levels of consulting that are needed, and that large companies with trained staff may show less cost because they use in-house consultants but do

not include those costs in their reimbursement applications. The commission responds that when determining the reimbursable costs, only the fair market value for cleaning up LPST sites was evaluated without regard to involvement by the owner or operator.

A commenter stated that the markup of subcontractor's charges should be treated the same as purchasing parts and supplies for inventory. Another commenter stated there needs to be a more realistic markup of third party goods and services based on market conditions and business economics. The commission believes that the guidelines for markup rates fairly reflect the costs to contractors of hiring subcontractors for various remediation activities.

A commenter stated that the hours allowed for professionals are unreasonable because of the restrictions placed on certain professionals with regard to negotiating hours. Another commenter objected to the TWC specifying personnel classifications for businesses. The commission responds that the hours allowed were based on a market survey of certain corrective action activities. The commission has the statutory authority to implement by rule necessary guidelines for determining amounts that may be paid from the petroleum storage tank remediation fund. The commission also responds that the cost guidelines are not intended to impact the business arrangements that a professional engages in, rather, it is providing an owner or operator a range of costs within which the commission will reimburse for certain activities. In addition, the titles designated for individuals performing certain corrective action activities were developed to standardize these functions and to provide consistency in the technical and financial review of reimbursement applications.

A commenter stated that the cost guidelines need to be clarified since it is unclear what specific costs are included in the general categories. The commission responds that it believes that the guidelines provide sufficient detail to enable owners, operators, contractors, and consultants to carry out corrective action activities. The commission believes that some flexibility and independent decision making should be left up to the parties involved.

A commenter stated the Reimbursable Cost Guidelines may reduce competition since they leave no room for justification of expenses on the more severe LPST sites. Another commenter stated the guidelines do not appear to allow owners and operators to exceed the guidelines due to variable site conditions. Another commenter stated that the Reimbursable Cost Guidelines is meant to establish guidelines, not ceilings on costs and that if costs fall above the established guideline, benefit of the doubt should be given to the responsible party, assuming that the actions were taken in good faith. The commission responds that a justification for those costs that exceed the reimbursable cost guidelines should be submitted to the executive director for a determination as to whether those costs are allowable for reimbursement. The guidelines are not intended to set pricing for certain activities or to remove an element

of competition for the petroleum storage tank industry; rather, the guidelines are intended to allow for a range of costs that will not be static, but which can be as dynamic as necessary to support and enhance competition.

Some commenters suggested that the commission formalize the statement in the preamble to this proposal which states that upon executive director approval, costs associated with tank removals can be applied toward the deductible. This commenter wanted a clarification that this applies when corrective action is required. Another commenter expressed a concern that if costs of tank pulls are used to offset the deductible, this would only benefit owners of multiple tanks, and not the smaller tank owners. The commission responds that since §334.308 of this chapter provides for reimbursement of a portion of costs associated with tank removals, the remaining costs incurred shall not be applied to reduce the owner/operator contribution.

A commenter stated that the proposed regulations and limits on reimbursable costs appear not to have been coordinated internally within the commission. The commission responds that the cost guidelines were developed by the commission's technical, fiscal, and legal staff, along with members of the PST Task Force, which is composed of representatives of the commission, petroleum industry, Texas Oil Marketers Association, Industry Council On The Environment, Texas Association of Storage Tank Professionals, contractors, and consultants.

A number of commenters said that the Reimbursable Cost Guidelines should be updated on at least an annual basis through the review of the same criteria that went into formulating the current guidelines, i.e., market surveys, review of protested amounts, and history of payments made from the Fund. In addition, a mechanism should be included for reimbursable costs to increase with inflation, rising labor and material costs. Another commenter stated that there needs to be a method by which those total costs that are too low could be raised to market level through arbitration or negotiation. The commission responds that the Reimbursable Cost Guidelines will be updated on a regular basis, as necessary, to reflect current market values. The guidelines will be updated based upon actual costs as reflected in reimbursement applications which will be tracked on a data base for specific activities relating to the cleanup of LPST sites.

A commenter stated that the reimbursement rules should provide an option to bid by lump-sum corrective action activities, and that the lump-sum bid option be operated with a reimbursable cost cap. The commission responds that the current cost guidelines do not allow

for lump-sum bidding; however, this option is currently being reviewed by the commission.

Numerous commenters stated that it is unfair to apply the Reimbursable Cost Guidelines retroactively and that the guidelines should become effective upon the effective date of this rule. The commission responds that the cost guidelines will be used to evaluate and process all claims for corrective action activities associated with LPST sites, unless otherwise provided by commission policy or rules in effect at the time the activities were performed.

A commenter stated that if significant revisions to the Reimbursable Cost Guidelines are proposed, those revisions should be re-proposed to allow the regulated industry to comment on the intended final version as a whole. The commission responds that since no significant revisions to the proposal have been made, re-proposal is not warranted at this time; however, the revisions which are being contemplated for the near future will be made available for review by the PST Task Force prior to publication and will be proposed for comment by the public.

A commenter stated that an attempt to cap reimbursable costs for tank owners and operators by promulgating Subchapter M is setting up those owners for financial hardship, and that persons who do not initiate compliance with regulations will benefit over those who attempt to maintain compliance with applicable regulations. The commission responds that the guidelines are simply to provide owners, operators, consultants, and contractors with information regarding how their reimbursement application will be evaluated and what the reimbursable cost ranges are for various cleanup activities.

A commenter stated the remediation industry is a for-profit business and too many disincentives to LPST owners and to the remediation industry will cause some firms to remove themselves from the market, that the remediation industry is not an altruistic, "save the earth" endeavor, that it is a business, and that recent directives issued by the commission have put some firms on the brink of bankruptcy. The commission responds that the reimbursable cost guidelines document has been established to reduce the number of disputes regarding reimbursable costs in an effort to streamline the reimbursement process and to make the most efficient use of the limited money in the PSTF Fund.

A commenter stated that if allowable costs are too strictly regimented or overly detailed costs reviews become the "norm", the TWC staff will spend most of its efforts bogged down in cost protests and explanations, and that efforts would be better spent with less detailed cost review and more efforts on

cleaning up sites, enforcing regulations on those who do not comply, and pursuing the remaining contractors and consultants preying on the unaware. The commission responds that although upfront approval will require significant staff time initially, a focusing of effort early on in the process will reduce the resources required once the activities and associated costs have been reviewed and approved.

A commenter stated TWC has begun to act like an overly-cost conscious "owner" with regard to prices, that TWC's role is to administer the fund that the owners and operators have paid into. The commenter also stated that the Fund belongs to the owners and operators, not TWC, and that TWC should only look at technical merit and whether the costs are in the range of the cost guidelines. The commission responds that the Texas Water Code, §26.3573(g) mandates that the commission make the most efficient use possible of money in the PSTF Fund. Section 26.3573(h) authorizes the commission to implement by rule any necessary guidelines for determining amounts that may be paid from the PSTF Fund. The commission also responds that it does in fact consider the technical merit of all performed corrective action activities that are submitted for reimbursement, in addition to determining whether those costs are in the range of the cost guidelines.

A commenter stated that the Reimbursable Cost Guidelines, the pre-approval process, and Subchapter J have reduced the speed and efficiencies with which sites are addressed and closed while increasing costs due to more administrative paperwork and subsequent delays. The commission responds that guidelines are intended to increase rate at which applicants are reimbursed, contingent upon availability of funds. Furthermore, the changes adopted in subchapters H and J will enable the PST program to more effectively and efficiently oversee the remediation of contaminated sites and administer the PSTF Fund.

The new section is adopted under the Texas Water Code, §5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt any sections necessary to carry out its powers and duties under the Texas Water Code and other laws of the State of Texas, and to establish and approve all general policy of the commission.

§334.560. *Reimbursable Cost Guidelines.* The Texas Water Commission hereby adopts the following Reimbursable Cost Guidelines for the Petroleum Storage Tank Reimbursement Program which are in effect as of June 9, 1993.

PETROLEUM STORAGE TANK DIVISION

Reimbursable Costs Guidelines



the
Texas Water
Commission

P.O. Box 13087, Austin, Texas 78711-3087

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Introduction

The objective of this document is to provide guidance for the evaluation of costs incurred in the performance of corrective action activities associated with LPST sites. The guidelines are not intended to set pricing for certain activities or remove an element of competition for the petroleum storage tank industry. Rather, the guidelines are intended to allow for a range of costs that will not be static, but which can be as dynamic as necessary to support and enhance competition.

These cost guidelines were established to provide a range of costs within which the TWC will reimburse for certain corrective action activities. Only the costs that are at or below the published values in this document will be reimbursed unless a justification for costs exceeding the guidelines are submitted for TWC review to determine if those costs are allowable.

The Reimbursable Cost Guidelines will be utilized by the TWC to evaluate and process all reimbursement claims for corrective action activities associated with LPST sites, unless otherwise provided by TWC policy or rules in effect at the time the activities were performed.

Aquifer Pumping Test

The Below Guidelines show the length of the test as well as summarize the titles of personnel who may be present during the test and provide a general description of the work being performed. The length of the test is usually 12 hours.

Personnel - 12 hour test

Title	Duty	Hours	Average Rate/Hr.	Maximum Allowable Rate/Hr.	Total Average Cost	Maximum Allowable
Senior Engineer	Report/Review	4	\$85.00	\$95.00	\$340.00	\$380.00
Project Manager	Field/Report Rev.	28	\$70.00	\$80.00	\$1,960.00	\$2,240.00
Technician II	Field	16	\$40.00	\$45.00	\$640.00	\$720.00
Draft-Person I	Report/Review	6	\$40.00	\$45.00	\$240.00	\$270.00
Word Processor	Report/Review	4	\$30.00	\$35.00	\$120.00	\$140.00
Total		58			\$3,300.00	\$3,750.00

Personnel - 24 hour test

Title	Duty	Hours	Average Rate/Hr.	Maximum Allowable Rate/Hr.	Total Average Cost	Maximum Allowable
Senior Engineer	Report/Review	4	\$85.00	\$95.00	\$340.00	\$380.00
Project Manager	Field/Report Rev.	41	\$70.00	\$80.00	\$2,870.00	\$3,280.00
Technician II	Field	28	\$40.00	\$45.00	\$1,120.00	\$1,260.00
Draft-Person I	Report/Review	8	\$40.00	\$45.00	\$320.00	\$360.00
Word Processor	Report/Review	4	\$30.00	\$35.00	\$120.00	\$140.00
Total		85			\$4,770.00	\$5,420.00

General Equipment Used and Rental Rate

Equipment	Quantity	Rate/Each	12 Hr. Test Total	24 Hr. Test Total
Submersible Pump or Pneumatic Pump	1	\$20.00		
Data Logger	1	\$75.00	\$75.00	\$150.00
Interface Probe	1	\$125.00	\$125.00	\$250.00
Generator	2	\$40.00	\$80.00	\$160.00
Air Stripper	1	\$75.00	\$75.00	\$150.00
Equipment Vehicle	1	\$250.00	\$250.00	\$500.00
Carbon Canister	2	\$45.00	\$90.00	\$180.00
Storage Tank	1	\$500.00	\$500.00	\$1,000.00
Miscellaneous	3	\$100.00	\$300.00	\$600.00
	1	\$50.00	\$50.00	\$100.00
Sub Total			\$1,545.00	\$ 3,090.00

		12 Hr. Test	24 Hr. Test
Summary (for task)	Personnel	\$3,300.00	\$4,770.00
Allowable Cost	Equipment	\$1,545.00	\$3,090.00
	Total	\$4,845.00	\$7,860.00

Note: Laboratory analysis, waste disposal and travel cost are not included in the above costs.

Equipment and Supplies

Operator

Costs shown are without an operator unless otherwise stated.

Lease/Purchase

The responsible party will be reimbursed based on the most economically efficient method of obtaining equipment. Equipment system purchase will be reimbursed over the estimated life of the remediation project. Contact the PST Coordinator if assistance is needed in evaluating a lease/purchase option.

Information should be included within the application for reimbursement which provides adequate justification for the decision. Lease agreements should be included in the application for reimbursement.

Remediation System Equipment

Equipment purchased as part of a remediation system will be reimbursed over the estimated life of the project.

Rental Equipment

The total reimbursable cost for rental equipment will not exceed the purchase price for all equipment. The responsible party has an obligation to use the most economically efficient method of remediating a site.

Equipment and Supplies

Equipment	Size/Description	Rental Price Average	Rental Price Maximum	Purchase Price Av.	Purchase Price Max.
Absorbent Booms	4" x 36" - Each	N/A	N/A	\$5.00	\$8.00
Absorbent Booms	6" x 10' - Each	N/A	N/A	\$30.00	\$38.00
Absorbent Booms	8" x 10' - Each	N/A	N/A	\$40.00	\$50.00
Aeration Trays	Each Month	\$100.00	\$150.00	N/A	N/A
Air Compressor	3/4 HP - Per Day	\$ 15.00	\$ 20.00	N/A	N/A
Air Compressor	3/4 HP - Per Week	\$ 70.00	\$ 80.00	N/A	N/A
Air Compressor	3/4 HP - Per Month	\$200.00	\$240.00	N/A	N/A
Air Compressor	2 HP - Per Day	\$ 20.00	\$ 25.00	N/A	N/A
Air Compressor	2 HP - Per Week	\$ 75.00	\$100.00	N/A	N/A
Air Compressor	2 HP - Per Month	\$250.00	\$300.00	N/A	N/A
Air Compressor	5 HP - Per Day	\$20.00	\$30.00	N/A	N/A
Air Compressor	5 HP - Per Week	\$100.00	\$120.00	N/A	N/A
Air Compressor	5 HP - Per Month	\$300.00	\$360.00	N/A	N/A
A C w/Jackhammer	150 CFM- Per Day	\$85.00	\$110.00	N/A	N/A
A C w/Jackhammer	150 CFM- Per Week	\$325.00	\$400.00	N/A	N/A
A C w/Jackhammer	150 CFM- Per Month	\$950.00	\$975.00	N/A	N/A
Air Stripper	10 GPM/Per Month	\$625.00	\$1,200.00	\$15,250.00	\$20,750.00
Air Stripper	1'Tower- Per Week	\$600.00	\$845.00	N/A	N/A
Air Stripper	1'Tower- Per Month	\$1,250.00	\$1,660.00	N/A	N/A
Air Stripper	2'Tower- Per Week	\$750.00	\$1,180.00	N/A	N/A
Air Stripper	2'Tower- Per Month	\$2,000.00	\$2,375.00	N/A	N/A
Air Stripper	3'Tower- Per Week	\$1,250.00	\$1,620.00	N/A	N/A
Air Stripper	3'Tower- Per Month	\$2,225.00	\$2,960.00	N/A	N/A
Air Stripper - 25 gpm	Each Per Month	\$1,150.00	\$1,150.00	N/A	N/A
Air Stripper - 25 gpm	Maintenance Ea/Month	\$575.00	\$575.00	N/A	N/A
Automobile Mileage	Personal Per/Mile	\$0.35	\$0.35	N/A	N/A
Automobile Mileage	Rental Per Day	\$34.00	\$50.00	N/A	N/A
Backhoe-Light Duty HP 51-62; Dig Depth 12'-18'6"	Per Day	\$175.00	\$200.00	N/A	N/A
Backhoe-Light Duty	Per Week	\$485.00	\$560.00	N/A	N/A
Backhoe-Light Duty	Per Month	\$1,450.00	\$1,600.00	N/A	N/A
Backhoe-Medium Duty HP 63775; Dig Depth 14"-19'8"	Per Day	\$215.00	\$250.00	N/A	N/A
Backhoe-Medium Duty	Per Week	\$620.00	\$650.00	N/A	N/A
Backhoe-Medium Duty	Per Month	\$1,700.00	\$1,750.00	N/A	N/A
Backhoe-Medium/Heavy Hp 77-90; Dig Depth 16'-19'9"	Per Day	\$250.00	\$275.00	N/A	N/A
Backhoe-Medium/Heavy	Per Week	\$700.00	\$750.00	N/A	N/A
Backhoe-Medium/Heavy	Per Month	\$2,075.00	\$2,150.00	N/A	N/A
Backhoe-Heavy Duty HP 95-115; Dig Dp 17'10"-21'5"	Per Day	\$300.00	\$350.00	N/A	N/A
Backhoe Heavy Duty	Per Week	\$950.00	\$1,000.00	N/A	N/A
Backhoe Heavy Duty	Per Month	\$2,825.00	\$2,900.00	N/A	N/A

Equipment and Supplies

Equipment	Size/Description	Rental Average	Rental Maximum	Purchase Average	Purchase Max.
Barricades	Each Per Day	\$1.00	\$1.00	N/A	N/A
Barricades	Each Per Day- Lighted	\$1.50	\$1.50	N/A	N/A
Bentonite Pellets	50 Pounds (lbs)	N/A	N/A	\$45.00	\$57.00
Camera Rental	N/A	N/A	N/A	N/A	N/A
Film Developing		N/A	N/A	At Cost	At Cost
Carbon Canister	Each	N/A	N/A	500.00	\$650.00
Combustible Gas Meter	Each Per Day	\$25.00	\$40.00	N/A	N/A
Computer/Time Rental	N/A	not reimbursable	not reimbursable	N/A	N/A
Concrete Saw (\$50 Per Day Minimum)	Each Per Foot	\$2.00	\$2.00	N/A	N/A
D. O. Meter (Dissolved Oxygen)	Each Per Day	\$20.00	\$50.00	N/A	N/A
Data Logger	Each Per Day	\$125.00	\$150.00	N/A	N/A
Data Logger	Each Per Month	\$500.00	\$750.00	N/A	N/A
Data Logger/Pressure Transducer	Each Per Day	\$300.00	\$385.00	N/A	N/A
Decontamination Supplies	N/A included within	the cost of the	activity		
Diaphragm Pump-2"	Each Per Day	\$35.00	\$45.00	N/A	N/A
Disposable Bailer	Each	N/A	N/A	\$8.00	\$10.00
EC Meter	Each Per Day	\$30.00	\$50.00	N/A	N/A
EH Meter	Each Per Day	\$30.00	\$50.00	N/A	N/A
Equipment Truck	Each Per Day-1 Ton	\$45.00	\$55.00	N/A	N/A
Equipment Truck	Each Per Day-2 Ton	\$175.00	\$175.00	N/A	N/A
Equipment Truck	Each Per Day-1/2 Ton	\$45.00	\$45.00	N/A	N/A
Equipment Truck	Field Vehicle Mileage	\$0.40	\$0.48	N/A	N/A
Explosion Proof Exhaust Fan	Each Per Day	\$75.00	\$100.00	N/A	N/A
Fence Compound (Wood/Chain)	Each - 6' (Per Site)	N/A	N/A	\$850.00	\$1,500.00
Fence Compound (Chain)	Fence/Ft. up to 1 yr	\$1.50	\$2.50	N/A	N/A
Fence Compound (Chain)	Gate-up to 1 yr.	\$150.00	\$250.00	N/A	N/A
Film Developing	Per Roll	N/A	N/A	At Cost	At Cost
Field Office Trailer(3 day limit)	Each Per Day Per Site	\$50.00	\$75.00	N/A	N/A
Filter Sand	Each/Bag-100 lb.	N/A	N/A	\$10.00	\$12.00
Generator-3500 Watt	Each Per Day	\$75.00	\$100.00	N/A	N/A
Generator-400 Watt	Each Per Day	\$50.00	\$50.00	N/A	N/A

Equipment and Supplies

Equipment	Size/Description	Rental Average	Rental Maximum	Purchase Average	Purchase Max.
Hand Auger - Power	Each/Per Day	\$45.00	\$45.00	N/A	N/A
Interface Probe	Each/Per Day	\$40.00	\$50.00	N/A	N/A
Interface Probe	Each/Per Week	\$200.00	\$225.00	N/A	N/A
Interface Probe	Each/Per Month	\$400.00	\$450.00	N/A	N/A
Jackhammer	Each/Per Day	\$40.00	\$50.00	N/A	N/A
Jackhammer	Each/Per Week	\$150.00	\$200.00	N/A	N/A
Jackhammer	Each/Per Month	\$500.00	\$600.00	N/A	N/A
Oil & Water Separator	Each/Per Week-10gpm	\$150.00	\$200.00	\$5,000.00	\$5,000.00
Oil & Water Separator	Each/Per Month-10gpm	\$500.00	\$650.00	\$5,000.00	\$5,000.00
Oil & Water Separator and Air Stripper	Each/Per Month	\$2,000.00	\$2,450.00	N/A	N/A
OVM Meter	Each/Per Day	\$75.00	\$100.00	N/A	N/A
OVM Meter	Each/Per Week	\$250.00	\$300.00	N/A	N/A
Oxygen Meter	Each/Per Day	\$30.00	\$40.00	N/A	N/A
PH Meter	Each/Per Day	\$20.00	\$25.00	N/A	N/A
Pneumatic Pump	Each/Per Day	\$75.00	\$100.00	\$2,000.00	\$3,000.00
Pneumatic Pump	Each/Per Week	\$200.00	\$225.00	N/A	N/A
Pressure Gauges	Each/Per Day (For Vapor Testing)	\$75.00	\$100.00	\$276.00	\$388.00
Storage Tanks	200 Gallon/Per Month	\$50.00	\$75.00	\$250.00	\$325.00
Storage Tanks	500 Gallon/Per Month	\$100.00	\$150.00	N/A	N/A
Storage Tanks	1,000 Gallon/Per Day	\$25.00	\$35.00	\$700.00	\$875.00
Storage Tanks	2,000 Gallon/Per Day	\$30.00	\$45.00	N/A	N/A
Storage Tanks	5,000 Gallon/Per Day	\$35.00	\$45.00	\$3,750.00	\$4,200.00
Storage Tanks	5,000 Gallon/Per Month	\$1,200.00	\$1,350.00	\$3,750.00	\$4,200.00
Storage Tanks	10,000 Gallon/Per Day	\$35.00	\$45.00	\$8,500.00	\$9,750.00
Storage Tanks	10,000 Gallon Per Month	\$1,200.00	\$1,530.00	\$8,500.00	\$9,750.00
Storage Tanks	20,000 Gallon/Per Day	\$100.00	\$130.00	N/A	N/A
Storage Tanks	20,000 Gallon Per Month	\$750.00	\$1,350.00	N/A	N/A
PSH Skimmer Pump	Each/Per Day	\$100.00	\$150.00	\$2,700.00	\$3,200.00
PSH Skimmer Pump	Each/Per Week	\$200.00	\$300.00	\$2,700.00	\$3,200.00
PSH Skimmer Pump	Each/Per Month	\$150.00	\$250.00	\$2,700.00	\$3,200.00
PVC Well Casing	2"-Per Foot	N/A	N/A	\$1.00	\$2.00
PVC Well Casing	4"-Per Foot	N/A	N/A	\$4.00	\$4.50
PVC Well Screen	2"-Per Foot	N/A	N/A	\$3.00	\$4.00
PVC Well Screen	4"-Per Foot	N/A	N/A	\$8.00	\$10.00

Equipment and Supplies

Equipment	Size/Description	Rental Average	Rental Maximum	Purchase Average	Purchase Max.
Regenerative Blower	Each Per/Month 1.5 Hp	\$100.00	\$150.00	\$1,000.00	\$1,000.00
Regenerative Blower	Each Per/Month 5.0 Hp	\$300.00	\$350.00	N/A	N/A
Regenerative Blower	Each Per/Month 15.0 Hp	\$750.00	\$1000.00	N/A	N/A
Report Reproduction	Per Page/Copy	N/A	N/A	\$0.05	\$0.10
Report Reproduction	Per Page/Color Copy	N/A	N/A	\$1.50	\$1.70
Sample Containers	Water / Soil	N/A	N/A	Inc. in lab cost	Inc. in lab Cost
Soil Vapor Probe	Each/Per Day	\$100.00	\$150.00	N/A	N/A
Soil Vapor Probe	Each/Per Week	\$250.00	\$300.00	N/A	N/A
Sorbent Pads	Each	N/A	N/A	At Cost	At Cost
Steam Cleaner	Each/Per Day	\$75.00	\$135.00	N/A	N/A
Submersible Pump - 8 gpm	Each/Per Day	\$20.00	\$25.00	\$600.00	\$600.00
Submersible Pump - 8 gpm	Each/Per Week	\$75.00	\$95.00	\$600.00	\$600.00
Survey Equipment	Each/Per Day Transit, Tripod, Etc.	\$25.00	\$70.00	N/A	N/A
Trackhoe - Light Duty (Track Excavator) (Hp 95-100; Dig Depth 20'-22')	Each/Per Day	\$425.00	\$440.00	N/A	N/A
Trackhoe - Light Duty	Each/Per Week	\$1,185.00	\$1,200.00	N/A	N/A
Trackhoe - Light Duty	Each/Per Month	\$3,350.00	\$3,400.00	N/A	N/A
Trackhoe - Medium Duty (Track Excavator) (Hp 150-155; Dig Depth 24'-26')	Each/Per Day	\$575.00	\$625.00	N/A	N/A
Trackhoe - Medium Duty	Each/Per Week	\$1,675.00	\$1,750.00	N/A	N/A
Trackhoe - Medium Duty	Each/Per Month	\$5,000.00	\$5,100.00	N/A	N/A
Trackhoe - Heavy Duty (Track Excavator) Hp 195-200; Dig Depth Over 26')	Each/Per Day	\$720.00	\$750.00	N/A	N/A
Trackhoe - Heavy Duty	Each/Per Week	\$2,175.00	\$2,200.00	N/A	N/A
Trackhoe - Heavy Duty	Each/Per Month	\$6,500.00	\$6,550.00	N/A	N/A
Waste Containers	Each/Barrel & Drum	N/A	N/A	\$30.00	\$40.00
Well Head Covers	Each	N/A	N/A	\$75.00	\$110.00

Excavation

These Tables should be used for all excavation or over-excavation activities performed at the site.

Site Excavation:

Item	2" Asphalt	6" Concrete	Native Soil
Remove Pavement Over Affected Area:			
Average Cost (sq. ft.)	\$2.50	\$3.25	\$0.00
Maximum Rate	\$3.50	\$5.50	\$0.00
Pavement/Cover Resurfacing			
Average Rate (sq. ft.)	\$3.00	\$3.50	\$0.00
Maximum Rate	\$4.00	\$4.00	\$0.00

Excavate Affected Area, Replace Backfill Material and Compaction:

Item	Average Rate (cubic yard)	Maximum Rate (cubic yard)
Excavate Affected Area	\$7.00	\$9.00
Material -Regular	\$9.50	\$11.00
Material - Select	\$11.50	\$14.00
Compaction - Normal	\$7.00	\$9.00
Compaction - Select	\$9.00	\$12.00

Excavation includes time, materials and equipment operator. Material costs include purchase, delivery and filling. Compaction includes machine labor and in place density tests (does not include hand labor).

Personnel For Excavation:

Title	Duty	Hours	Average Rate	Maximum Allowable Rate	Total Average Costs	Total Maximum Costs
Field Engineer	Field/Report	15	\$60.00	\$65.00	\$900.00	\$975.00
Project Manager	Field/Report Rev.	6	\$70.00	\$80.00	\$420.00	\$480.00
Technician III	Field/Report Rev.	8	\$45.00	\$50.00	\$360.00	\$400.00
Word Processor	Report/Review	4	\$30.00	\$35.00	\$120.00	\$140.00
Drafts-Person	Report/Review	5	\$40.00	\$45.00	\$200.00	\$225.00
Total		38			\$2,000.00	\$2,220.00

Excavation Personnel includes field supervisory work, sample collection, report preparation, and report review.

Excavation

Example:

Excavate 300 cubic yards of soil from an area. Assume that the dimensions of the excavation are 28.5 ft. by 28.5 ft. by 10 ft. deep. The assumption that the new backfill for the excavation is measured in loose yards, so a factor of 1.3 is used to estimate the volume of backfill material needed.

Site Excavation

Item	2" Asphalt	Sq. Ft.	Cost	6" Concrete	Sq. Ft.	Cost
Remove Pavement Over Affected Area:						
Average Cost (sq. ft.)	\$2.50	813	\$2,032.50	\$3.25	813	\$2,642.25
Maximum Rate	\$3.50	813	\$2,845.50	\$5.50	813	\$4,471.50
Pavement/Cover Resurfacing						
Average Rate (sq. ft.)	\$3.00	813	\$2,439.00	\$3.50	813	\$2,845.50
Maximum Rate	\$4.00	813	\$3,252.00	\$4.00	813	\$3,252.00

Excavate Affected Area, Replace Backfill Material and Compaction:

Item	Av. Rate Per Cubic Yd.	Cubic Yds.	Cost	Max. Rate Per Cubic Yd.	Cubic Yards	Cost
Excavate Affected Area	\$7.00	300	\$2,100.00	\$9.00	300	\$2,700.00
Material -Regular	\$9.50	390	\$3,705.00	\$11.00	390	\$4,290.00
Material - Select	\$11.50	390	\$4,485.00	\$14.00	390	\$5,460.00
Compaction - Normal	\$7.00	390	\$2,730.00	\$9.00	390	\$3,510.00
Compaction - Select	\$9.00	390	\$3,510.00	\$12.00	390	\$4,680.00

Excavation includes time, materials and equipment operator. Material costs include purchase, delivery and filling. Compaction includes machine labor and in place density tests (does not include hand labor).

Personnel For Excavation:

Title	Duty	Hours	Average Rate	Maximum Allowable Rate	Total Average Costs	Total Maximum Costs
Field Engineer	Field/Report	15	\$60.00	\$65.00	\$900.00	\$975.00
Project Manager	Field/Report Rev.	6	\$70.00	\$80.00	\$420.00	\$480.00
Technician III	Field/Report Rev.	8	\$45.00	\$50.00	\$360.00	\$400.00
Word Processor	Report/Review	4	\$30.00	\$35.00	\$120.00	\$140.00
Drafts-Person	Report/Review	5	\$40.00	\$45.00	\$200.00	\$225.00
Total		38			\$2,000.00	\$2,220.00

Excavation Personnel includes field supervisory work, sample collection, report preparation, and report review.

Excavation

Example (Continued)

Excavate 300 cubic yards of soil from an area. Assume that the dimensions of the excavation are 28.5 ft. by 28.5 ft. by 10 ft. deep. The assumption that the new backfill for the excavation is measured in loose yards, so a factor of 1.3 is used to estimate the volume of backfill material needed.

Site Excavation	Average Rate			Maximum Rate		
Item	2" Asphalt	Sq. Ft.	Cost	2" Asphalt	Sq. Ft.	Cost
Remove Pavement Over Affected Area:						
Rate/Cost (sq.ft.)	\$2.50	813	\$2,032.50	\$3.50	813	\$2,845.50
Pavement/Cover Resurfacing Rate/Cost (sq.ft.)	\$3.00	813	\$2,439.00	\$4.00	813	\$3,252.00
		Volume Cubic Yards			Volume Cubic Yards	
Excavate Affected Area	\$7.00	300	\$2,100.00	\$9.00	300	\$2,700.00
Material -Regular	\$9.50	390	\$3,705.00	\$11.00	390	\$4,290.00
Compaction - Normal	\$7.00	390	\$2,730.00	\$9.00	390	\$3,510.00
Personnel Costs			\$2,000.00			\$2,220.00
Total Costs for Example			\$15,006.50			\$18,817.50

Site Excavation	Average Rate			Maximum Rate		
Item	6" Concrete	Sq. Ft.	Cost	6" Concrete	Sq. Ft.	Cost
Remove Pavement Over Affected Area:						
Cost (sq.ft.)	\$3.25	813	\$2,642.25	\$5.50	813	\$4,471.50
Pavement/Cover Resurfacing Rate (sq.ft.)	\$3.50	813	\$2,845.50	\$4.00	813	\$3,252.00
		Volume Cubic Yards			Volume Cubic Yards	
Excavate Affected Area	\$7.00	300	\$2,100.00	\$9.00	300	\$2,700.00
Material -Regular	\$9.50	390	\$3,705.00	\$11.00	390	\$4,290.00
Compaction - Normal	\$7.00	390	\$2,730.00	\$9.00	390	\$3,510.00
Personnel Costs			\$2,000.00			\$2,220.00
Total Costs for Example			\$16,022.75			\$20,443.50

Ground Water Extraction and Treatment System

The costs shown are for the installation of the groundwater extraction and treatment system. The system includes one (1) pumping well and three (3) observation wells. The three (3) observation wells are assumed to be installed during the site assessment.

Personnel:

Title	Duty	Hours	Average Rate	Maximum Rate	Total Average	Total Maximum
Senior Engineer	Report Preparation	3	\$85.00	\$95.00	\$255.00	\$285.00
Project Manager	Field/Report Rev.	25	\$70.00	\$80.00	\$1,750.00	\$2,000.00
Technician	Field/Report Rev.	40	\$40.00	\$45.00	\$1,400.00	\$1,600.00
Staff Engineer	Report/Review	27	\$70.00	\$80.00	\$1,755.00	\$1,890.00
Drafts Person	Report/Review	12	\$40.00	\$45.00	\$480.00	\$540.00
Word Processor	Report/Review	10	\$30.00	\$35.00	\$300.00	\$350.00
Sub Total		117			\$5,940.00	\$6,665.00

Groundwater Extraction System - System Cost

Equipment	Quantity	Rate/Each	Pneumatic Total	Submersible Total
Submersible Pump	Each	\$600.00		\$600.00
Pneumatic Pump	Each	\$2,000.00	\$2,000.00	
Plumbing supplies	Per Well	\$575.00	\$575.00	\$575.00
Fence Compound	Lump Sum	\$1,200.00	\$1,200.00	\$1,200.00
Product Storage Tank(s)	Each	\$250.00	\$250.00	\$250.00
Oil Water Separator	Each	\$5,000.00	\$5,000.00	\$5,000.00
Air Stripper	Each	\$600.00	\$600.00	\$600.00
Air Compressor	Per Month	\$300.00	\$300.00	\$300.00
Miscellaneous	Lump Sum	\$50.00	\$50.00	\$50.00
Sub Total			\$9,975.00	\$8,575.00

Groundwater Extraction System - Installation Costs

Item	Per Unit	Unit Cost	Set Up
Trenching	Per Foot/100 Ft.	\$15.00	\$1,500.00
Resurfacing	Per Foot/100 Ft.	\$6.00	\$600.00
Plumbing	Per Foot/100 Ft.	\$15.00	\$1,500.00
Electrical Costs	Utilities	Lump Sum	\$210.00
Subtotal			\$3,810.00

Ground Water Extraction and Treatment System

Summary

Item	Total Hours	Personnel Cost	Equipment Cost	Equipment Installation	Total
Groundwater Extraction System (System Setup - Submersible Pump)	117	\$5,940.00	\$8,575.00	\$3,810.00	\$18,325.00
Groundwater Extraction System (System Setup) - Pneumatic Pump	117	\$5,940.00	\$9,975.00	\$3,810.00	\$19,725.00

Notes:

1. Monthly costs for equipment rental are included in the monthly operation and maintenance.
2. Oil/Water separator is allowed if recovering phase separated hydrocarbons (PSH).
3. The above costs do not include the cost of electrical work.

Emergency Abatement Measures

Initial (emergency) abatement measures are those activities performed to reduce an immediate risk or threat to human health, safety and the environment. These activities outlined in TAC 334.7 (relating to initial abatement and site check), include the following:

- Monitor and mitigate any fire and safety hazards posed by vapors or free product.
- Removal of product from tanks to prevent a further release.
- Continuous phase-separated product removal.

Pursuant to TAC 334.310 (f), all emergency abatement measures that continue after 48 hours (except removal of continuous phase-separated product flow) must be approved by the TWC prior to implementation. Costs for emergency measures submitted in the application for reimbursement should be identified, and submitted with justification. All costs associated with emergency abatement are subject to verification.

Laboratory Analysis

The following are the guidelines for laboratory analysis:

Rate	Rate Explanation
Regular Rate	Greater than three (3) day turn around time.
Rush Rate	Twenty-four (24) hour turn around time. Explanation must be provided for use of this rate.
Other	Forty-eight (48) hour turn around.

Labor for collecting the samples is not included in the above costs unless the samples are collected by the lab.

All necessary supplies are assumed to be included in the price. Any additional expenses incurred by the contractor are assumed to be included in the allowable markup (labor, supplies, etc.)

Costs should be billed for reimbursement at actual costs up to the allowable maximum, plus allowable markup up to the maximum to absorb any additional expenses incurred by the contractor.

Costs are exclusive of shipping and handling. Shipping and handling is reimbursable at cost. Shipping and handling invoices should be included with your reimbursement applications.

Test Method	Average Rate	Max. Rate	Test Method	Average Rate	Max. Rate
EPA: Method 418.1			EPA: Method 418.1		
TPH/Soil - Reg. Rate	\$58.00	\$65.00	TPH/Water - Reg. Rate	\$52.00	\$63.00
TPH/Soil - Rush Rate	\$89.00	\$97.00	TPH/Water - Rush Rate	\$91.00	\$109.00
TPH/Soil - Other	\$81.00	\$90.00	TPH/Water - Other	\$76.00	\$81.00
EPA: Method 8020 w/5030			EPA: Method 8020 w/5030		
BTEX/Soil-Reg. Rate	\$82.00	\$91.00	BTEX/Water-Reg. Rate	\$89.00	\$111.00
BTEX/Soil-Rush Rate	\$130.00	\$152.00	BTEX/Water-Rush Rate	\$142.00	\$168.00
BTEX/Soil-Other	\$105.00	\$116.00	BTEX/Water-Other	\$121.00	\$145.00
EPA: Method 8015 w/5030			EPA: Method 8015 w/5030		
BTEX/Soil-Reg. Rate	\$94.00	\$102.00	BTEX/Water-Reg. Rate	\$101.00	\$108.00
BTEX/Soil-Rush Rate	\$171.00	\$208.00	BTEX/Water-Rush Rate	\$178.00	\$213.00
BTEX/Soil-Other	\$97.00	\$113.00	BTEX/Water-Other	\$102.00	\$115.00
EPA: Method 8240 w/5030			EPA: Method 8240 w/5030		
BTEX/Soil-Reg. Rate	\$181.00	\$216.00	BTEX/Water-Reg. Rate	\$188.00	\$223.00
BTEX/Soil-Rush Rate	\$267.00	\$349.99	BTEX/Water-Rush Rate	\$275.99	\$354.99
BTEX/Soil-Other	\$228.00	\$271.00	BTEX/Water-Other	\$204.00	\$249.00
Total Metals EPA 1311			EPA: Method 8015 w/5030		
Soil/Water-Reg. Rate	\$166.00	\$218.00	MTBE/Water - Reg. Rate	\$78.00	\$99.00
Soil/Water-Rush Rate	\$228.00	\$302.00	MTBE/Water - Rush Rate	\$138.00	\$177.00
Soil/Water-Other	\$184.00	\$249.00	MTBE/Water - Other	\$86.00	\$95.00
			TDS EPA 160.1-(Total Dissolved Solids)		
			Water-Reg. Rate	\$15.00	
			Water-Rush Rate	\$30.00	
			Water-Other	\$20.00	

Laboratory Analysis

Test Method	Average Rate	Max. Rate	Test Method	Average Rate	Max. Rate
TCLP - Total Soil-Reg. Rate	\$850.00	\$950.00	TCLP - 8 Metals Water - Reg. Rate	\$200.00	\$250.00
TCLP - Lead Soil-Reg. Rate	\$100.00	\$150.00			
Total Lead			TOX (EP Toxicity -Metals)		
Soil/Water - Reg. Rate	\$25.00	\$35.00	Water - Reg. Rate	\$125.00	\$140.00
Soil/Water - Rush Rate	\$35.00	\$45.00	Water - Rush Rate	\$150.00	\$175.00
Soil/Water - Other	\$30.00	\$40.00	Water - Other	\$140.00	\$155.00
Ph			Soil Bulk Density		
Water - Reg. Rate	\$6.00	\$10.00	Soil - Reg. Rate	\$10.00	\$10.00
Water - Rush Rate	\$6.00	\$10.00	Soil - Rush Rate	\$10.00	\$10.00
Water - Other	\$6.00	\$10.00	Soil - Other	\$10.00	\$10.00
Mass Based Water Content (Karl Fisher or Moisture Cont.)					
Soil - Reg. Rate	\$15.00	\$25.00			
Soil - Rush Rate	\$15.00	\$25.00			
Soil - Other	\$15.00	\$25.00			
Volumetric Soil/Water Content(Centrifuge Method)					
Soil - Reg. Rate	\$20.00	\$25.00			
Soil - Rush Rate	\$20.00	\$25.00			
Soil - Other	\$20.00	\$25.00			
Total Organic Carbon (TOC)			Total Organic Carbon (TOC)		
Soil - Reg. Rate	\$35.00	\$40.00	Water - Reg. Rate	\$25.00	\$30.00
Soil - Rush Rate	\$50.00	\$60.00	Water - Rush Rate	\$40.00	\$50.00
Soil - Other	\$45.00	\$50.00	Water - Other	\$35.00	\$40.00
Polynuclear Aromatic Hydrocarbon (PAH) EPA 8100 (GC)					
Soil - Reg. Rate	\$180.00	\$210.00	Water - Reg. Rate	\$150.00	\$175.00
Polynuclear Aromatic Hydrocarbon (PAH) EPA 8270 (GC/MS)					
Soil - Reg. Rate	\$275.00	\$250.00	Water - Reg. Rate	\$200.00	\$225.00

Mark-up

For Use Prior to March 1, 1993

Item	Maximum Allowed Mark-up
All subcontractors invoices, EXCEPT Waste Treatment, Waste Hauling and Disposal, and Lab Costs	20%
Laboratory Costs	20%
Waste Hauling and Disposal	20%
Waste Treatment	20%

For Use On or After March 1, 1993

Item	Maximum Allowed Mark-up
All subcontractors invoices, EXCEPT Waste Treatment, Waste Hauling and Disposal, and Lab Costs	15%
Laboratory Costs	10%
Waste Hauling and Disposal	10%
Waste Treatment	10%

1. Mark-up is allowed for the primary contractor and or primary corrective action specialist (consultant) on sub-contractor invoices.
2. Corrective Action Specialist/Contractors may not mark-up their own expenses.
3. Retail mark-up is not allowed. Mark-up should be calculated as follows:
 $\$100.00 \times 15\% = \15.00

TWC Approval Letters

TWC corrective action activity approval letters or forms when applicable must be included with all applications for reimbursement.

Invoices

Invoices must be submitted for all items of corrective action which are being claimed for reimbursement. Subcontractor invoices must be submitted for all costs in excess of \$200.00 and for all line items in excess of \$200.00. Sub-contractor's invoices must be submitted for all costs where a mark-up is being reimbursed. Costs which are not properly documented will not be reimbursed.

Travel Reimbursement Policy

Mileage/Airfare - TWC will reimburse the lesser of 500 miles round-trip mileage, plus 10 hours travel time or round-trip coach airfare, plus 1 1/2 hours travel time per site visit, excluding site related miles. An justification must be provided for more than two (2) people per trip.

The rate per mile on the vehicle will accrue on travel from office to site and mileage for other related site activities. An explanation should be provided for mileage traveled. Mileage for personal trips is not reimbursable. This amount will be reimbursed for actual travel for each reasonable activity being performed (per site/per visit). The purpose and length of each activity/trip should be described in detail.

Personnel rates will be at normal rates for the specified title of the individual traveling. No overtime rates will be reimbursed. For companies who utilize other than local office, only charges from the local office to the site are reimbursable.

Entertainment is not a reimbursable travel expense.

Per Diem (meals and lodging) will be reimbursed at the lesser of cost or \$80.00 per night, if necessary.

Groundwater Monitoring and Reporting (Quarterly/Semi-Annually)

Quarterly and Semi-Annual reporting should be based on the following.

Personnel (3 wells-25 feet deep)

Title	Duty	Hours	Average Rate/per hour	Max. Rate/per hour	Average Cost Allowed	Max. Cost Allowed.
Project Manager	Mgmt./Rpt Rev.	1	\$70.00	\$80.00	\$70.00	\$80.00
Field Engineer	Mgmt./Field/Rpt.Prep.	4	\$60.00	\$65.00	\$240.00	\$260.00
Technician II	Field	4	\$40.00	\$45.00	\$160.00	\$180.00
Draftsperson I	Report Preparation	0	\$40.00	\$45.00	\$ 0.00	\$0.00
Word Processor	Report Preparation	1	\$30.00	\$35.00	\$30.00	\$35.00
		10			\$500.00	\$555.00

Personnel (6 wells-25 feet deep)

Title	Duty	Hours	Average Rate/per hour	Max. Rate/per hour	Average Cost Allowed	Max. Cost Allowed.
Project Manager	Mgmt./Rpt Rev.	1	\$70.00	\$80.00	\$70.00	\$80.00
Field Engineer	Mgmt./Field/Rpt.Prep.	5	\$60.00	\$65.00	\$300.00	\$325.00
Technician II	Field	6	\$40.00	\$45.00	\$240.00	\$270.00
Draftsperson I	Report Preparation	0	\$40.00	\$45.00	\$ 0.00	\$0.00
Word Processor	Report Preparation	1	\$30.00	\$35.00	\$30.00	\$35.00
		13			\$640.00	\$710.00

Equipment Rental

Description	Unit	Unit Cost	Number of Units	3 Wells	6 Wells
Submersible Pump	Per Day	\$20.00	1	N/A	N/A
Pneumatic Pump (for well purging)	Per Day	\$75.00	1	\$75.00	\$75.00
Interface Probe	Per Day	\$40.00	1	\$40.00	\$40.00
Portable Gas Monitor (OVM Meter)	Per Day	\$75.00	1	\$75.00	\$75.00
Generator	Per Day	\$50.00	1	\$50.00	\$50.00
Bailers	Each/Cost	\$8.00	Per Well	\$24.00	\$48.00
Truck	Per Day	\$45.00	1	\$45.00	\$45.00
Total				\$309.00	\$333.00

Total

Item	Personnel	Equipment	Total
3 Wells	\$500.00	\$309.00	\$809.00
6 Wells	\$640.00	\$333.00	\$973.00

Quarterly and semi-annual reports should be submitted on the Monitoring Event Summary and Status Report (Form TWC-0013).

The above costs include the time for sample collection, but not laboratory analysis.

Monthly well gauging is not included in the above costs. An additional one (1) hour per month will be allowed for field personnel to perform monthly well gauging, if required.

All wells over 50 feet and/or with a yield of over 20 gallons should use a submersible pump or pneumatic pump. Explanation should be provided for use of a bailer in these instances.

Equipment which was purchased as part of the system installation should not be included in the equipment rental costs for quarterly or semi-annual monitoring.

Groundwater Monitoring and Reporting (Annual)

Annual monitoring and reporting should be based on the following.

Personnel (3 wells-25 feet deep)

Title	Duty	Hours	Average Rate/per hour	Max. Rate/per hour	Average Cost Allowed	Max. Cost Allowed.
Project Manager	Mgmt./Rpt Rev.	3	\$70.00	\$80.00	\$210.00	\$240.00
Field Engineer	Mgmt./Field/Rpt.Prep.	6	\$60.00	\$65.00	\$360.00	\$390.00
Technician II	Field	4	\$40.00	\$45.00	\$160.00	\$180.00
Draftsperson I	Report Preparation	4	\$40.00	\$45.00	\$160.00	\$180.00
Word Processor	Report Preparation	3	\$30.00	\$35.00	\$90.00	\$105.00
		20			\$980.00	\$1,095.00

Personnel (6 wells-25 feet deep)

Title	Duty	Hours	Average Rate/per hour	Max. Rate/per hour	Average Cost Allowed	Max. Cost Allowed.
Project Manager	Mgmt./Rpt Rev.	3	\$70.00	\$80.00	\$210.00	\$240.00
Field Engineer	Mgmt./Field/Rpt.Prep.	8	\$60.00	\$65.00	\$480.00	\$520.00
Technician II	Field	6	\$40.00	\$45.00	\$240.00	\$270.00
Draftsperson I	Report Preparation	5	\$40.00	\$45.00	\$200.00	\$225.00
Word Processor	Report Preparation	4	\$30.00	\$35.00	\$120.00	\$140.00
		26			\$1,250.00	\$1,395.00

Annually Monitoring-Equipment Rental

Description	Unit	Unit Cost	Number of Units	3 Wells	6 Wells
Submersible Pump	Per Day	\$20.00	1	N/A	N/A
Pneumatic Pump (for well purging)	Per Day	\$75.00	1	\$75.00	\$75.00
Interface Probe	Per Day	\$40.00	1	\$40.00	\$40.00
Portable Gas Monitor (OVM Meter)	Per Day	\$75.00	1	\$75.00	\$75.00
Generator	Per Day	\$50.00	1	\$50.00	\$50.00
Bailers	Each/Cost	\$8.00	Per Well	\$24.00	\$48.00
Truck	Per Day	\$45.00	1	\$45.00	\$45.00
Total				\$309.00	\$333.00

Total

Item	Personnel	Equipment	Total
3 Wells	\$980.00	\$309.00	\$1,289.00
6 Wells	\$1,250.00	\$333.00	\$1,583.00

Annual reports should be submitted in the Annual Groundwater Monitoring Report.

The above costs include the time for sample collection, but not laboratory analysis.

Monthly well gauging is not included in the above costs. An additional one (1) hour per month will be allowed for field personnel to perform monthly well gauging, if required.

All wells over 50 feet and/or with a yield of over 20 gallons should use a submersible pump or pneumatic pump. Explanation should be provided for use of a bailer in these instances.

Equipment which was purchased as part of the system installation should not be included in the equipment rental costs for annual monitoring.

Operation and Maintenance

The below summarizes the average and maximum reimbursable charges for the operation and maintenance of remediation systems. This summary represents one (1) year of operation and maintenance with weekly visits. The below systems include one (1) extraction well and three (3) observation wells.

Groundwater Extraction System

Title	Duty	Hours	Average Rate/per hour	Max. Rate/per hour	Average Cost Allowed	Max. Cost Allowed.
Project Manager Technician	Rpt Rev. /Rpt. Prep Field/Rpt.Prepare.	50	\$70.00	\$80.00	\$3,500.00	\$4,000.00
		96	\$45.00	\$50.00	\$4,320.00	\$4,800.00
		146			\$7,820.00	\$8,800.00

Soil Vapor Extraction System (SVE)

Title	Duty	Hours	Average Rate/per hour	Max. Rate/per hour	Average Cost Allowed	Max. Cost Allowed.
Project Manager Technician	Rpt Rev. /Rpt. Prep Field/Rpt.Prepare.	50	\$70.00	\$80.00	\$3,500.00	\$4,000.00
		96	\$45.00	\$50.00	\$4,320.00	\$4,800.00
		146			\$7,820.00	\$8,800.00

Soil Vapor Extraction System and Groundwater Extraction System

Title	Duty	Hours	Average Rate/per hour	Max. Rate/per hour	Average Cost Allowed	Max. Cost Allowed.
Project Manager Technician	Rpt Rev. /Rpt. Prep Field/Rpt.Prepare.	55	\$70.00	\$80.00	\$3,850.00	\$4,400.00
		111	\$45.00	\$50.00	\$4,995.00	\$5,550.00
		166			\$8,845.00	\$9,950.00

Equipment Rental

Description	Costs	Unit	Groundwater Extraction System	Vapor Extraction System	Groundwater and VES System
Portable Gas Monitor	\$75.00	Per Day	N/A	\$900.00	\$900.00
Generator	N/A	Per Month	N/A	N/A	N/A
Regenerative Blower	\$150.00	Per Month	N/A	N/A	N/A
Maintenance	\$50.00	Per Month	\$600.00	\$600.00	\$600.00
Interface Probe	\$40.00	Per Day	\$480.00	\$0.00	\$480.00
Truck	\$45.00	Per Day	\$540.00	\$540.00	\$540.00
Oil/Water Separator	System	N/A	N/A	N/A	N/A
Air Stripper	\$625.00	Per Month	\$7,500.00	\$0.00	\$7,500.00
Air Compressor	\$300.00	Per Month	\$3,600.00	\$0.00	\$3,600.00
Aeration Trays	\$100.00	Per Month	\$0.00	\$100.00	\$100.00
Storage Tanks	System	N/A	\$0.00	\$0.00	\$0.00
Incinerator	System	N/A	\$0.00	\$0.00	\$0.00
Electrical Cost	\$200.00	Per Month	\$2,400.00	\$2,400.00	\$2,400.00
Total			\$15,120.00	\$4,540.00	\$16,120.00

Operation and Maintenance

Disposal Equipment

Description	Costs	Unit	Groundwater Extraction System	Vapor Extraction System	Groundwater and VES System
Disposable Bailers	\$8.00	Each	\$288.00	N/A	\$288.00
Carbon Canister	\$500.00	Each	\$6,000.00	\$6,000.00	\$6,000.00
Total			\$6,288.00	\$6,000.00	\$6,288.00

Summary

Item	Personnel	Equipment	Disposable Equipment	Total
Groundwater Extraction System	\$7,820.00	\$15,120.00	\$6,288.00	\$29,228.00
Soil Vapor Extraction System	\$7,820.00	\$4,540.00	\$6,000.00	\$18,360.00
Groundwater and SVE	\$8,845.00	\$16,120.00	\$6,288.00	\$31,253.00

Notes:

1. Equipment purchased and reimbursed during the installation of the remediation system should not be included in the operation and maintenance of the remediation system.
2. The above costs include costs for a site check and effluent sampling. Maintenance time related to repairs are not included in these costs. All additional costs should be submitted on the additional costs forms.
3. The total number of hours should increase by 25 percent for each additional 4 wells on-site.

Personnel/Labor Rates

Personnel Title	Average Rate/Hour	Maximum Rate/Hour
Principal (PR)	\$115.00	\$130.00
Prin. Engineer/Geologist/Hydrogeologist III (P3)	\$100.00	\$110.00
Senior Engineer/Geologist/Hydrogeologist II (S2)	\$85.00	\$95.00
Assoc. Engineer/Geologist/Hydrogeologist I (A1)	\$75.00	\$85.00
Project Manager (PM)	\$70.00	\$80.00
Staff Engineer/Geologist/Hydrogeologist (SF)	\$65.00	\$70.00
Field Engineer/Geologist/Hydrogeologist (FD)	\$60.00	\$65.00
Environmental Scientist (ES)	\$65.00	\$70.00
Health Scientist (HS)	\$70.00	\$80.00
Technician III (3)	\$45.00	\$50.00
Technician II (2)	\$40.00	\$45.00
Technician I (1)	\$35.00	\$40.00
Construction Foreman III (C3)	\$45.00	\$55.00
Construction Foreman II (C2)	\$40.00	\$50.00
Construction Foreman I (C1)	\$40.00	\$45.00
Operator III (O3)	\$35.00	\$40.00
Operator II (O2)	\$30.00	\$35.00
Operator I (O1)	\$25.00	\$30.00
Drafts Person II (D2)	\$45.00	\$50.00
Drafts Person I (D1)	\$40.00	\$45.00
Laborer III (L3)	\$25.00	\$30.00
Laborer II (L2)	\$20.00	\$25.00
Laborer I (L1)	\$15.00	\$20.00
Word Processor (WP)	\$30.00	\$35.00
Clerical (CL)	\$25.00	\$30.00

Note: The above Personnel Titles correspond with the Personnel/Qualifications & Task. Reimbursement will be based on the above labor costs.

Personnel/Qualifications & Task Description

Personnel and Qualifications	Task Description
<p>Principal (PR) Principal would probably be registered under proposed Subchapter J rules. Administrative and/or professional head of organization with authority and responsibility for conceiving and executing plans and function of the organization and directing a professional staff. Normally has financial interest in the company as partial owner, investor, or stockholder. Charges a very limited number of hours per site, as in review of the project documents as a Principal. Principal should almost never bill field work at this rate.</p>	<ul style="list-style-type: none"> - Expert testimony - Legal strategies - Depositions - Review most complex sites - New technology innovations
<p>Principal Engineer/Geologist/Hydrogeologist III (P3) Typically requires an advanced degree. Requires professional registration when applicable, and 10-12 years experience. Principal should be registered as required by Subchapter J. Administrative and/or professional head of organization with authority and responsibility for directing a professional staff. As a professional in engineering, geology, or hydrogeology, may be responsible for district/regional technical staff. Will serve as technical expert and coordinator of very large and/or technically difficult environmental and groundwater recovery and treatment projects. Charges a very limited number of hours per site, as in review of project documents for technical accuracy. Principal should almost never bill field work at this rate.</p>	<ul style="list-style-type: none"> - Project oversight - Review technical reports - Review remedial action plans - Data review and analysis
<p>Senior Engineer/Geologist/Hydrogeologist II (S2) Typically requires advanced degree, registration or certification as a P.E. or other professional as applicable, and 8 or more years of experience in technical and/or managerial roles. Complies with Subchapter J. Serves as senior technical leader for environmental remediation projects of medium to large scope and/or complexity and has developed substantial expertise in the field of practice. May supervise or direct the work activities of lower level engineers and technicians. Will perform very limited field work, and have limited involvement in projects. Duties typically include reviewing reports, developing strategies, and attending client and/or agency meeting. Responsible for approving designs, reports, plans, and specifications before submittal to clients or regulatory agency. If significant involvement in a highly technical project, should have substantial technical expertise directly related to the project.</p>	<ul style="list-style-type: none"> - Project oversight - Project management - Aquifer characterization - Review of technical reports - Review remedial action plans - Data review and analysis - Prepares proposals

Personnel/Qualifications & Task Description

Personnel and Qualifications	Task Description
<p>Associate Engineer/Geologist/Hydrogeologist I (A1) Typically requires a degree in engineering, geology, hydrogeology, or related science, and registration or certification as a P.E. or other professional as applicable. Complies with Subchapter J, and has 5-10 years of experience or an advanced degree and 3 years experience. Leads and supervises technical teams of lower level personnel, but would have limited number of hours charged to each site, and only a small percentage of total field hours. Generally supervises project managers and oversees a number of projects. May prepare proposals and cost estimates for projects, and schedule resources. Significantly involved in review of reports.</p>	<ul style="list-style-type: none"> - Project management - Engineering/remedial equipment design - Aquifer characterization - Review technical reports - Review remedial action plans - Data review and analysis - Report preparation - Prepares proposals - Site inspections (periodic)
<p>Project Manager (PM) Requires a bachelor's degree in physical sciences, natural science, biological science, environmental science, engineering, applied geography, or in a subject directly relevant to the environmental field which is technical in focus and 2 years of experience in corrective action services. Complies with Subchapter J. Under general direction, prepares environmental programs and plans specifications for site remediation activities. Is responsible for gathering field data, and is competent at data analysis. Has responsibility for managing entire projects. Identifies and develops approaches and prepares plans to remedy contamination problems using various techniques, serves as on-site technical expert on projects. Analyzes and interprets data, prepare sections of site assessment reports, may do hydrological site characterizations, supervise hydraulic tests, etc.</p>	<ul style="list-style-type: none"> - Project management - Data review and analysis - Report preparation - Report review - Engineering/equipment design - On-site supervision - Work plan preparation - Site assessment planning - Field work planning - Site inspection (periodic) - Obtaining permission to access off-site properties
<p>Staff Engineer/ Geologist/ Hydrogeologist (SF) Entry level position that typically requires a degree in engineering, geology, hydrogeology, or related science, and 1-3 years related experience. Works under close supervision to perform specific routine tasks related to environmental remediation system design, or general geological and field tasks. This position will normally be highest in number of hours billed for field work. Gathers basic technical information, and provides technical support for hydrogeological on-site projects. Responsibilities may include installing monitor wells, aiding in geological mapping, basic geological analysis.</p>	<ul style="list-style-type: none"> - Report preparation - Field work preparation/planning - Supervise site assessment activities - Site reconnaissance and mapping - Remedial system installation - Limited data review and analysis - Obtaining permission to access off-site properties - Monitoring activities - Supervise over-excavation activities

Personnel/Qualifications & Task Description

Personnel and Qualifications	Task Description
<p>Field Engineer/Geologist/Hydrogeologist (FD) Entry level position requiring a degree in engineering, geology, hydrogeology, or related science, and 0-1 year experience. Works under close supervision to perform routine field tasks related to the projects; work involves installing monitor wells, aiding in geological mapping, writing field notes, and basic geological analysis.</p>	<ul style="list-style-type: none"> - Field work prep. and planning - Supervise site assessment activities - Site reconnaissance/mapping - Remedial system installation - Limited data review and analysis - Obtaining permission to access off-site properties - Monitoring activities - Supervise over-excavation activities
<p>Environmental Scientist (ES) Typically requires a degree in biology, chemistry, microbiology, or related environmental science degree, and 2-6 years of related experience or an advanced degree and 2 years related experience. Performs assignments related to site assessments and bioremediation projects; risk analysis methodologies and analytical data reduction.</p>	<ul style="list-style-type: none"> - Data review and analysis - Bioremediation feasibility studies - Report preparation - Report review - On-site supervision - Work plan preparation - Site assessment planning
<p>Health Scientist (HS) Typically requires a degree in Industrial Hygiene, Toxicology, or a related health science degree, requires 1-3 years of related experience. Ensures compliance of field service operations within OSHA safety standards, and public health concerns. Work performed would need to be clearly defined and directly related to remediation in order to be reimbursable.</p>	<ul style="list-style-type: none"> - Health and safety coordinator - Develop site safety plan - Oversees safety health monitoring (periodic)
<p>Technician III (T3) Typically requires a high school diploma, certified or licensed trades-person or an Associate degree. Requires 4-6 years related experience. Responsible for general on-site supervision of installation, maintenance, and repair of machinery and equipment, and sampling activities. May collect samples and maintain documentation of record logs pertaining to monitoring and maintenance of machinery and equipment. Works under appropriate supervision.</p>	<ul style="list-style-type: none"> - Field work preparation and planning - Operation and maintenance of equipment - Well development - Waste handling - Decontamination - Environmental monitoring - Remedial system installation - Field contractor supervision (limited) - Monitoring activities - PSH removal (Free Product)

Personnel/Qualifications & Task Description

Personnel and Qualifications	Task Description
<p>Technician II (T2) Typically requires a high school diploma. Requires 2-4 years on-the-job training. Performs routine labor tasks related to on-site installation, maintenance and repair of machinery, and equipment. Performs routine tasks such as soil and groundwater sampling, bailing wells, etc. Performs these tasks under appropriate supervision.</p>	<ul style="list-style-type: none"> - Field work preparation and planning - Operation and maintenance of equipment - Well development - Waste handling - Decontamination - Remedial system installation - Monitoring activities - PSH removal
<p>Technician I (T1) Typically requires a high school diploma. Entry level position, under close supervision. Performs routine labor tasks related to on-site installation, maintenance and repair of machinery, and equipment. Performs routine tasks such as soil and groundwater sampling, bailing wells, etc.</p>	<ul style="list-style-type: none"> - Field work preparation and planning - Operation and maintenance of equipment - Well development - Waste handling - Decontamination - Remedial system installation - Monitoring activities - PSH removal
<p>Construction Foreman III (C3) Typically requires an Associate degree, 5-8 years experience, A and B License (under Subchapter I). Work includes on-site supervision and job foreman, oversees construction activities such as tank removals, installations, and repairs (must be present on-site during all critical junctures). Ensures compliance of field service operations within OSHA safety standards.</p>	<ul style="list-style-type: none"> - On-site supervision - Remove UST systems - Remedial system installation - Safety health monitoring (on-site) - PSH removal - Backfilling
<p>Construction Foreman II (C2) Typically requires A high school diploma, 3-5 years experience, A or B License (under Subchapter I).</p>	<ul style="list-style-type: none"> - Remove UST systems - Backfilling - PSH removal - Safety health monitoring (on-site)
<p>Construction Foreman I (C1) Typically requires a high school diploma, 2-4 years experience, B License, trainee.</p>	<ul style="list-style-type: none"> - Remove UST systems - PSH removal - Safety health monitoring (on-site)

Personnel/Qualifications & Task Description

Personnel and Qualifications	Task Description
<p>Operator III (O3) Typically requires high school diploma. Requires 3-5 years experience. Works under appropriate supervision. Certified to operate heavy equipment, if applicable. Supervises manual laborers working under him/her. Makes field decisions concerning construction finish and final improvements.</p>	<ul style="list-style-type: none"> - Field contractor supervision - Operates heavy equipment - Backfilling
<p>Operator II (O2) Typically requires high school diploma. Requires 2-4 years experience. Operates light to heavy equipment, such as backhoe, loaders, etc. Works under appropriate supervision.</p>	<ul style="list-style-type: none"> - Operates light to heavy equipment - Backfilling
<p>Operator I (O1) Requires 0-3 years experience. Operates light equipment. Works under appropriate supervision.</p>	<ul style="list-style-type: none"> - Operates light equipment - Backfilling
<p>Drafts Person II (D2) Typically requires high school diploma. Requires 4-8 years experience or two years related college and 1 year of experience. Generally requires a Technical Drawing Certificate, and advanced drafting skills such as Computer Assisted Design operations.</p>	<ul style="list-style-type: none"> - Advanced drafting - CAD work - Cartography
<p>Drafts Person I (D1) Typically requires high school diploma. Requires 0-4 years experience and generally requires a Technical Drawing Certificate. Performs entry to mid-level drafting, such as minor edits to existing drawings using Computer Assisted Design and/or Board.</p>	<ul style="list-style-type: none"> - Mid-level drafting - CAD work
<p>Laborer III (L3) Requires 2-4 years experience. Works under direct supervision. Performs manual labor, and may operate company-owned or rented equipment. Helps maintain equipment and machinery. May assist in supervising Laborers I and II.</p>	<ul style="list-style-type: none"> - Maintains equipment and machinery - Operates equipment - Laborer I & II supervision
<p>Laborer II (L2) Requires 1-3 years experience. Works under direct supervision. Performs manual labor, and may operate company-owned or rented equipment. Helps maintain equipment and machinery.</p>	<ul style="list-style-type: none"> - Maintains equipment and machinery - Operates equipment - Laborer I & II supervision - Hand digging with shovels
<p>Laborer I (L1) Entry level. Works under direct supervision. Performs manual labor (hand digging with shovels, etc.)</p>	<ul style="list-style-type: none"> - Maintains equipment and machinery - Operates equipment - Hand digging with shovels

Personnel/Qualifications & Task Description

Personnel and Qualifications	Task Description
Word Processor (WP) Operates computer for word processing, spreadsheets, and statistical typing, correspondence, report generation, etc. Higher billing rates imply experienced, efficient work. Longer technical reports would incur more hours billed than short reports.	<ul style="list-style-type: none">- Spreadsheets- Report generation- Word processing
Clerical (CL) General office work, typing and filing.	<ul style="list-style-type: none">- Typing- Filing- General secretarial- Document reproduction

Corrective (Remedial) Action Plan Preparation

The below summarizes the average and maximum reimbursable charges for the preparation of a corrective action plan. The summary is provided for both soils only contamination and soil and groundwater contamination. The below summary is for instances where no off-site migration of the contamination has occurred. A 25 percent increase will be allowed for sites with off-site contamination.

Soil only (no off-site migration)

Title	Duty	Hours	Average Rate Per Hour	Max. Rate Per Hour	Total Average	Total Maximum
Assoc. Engineer	Mgmt/Rpt Prep/Rpt Rev.	13	\$75.00	\$85.00	\$975.00	\$1,105.00
Project Manager	Mgmt/Rpt Rev.	3	\$70.00	\$80.00	\$210.00	\$240.00
Staff Engineer	Mgmt/Rpt Prep/Rpt Rev.	13	\$65.00	\$70.00	\$845.00	\$910.00
Drafts Person	Report Preparation	6	\$40.00	\$45.00	\$240.00	\$270.00
Word Processor	Report Preparation	5	\$30.00	\$35.00	\$150.00	\$175.00
Total		40			\$2,420.00	\$2,700.00

Soil and Ground Water (no off-site migration)

Title	Duty	Hours	Average Rate Per Hour	Max. Rate Per Hour	Total Average	Total Maximum
Assoc. Engineer	Mgmt/Rpt Prep/Rpt Rev.	36	\$75.00	\$85.00	\$2,700.00	\$3,060.00
Project Manager	Mgmt/Rpt Prep/Rpt Rev.	3	\$70.00	\$80.00	\$210.00	\$240.00
Staff Engineer	Mgmt/Rpt Prep/Rpt Rev.	22	\$65.00	\$70.00	\$1,430.00	\$1,540.00
Drafts Person	Report Preparation	30	\$40.00	\$45.00	\$1,200.00	\$1,350.00
Word Processor	Report Preparation	12	\$30.00	\$35.00	\$360.00	\$420.00
Total		103			\$5,900.00	\$6,610.00

Notes:

1. Costs include a complete corrective action plan. Including at minimum, maps and preliminary design drawings (to scale). This cost does not include "as built" drawings.
2. Slug and Bail Test and Aquifer Pumping Test Costs are not included in these costs.
3. Justification should be included for all corrective action plans over the costs shown.
4. The rate reimbursable for review by the project manager and/or principal will be at the project manager rate.
5. Reimbursement will not be made for a remedial action plan for soil only cases where the plan only entails over-excavation and disposal of the soils.

Site Assessment

The below summarizes the average and maximum reimbursable charges for the preparation of a Site Assessment plan.

Site Assessment - (4) Wells at 25 Feet

Title	Duty	Hours	Average Rate Per Hour	Max. Rate Per Hour	Total Average	Total Maximum
Principal	Mgmt/Rpt Rev.	1	\$115.00	\$130.00	\$115.00	\$130.00
Project Manager	Mgmt/Rpt Prep/Rpt Rev.	10	\$70.00	\$80.00	\$700.00	\$800.00
Staff Eng./Geologist	Field/Rpt Prep.	34	\$65.00	\$70.00	\$2,210.00	\$2,380.00
Technician II	Field	15	\$40.00	\$45.00	\$600.00	\$675.00
Drafts Person I	Report Preparation	12	\$40.00	\$45.00	\$480.00	\$540.00
Word Processor	Report Preparation	8	\$30.00	\$35.00	\$240.00	\$280.00
Total		80			\$4,345.00	\$4,805.00

Site Assessment - (7) Wells at 25 Feet

Title	Duty	Hours	Average Rate Per Hour	Max. Rate Per Hour	Total Average	Total Maximum
Principal	Mgmt/Rpt Rev.	1	\$115.00	\$130.00	\$115.00	\$130.00
Project Manager	Mgmt/Rpt Prep/Rpt Rev.	10	\$70.00	\$80.00	\$700.00	\$800.00
Staff Eng./Geologist	Field/Rpt Prep.	44	\$65.00	\$70.00	\$2,860.00	\$3,080.00
Technician II	Field	25	\$40.00	\$45.00	\$1,000.00	\$1,125.00
Drafts Person I	Report Preparation	12	\$40.00	\$45.00	\$480.00	\$540.00
Word Processor	Report Preparation	8	\$30.00	\$35.00	\$240.00	\$280.00
Total		100			\$5,395.00	\$5,955.00

Soil Boring and Monitor Well Installation (total price per foot)

Well Diameter and Depth	Sand/Silt	Clay	Limestone	Sand/Silt Per Well	Clay Per Well	Lime Stone Per Well
2" Diameter - 25 Feet	\$36.00	\$36.00	\$47.00	\$900.00	\$900.00	\$1,175.00
2" Diameter - 50 Feet	\$47.00	\$47.00	\$55.00	\$2,350.00	\$2,350.00	\$2,750.00
4" Diameter - 25 Feet	\$43.00	\$43.00	\$51.00	\$1,075.00	\$1,075.00	\$1,275.00
4" Diameter - 50 Feet	\$58.00	\$58.00	\$61.00	\$2,900.00	\$2,900.00	\$3,050.00
4" Diameter - 100 Feet	\$60.00	\$60.00	\$60.00	\$6,000.00	\$6,000.00	\$6,000.00
6" Diameter - 100 Feet	\$69.00	\$69.00	\$69.00	\$6,900.00	\$6,900.00	\$6,900.00

Soil boring includes labor, materials and equipment rentals (including concrete coring, concrete pad, and manhole covers).

Well Costs include all soil boring costs, plus any additional well completion costs (including bentonite pellets and PVC casing).

Explanation should be provided for the use of stainless steel casing and stabilizers.

Site Assessment

Equipment Rental

Equipment	Time Period (Days)	Number	Rate	4 - Wells per (2 days)	7 - Wells per (3-Days)
Portable Gas Meter	2	1	\$75.00	\$150.00	\$225.00
Combustible Gas Meter	2	1	\$25.00	\$50.00	\$75.00
Generator	2	1	\$50.00	\$100.00	\$150.00
Interface Probe	2	1	\$45.00	\$80.00	\$120.00
Equipment Vehicle	2	1	\$45.00	\$90.00	\$135.00
Barricades	2	10	\$1.00	\$20.00	\$30.00
Steam Cleaner	2	1	\$75.00	\$150.00	\$225.00
Protective Clothes	Each/Per Day	3	\$25.00	\$150.00	\$225.00
Bailers	N/A	5	\$8.00	\$80.00	\$120.00
Site Safety Plan	N/A	1	\$100.00	\$100.00	\$100.00
Miscellaneous	N/A	N/A	\$50.00	\$50.00	\$100.00
Total				\$1,020.00	\$1,505.00

Equipment rental should be consultant equipment related to the site assessment. The above costs do not include lab analysis, waste disposal and surveying the monitor wells. The above costs do include the costs for sample collection and water well inventory.

Summary- Site Assessment (4 Wells)

Well Diameter and Depth	Personnel	Boring Sand	Boring Clay	Boring Limestone	Equipment	Total Sand	Total Clay	Total Limestone
2" Dia.- 25 Ft.	\$4,345.00	\$3,600.00	\$3,600.00	\$4,700.00	\$1,020.00	\$8,965.00	\$8,965.00	\$10,065.00
2" Dia.- 50 Ft.	\$4,345.00	\$9,400.00	\$9,400.00	\$11,000.00	\$1,020.00	\$14,765.00	\$14,765.00	\$16,365.00
4" Dia.- 25 Ft.	\$4,345.00	\$4,300.00	\$4,300.00	\$5,100.00	\$1,020.00	\$9,665.00	\$9,665.00	\$10,465.00
4" Dia.- 50 Ft.	\$4,345.00	\$11,600.00	\$11,600.00	\$12,200.00	\$1,020.00	\$16,965.00	\$16,965.00	\$17,565.00
4" Dia.-100 Ft.	\$4,345.00	\$24,000.00	\$24,000.00	\$24,000.00	\$1,020.00	\$29,365.00	\$29,365.00	\$29,365.00
6" Dia.-100 Ft.	\$4,345.00	\$27,600.00	\$27,600.00	\$27,600.00	\$1,020.00	\$32,965.00	\$32,965.00	\$32,965.00

Summary- Site Assessment (7 Wells)

Well Diameter and Depth	Personnel	Boring Sand	Boring Clay	Boring Limestone	Equipment	Total Sand	Total Clay	Total Limestone
2" Dia.- 25 Ft.	\$5,395.00	\$6,300.00	\$6,300.00	\$8,225.00	\$1,505.00	\$13,200.00	\$13,200.00	\$15,125.00
2" Dia.- 50 Ft.	\$5,395.00	\$16,450.00	\$16,450.00	\$19,250.00	\$1,505.00	\$23,350.00	\$23,350.00	\$26,150.00
4" Dia.- 25 Ft.	\$5,395.00	\$7,525.00	\$7,525.00	\$8,925.00	\$1,505.00	\$14,425.00	\$14,425.00	\$15,825.00
4" Dia.- 50 Ft.	\$5,395.00	\$20,300.00	\$20,300.00	\$21,350.00	\$1,505.00	\$27,206.00	\$27,206.00	\$28,250.00
4" Dia.-100 Ft.	\$5,395.00	\$42,000.00	\$42,000.00	\$42,000.00	\$1,505.00	\$48,900.00	\$48,900.00	\$48,900.00
6" Dia.-100 Ft.	\$5,395.00	\$48,300.00	\$48,300.00	\$48,300.00	\$1,505.00	\$55,200.00	\$55,200.00	\$55,200.00

Site Closure

The below summarizes the average and maximum reimbursable charges for the preparation of site closure.

Site Closure-Groundwater Extraction System (4 Wells)

Title	Duty	Hours	Average Rate Per Hour	Max. Rate Per Hour	Total Average	Total Maximum
Principal	Rpt Rev.	1	\$115.00	\$130.00	\$115.00	\$130.00
Project Manager	Mgmt/Rpt Prep/Rpt	8	\$70.00	\$80.00	\$560.00	\$640.00
Field Engineer	Rev.	22	\$60.00	\$65.00	\$1,320.00	\$1,430.00
Drafts Person II	Mgmt/Rpt Prep/Rpt	2	\$45.00	\$50.00	\$90.00	\$100.00
Technician II	Rev.	20	\$40.00	\$45.00	\$800.00	\$900.00
Word Processor	Report Preparation	5	\$30.00	\$35.00	\$150.00	\$175.00
Laborer I	Field	25	\$15.00	\$20.00	\$375.00	\$500.00
Total		83			\$3,410.00	\$3,875.00

No. of total hours should increase by 25 percent for each additional 4 wells on-site.

Site Closure-Vapor Extraction System

Title	Duty	Hours	Average Rate Per Hour	Max. Rate Per Hour	Total Average	Total Maximum
Principal	Rpt Rev.	1	\$115.00	\$130.00	\$115.00	\$130.00
Project Manager	Mgmt/Rpt Prep/Rpt	8	\$70.00	\$80.00	\$560.00	\$640.00
Field Engineer	Rev.	22	\$60.00	\$65.00	\$1,320.00	\$1,430.00
Drafts Person II	Mgmt/Rpt Prep/Rpt	2	\$45.00	\$50.00	\$90.00	\$100.00
Technician II	Rev.	10	\$40.00	\$45.00	\$400.00	\$450.00
Word Processor	Report Preparation	5	\$30.00	\$35.00	\$150.00	\$175.00
Laborer I	Field	25	\$15.00	\$20.00	\$375.00	\$500.00
Total		73			\$3,010.00	\$3,425.00

Item	Unit	Cost
Plug and Cap Monitor Wells	Each/See Note B	\$250.00
Removal of Remediation Equipment (includes Demobilization)	Lump Sum	\$500.00
Material Fill-Excavation	Per Cubic Yard	\$9.50
Material Resurface Excavation	Per Square Foot	\$3.00
Disposal of Contaminated Material	See Note A	

Note A - See Costs for Waste Hauling and Disposal

Note B - The cost to plug and cap monitor wells may vary depending on the method used. Additional costs may be reimbursable depending on the method used. The method used to plug and cap wells must be fully explained in order for additional costs to be considered for reimbursement.

Site Closure

Example:

Assume that 4 wells are plugged and approximately 6 sq. ft. of resurfacing is needed for each well. The closure is of ground water wells.

Site Closure	Aver. Rate	Unit	Cost	Max. Rate	Unit	Cost
Material Resurfacing						
Rate Per Sq. Ft.	\$3.00	24	\$72.00	\$3.00	24	\$72.00
Plug Wells	\$250.00	4	\$1,000.00	\$250.00	4	\$1,000.00
Remove Equipment (lump)	\$500.00		\$500.00	\$500.00		\$500.00
Personnel Cost			\$3,410.00			\$3,875.00
Total			\$4,982.00			\$5,447.00

Example:

Assume that 4 wells are plugged and approximately 6 sq. ft. of resurfacing is needed for each well. The closure is of ground vapor wells.

Site Closure	Aver. Rate	Unit	Cost	Max. Rate	Unit	Cost
Material Resurfacing						
Rate Per Sq. Ft.	\$3.00	24	\$72.00	\$3.00	24	\$72.00
Plug Wells	\$250.00	4	\$1,000.00	\$250.00	4	\$1,000.00
Remove Equipment (lump)	\$500.00		\$500.00	\$500.00		\$500.00
Personnel Cost			\$3,010.00			\$3,425.00
Total			\$4,582.00			\$4,997.00

Slug and Bail Test

The below guidelines show the time length of the test as well as list the titles of people who may be present during the test and provide a general description of the work being performed. The test is normally a one-day test. The costs shown are per test performed. The price shown is for personnel and equipment used in the test.

Personnel - Six (6) Hour Test

Title	Duty	Hours	Average Rate Per Hour	Max. Rate Per Hour	Total Average	Total Maximum
Senior Engineer/Principal	Management	1	\$115.00	\$130.00	\$115.00	\$130.00
Staff Engineer/Project	Field	8	\$85.00	\$95.00	\$680.00	\$760.00
Manager	Report	8	\$75.00	\$95.00	\$600.00	\$760.00
Associate Engineer	Field	8	\$40.00	\$45.00	\$320.00	\$360.00
Technician II	Drafting	3	\$40.00	\$45.00	\$120.00	\$135.00
Drafts Person I	Data Entry	1	\$30.00	\$35.00	\$30.00	\$35.00
Word Processor	Clerical	2	\$25.00	\$30.00	\$50.00	\$60.00
Total		31			\$1,915.00	\$2,240.00

Personnel - Twelve (12) Hour Test

Title	Duty	Hours	Average Rate Per Hour	Max. Rate Per Hour	Total Average	Total Maximum
Senior Engineer/Principal	Management	2	\$115.00	\$130.00	\$230.00	\$260.00
Staff Engineer/Project	Field	14	\$85.00	\$95.00	\$1,190.00	\$1,330.00
Manager	Report	12	\$75.00	\$95.00	\$900.00	\$1,140.00
Associate Engineer	Field	14	\$40.00	\$45.00	\$560.00	\$630.00
Technician II	Drafting	4	\$40.00	\$45.00	\$160.00	\$180.00
Drafts Person I	Data Entry	1	\$30.00	\$35.00	\$30.00	\$35.00
Word Processor	Clerical	3	\$25.00	\$30.00	\$75.00	\$90.00
Total		50			\$3,145.00	\$3,665.00

General Equipment Used and Rental Rate (Per Day)

Equipment	Rate/Each	Rate (1 Day)	Rate (2 Days)
Data Logger	\$125.00	\$125.00	\$250.00
Interface Probe	\$40.00	\$40.00	\$80.00
Generator	\$50.00	\$50.00	\$100.00
Equipment Vehicle	\$45.00	\$45.00	\$90.00
Miscellaneous	\$100.00	\$100.00	\$200.00
		\$360.00	\$720.00

Summary

Summary	Total Hours	Personnel	Equipment	Total
Six (6) Hour Test	31	\$1,915.00	\$360.00	\$2,275.00
Twelve (12) Hour Test	50	\$3,145.00	\$720.00	\$3,865.00

Soil Vapor Extraction System

The below guidelines show the time length of the system installation, the people who may be present during the installation and provide a general description of the work being performed. The costs are summarized based on normal system installation costs for a retail facility with one (1) 20 foot deep extraction well. Cover material is 6" concrete and carbon treatment for remediation.

Personnel

Title	Duty	Hours	Average Rate Per Hour	Max. Rate/Hr Allowable	Total Average	Total Max. Allowable
Senior Engineer	Report/Review	3	\$85.00	\$95.00	\$255.00	\$285.00
Project Manager	Field/Report Rev.	15	\$70.00	\$80.00	\$1,050.00	\$1,200.00
Staff Engineer	Field/Report Rev.	15	\$65.00	\$70.00	\$975.00	\$1,050.00
Drafts Person	Report/Review	1	\$40.00	\$45.00	\$40.00	\$45.00
Technician I	Field/Report Rev.	30	\$35.00	\$40.00	\$1,050.00	\$1,200.00
Word Processor	Report/Review	3	\$30.00	\$35.00	\$90.00	\$105.00
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Total		67			\$3,460.00	\$3,885.00

Soil Vapor Extraction System - System Setup costs

Equipment	Quantity	Rate/Each	Total
Regenerative Blower (1.5 hp)	Cost - Each	\$1,000.00	\$1,000.00
Gauges	Lump Sum (for 3)	\$150.00	\$150.00
Plumbing Supplies	Lump Sum	\$830.00	\$830.00
Fence compound	Lump Sum	\$850.00	\$850.00
Product Storage Tank(s)	Each-200 Gallon	\$250.00	\$250.00
Carbon Canister	Per Month	\$500.00	\$500.00
Miscellaneous	Lump Sum	\$50.00	\$50.00
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Subtotal			\$3,630.00

Soil Vapor Extraction System - Other costs

Item	Per Unit	Unit cost	Setup
Trenching	Per Foot/100 Cu. Ft.	\$15.00	\$1,500.00
Resurfacing	Per Foot/100 Sq. Ft.	\$6.00	\$600.00
Plumbing	Per Foot/100 Ft.	\$15.00	\$1,500.00
Electrical Costs	Utilities	Lump Sum	\$210.00
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Subtotal			\$3,810.00

Summary

Summary	Total Hours	Personnel	Equipment	Installation	Total
Soil Vapor Extraction (System Setup)	67	\$3,460.00	\$3,630.00	\$3,810.00	\$10,900.00

The above costs do not include costs for electrical work.

Soil Vapor Extraction Pilot Test

The below guidelines show the time length of the test as well as summarizes the titles of people who may be present during the test and provide a general description of the work being performed. The test normally is a one-day test. The costs shown are per test performed. The price shown is for personnel and equipment used in the test as shown below.

Personnel - 12 Hour Test

Title	Duty	Hours	Average Rate Per Hour	Max.Rate/Hr Allowable	Total Average	Total Max. Allowable
Senior Engineer	Rpt Prep/Rpt Rev	3	\$85.00	\$95.00	\$255.00	\$285.00
Associate Engineer	Field	15	\$75.00	\$85.00	\$1,125.00	\$1,275.00
Technician III	Field	14	\$45.00	\$50.00	\$630.00	\$700.00
Drafts Person I	Rpt Prep	4	\$40.00	\$45.00	\$160.00	\$180.00
Technician II	Field	15	\$40.00	\$45.00	\$600.00	\$675.00
Word Processor/Clerical	Rpt Prep	1	\$30.00	\$35.00	\$30.00	\$35.00

Total		52			\$2,800.00	\$3,150.00

Personnel - 24 Hour Test

Title	Duty	Hours	Average Rate Per Hour	Max.Rate/Hr Allowable	Total Average	Total Max. Allowable
Senior Engineer	Rpt Prep/Rpt Rev	3	\$85.00	\$95.00	\$255.00	\$285.00
Associate Engineer	Field	30	\$75.00	\$85.00	\$2,250.00	\$2,550.00
Technician III	Field	28	\$45.00	\$50.00	\$1,260.00	\$1,400.00
Drafts Person I	Rpt Prep	4	\$40.00	\$45.00	\$160.00	\$180.00
Technician II	Field	15	\$40.00	\$45.00	\$600.00	\$675.00
Word Processor/Clerical	Rpt Prep	1	\$30.00	\$35.00	\$30.00	\$35.00

Total		81			\$4,555.00	\$5,125.00

Soil Vapor Extraction System - System Setup costs

Equipment	Quantity	Rate/Each	Total
Portable Gas Monitor (OVM METER)	1	\$75.00	\$75.00
Gages	3	\$75.00	\$225.00
Data Logger	1	\$125.00	\$125.00
Generator	1	\$75.00	\$75.00
Equipment Vehicle	1	\$45.00	\$45.00
Carbon Canister	1	\$500.00	\$500.00
Regenerative blower (1.5 hp.)	1	\$100.00	\$100.00
Miscellaneous		\$50.00	\$50.00

Subtotal			\$1,195.00

Summary	Total Hours	Personnel	Equipment	Total
Soil Vapor Extraction Test (12 Hours)	52	\$2,800.00	\$1,195.00	\$3,995.00
Soil Vapor Extraction Test (24 Hours)	81	\$4,555.00	\$1,195.00	\$5,750.00

Tank Removal Performed Prior to March 12, 1993

Effective Date

This section is effective for tanks removed prior to March 12, 1993.

Permits

Permits and Utility Clearances - The number and types of permits may vary for each site depending on the city and/or county regulations. Permits will be reimbursed at cost with receipts. The number of hours needed to complete the task should be approximately 4-8 hours. The personnel rate range should be \$40.00 - \$50.00 per hour. If any higher personnel is used a full explanation should be provided for the rate.

Various Permits Used in Remediation Activities

Construction (includes inspections), Fire Marshall Permit, Special Tank Removal Permit, Over-Sized Load Permit, Waste Disposal Permit, Utility Clearances (usually no charge).

Tank Removal Costs

Item	2" Asphalt	6" Concrete	Native Soil
Remove Pavement Over UST:			
Average Rate (sq. ft)	\$2.50	\$3.25	\$0.00
Maximum Rate	\$3.50	\$5.50	\$0.00
Pavement/Cover Resurfacing:			
Average Rate (sq. ft)	\$3.00	\$3.50	\$0.00
Maximum Rate	\$3.50	\$4.25	\$0.00

Tank Removal

Item	Site A 1-1000	Site B 3-8,000	Site C 3-10,000
Average Cost	\$1,071.00	\$3,719.00	\$3,824.00
Price Per Gallon	\$1.10	\$0.16	\$0.13
Maximum Cost	\$1,412.00	\$4,852.00	\$4,957.00
Price Per Gallon	\$1.40	\$0.20	\$0.17

Excavate Tank-hold, Replace Backfill Material and Compaction (per cubic yard)

Item	Regular Material Average Rate	Regular Material Max. Rate	Select Fill Average Rate	Select Fill Max. Rate
Excavate Tank-hold	\$7.00	\$9.00	\$7.00	\$9.00
Material	\$9.50	\$11.00	\$11.50	\$14.00
Compaction	\$7.00	\$9.00	\$9.00	\$12.00

Tank Removal

Personnel - for Tank removal

Title	Duty	Hours	Average Rate Per Hour	Max. Rate/Hr Allowable	Total Average	Total Max.
Field Engineer	Field/Report	16	\$60.00	\$65.00	\$960.00	\$1,040.00
Project Manager	Field/Report Rev.	3	\$70.00	\$80.00	\$210.00	\$240.00
Technician III	Field/Report Rev.	15	\$45.00	\$50.00	\$675.00	\$750.00
Word Processor	Report/Review	3	\$30.00	\$35.00	\$90.00	\$105.00
Drafts Person I	Report/Review	3	\$40.00	\$45.00	\$120.00	\$135.00
Total		40			\$2,055.00	\$2,270.00

Personnel - Personnel for tank removal are for sampling, some field hours and report preparation.

Select Fill - An explanation should be provided for the use of select backfill.

Compaction Rate - Compaction rate includes in-place density test.

Tank Removal - Tank removal costs should include all costs for tank preparation, removal of tank contents, disposal and transportation. The tank-hold boundary is estimated to be three (3) feet beyond the tank. Backfill is estimated to be loose yards (not compacted). The backfill used is estimated by multiplying the volume by 1.3.

Example:

For a 1000 gallon tank removal assume that the tank hold size is: 17 ft. long X 9 ft. wide X 8 ft. deep. Assume the depth of cover on top of tank is 3 ft. The amount of material excavated is assumed to be the volume of the tank hold and the replacement backfill needed is assumed to be measured in loose yards. The backfill is estimated by multiplying the volume by 1.3.

Item	Average Rate 2" Asphalt	(Sq.Ft)	Average Cost	Maximum Rate 2" Asphalt	(Sq.Ft)	Maximum Cost
Removal of Pavement (Sq.Ft.)	\$2.50	153	\$382.50	\$3.50	153	\$535.50
Pavement Resurface (Sq.Ft.)	\$3.00	153	\$459.00	\$3.50	153	\$535.50
Tank Removal per Gallon	\$1.10	1,000	\$1,100.00	\$1.40	1,000	\$1,400.00
		Volume (Cu. Yds)			Volume (Cu. Yds)	
Excavate	\$7.00	45	\$315.00	\$9.00	45	\$405.00
Material-Regular	\$9.50	59	\$560.50	\$11.00	59	\$649.00
Compaction	\$7.00	59	\$413.00	\$9.00	59	\$531.00
Personnel			\$2,055.00			\$2,270.00
Total			\$5,285.00			\$6,326.00

Tank Removal

Example:

For 3-8000 gallon tank removal assume that the tank hold size is: 27 ft. long X 33 ft. wide X 12 ft. deep. Assume the depth of cover on top of tank is 3 ft. The amount of material excavated is assumed to be the volume of the tank hold and the replacement backfill needed is assumed to be measured in loose yards. The backfill is estimated by multiplying the volume by 1.3.

Item	Average Rate 2" Asphalt	(Sq.Ft.)	Average Cost	Max.Rate 2" Asphalt	(Sq.Ft.)	Max. Cost
Removal of Pavement (Sq.Ft.)	\$2.50	891	\$2,227.50	\$3.50	891	\$3,118.50
Pavement Resurface (Sq.Ft.)	\$3.00	891	\$2,673.00	\$3.50	891	\$3,118.50
Tank Removal per Gallon	\$0.16	24,000	\$3,840.00	\$0.20	24,000	\$4,800.00
		Volume (Cu. Yds)			Volume (Cu. Yds)	
Excavate	\$7.00	396	\$2,772.00	\$9.00	396	\$3,564.00
Material-Regular	\$9.50	515	\$4,892.50	\$11.00	515	\$5,665.00
Compaction	\$7.00	515	\$3,605.00	\$9.00	515	\$4,635.00
Personnel			\$2,055.00			\$2,270.00
Total Costs			\$22,065.00			\$27,177.00

Example:

For 3-10,000 gallon tank removal assume that the tank hold size is: 39 ft. long X 23 ft. wide X 14 ft. deep. Assume the depth of cover on top of tank is 3 ft. The amount of material excavated is assumed to be the volume of the tank hold and the replacement backfill needed is assumed to be measured in loose yards. The backfill is estimated by multiplying the volume by 1.3.

Item	Average Rate 2" Asphalt	(Sq.Ft.)	Average Cost	Max.Rate 2" Asphalt	(Sq.Ft.)	Max. Cost
Removal of Pavement (Sq.Ft.)	\$2.50	897	\$2,242.50	\$3.50	897	\$3,139.50
Pavement Resurface (Sq.Ft.)	\$3.00	897	\$2,691.00	\$3.50	897	\$3,139.50
Tank Removal per Gallon	\$0.13	30,000	\$3,900.00	\$0.17	30,000	\$5,100.00
		Volume (Cu. Yds)			Volume (Cu. Yds)	
Excavate	\$7.00	465	\$3,255.00	\$9.00	465	\$4,185.00
Material-Regular	\$9.50	605	\$5,747.50	\$11.00	605	\$6,655.00
Compaction	\$7.00	605	\$4,235.00	\$9.00	605	\$5,445.00
Personnel Costs			\$2,055.00			\$2,270.00
Total Costs			\$24,126.00			\$29,934.00

Tank Removal Performed on or after March 12, 1993

Effective Date

This section is effective for tanks removed on or after March 12, 1993.

A tank removal is defined as the physical removal of an underground storage tank from the subsurface. Tank removals including removal and replacement of surface material, excavation and disposal of backfill material, tank removal and disposal, backfilling and compaction of excavation, and any other activities typically associated with the tank removal process.

Reimbursement of tank removals shall be based on the volume of the tank removed and shall have a maximum reimbursement limit of \$8,000.00 per LPST site. For underground storage tanks having a volume of 5,000 gallons or less, the portion of reimbursement costs or removal for each such tank is \$1,000.00. For underground storage tanks having a volume greater than 5,000 gallons, the portion of reimbursable costs of removal for each such tank is \$2,000.00.

Tank Volume (gallons)	Reimbursable Cost (per tank)	Total Maximum per LPST Site
5000 or less	\$1000.00	\$8,000.00
Greater than 5000	\$2000.00	\$8,000.00

Waste Hauling and Disposal

The following is for the loading, hauling and disposal of various contaminated waste.

Contaminated Soil	Quantity	Price Per Cubic Yard
Loading and Hauling	Over 20 Cubic Yards	\$13.00
Loading and Hauling	20 Cubic Yards and less	\$15.00

Contaminated soil loading and hauling is the disposal price per cubic yard.

Liquid Disposal	Maximum Price
(Water and Phase-Separated Product) Loading and Hauling (per hour)	\$68.00
Disposal (per gallon)	\$0.40
Water containerization (per day)	\$35.00

Disposal of Contaminated Soil (Landfill)

Contaminated Soil Disposal is reimbursable at costs, with landfill invoices/receipts, plus markup. Disposal costs per cubic yard range from \$2.00 to \$20.00, depending on the level of contamination.

Barrels - Reimbursable at cost with receipts. Costs range from \$15.00 to \$40.00 per barrel (depending on the content).

Lab fee for tests performed at the landfill for testing for contamination are reimbursable at cost with invoices/receipts.

Loading and hauling prices include labor and mileage. Class 1 soils may require additional travel which should be explained in detail.

Waste Treatment

The below guideline is for the waste treatment costs for contaminated waste.

Mobilization/Demobilization	Average	Maximum
Thermal Treatment	\$1,500.00	\$2,000.00
Bioremediation	\$500.00	\$500.00

Waste Treatment - Mobil(Portable) Thermal Treatment (Per Ton)	Average	Maximum
Sand/Silt	\$45.00	\$50.00
Clay	\$55.00	\$60.00
Limestone	\$50.00	\$55.00

Waste Treatment - Fixed Thermal Treatment (Per Ton)	Average	Maximum
Sand/Silt	\$30.00	\$45.00
Clay	\$55.00	\$85.00
Limestone	\$50.00	\$70.00

Waste Treatment - Bioremediation (Per Ton)	Average	Maximum
Sand/Silt	\$35.00	\$40.00
Clay	\$30.00	\$35.00
Limestone	\$30.00	\$30.00

The above costs include allowances for personnel, materials, equipment, and collecting samples for laboratory analysis. These costs do not include laboratory analysis.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on June 8, 1993.

TRD-9323989

Mary Ruth Holder
Director, Legal Division
Texas Water Commission

Effective date: June 29, 1993

Proposal publication date: March 12, 1993

For further information, please call: (512) 463-8069

◆ ◆ ◆
**Chapter 335. Industrial Solid
Waste and Municipal
Hazardous Waste In General**
**Subchapter A. Risk Reduction
Standards**

The Texas Water Commission adopts amendments to §§335.1, 335.5, 335.6, and 335.8 concerning industrial solid waste and municipal hazardous waste management in general, and adopts new §§335.551-335.569 concerning risk reduction standards. Sections 335.1, 335.8, 335.551-335.560, 335.563, and 335.566-335.569 are adopted with changes to the proposed text as published in the December 18, 1992, issue of the *Texas Register* (17 TexReg 8881). Sections 335.5, 335.6, 335.561, 335.562, 335.564, and 335.565 are adopted without changes and will not be published.

The Texas Water Commission (TWC) is promulgating these risk reduction rules to achieve a number of broad implementation and policy improvements for closures and remediations regulated under the hazardous/industrial solid waste, superfund, and spill programs. These goals are discussed in this section and were also thoroughly described in the preamble to the proposed rule published in the December 18, 1992, issue of the *Texas Register*.

These final rules represent an important and large step toward the adoption of a risk-based approach for determining the extent and type of closures or remediations which are necessary to protect human health and the environment. This approach represents a major departure from the commission's past practice of either requiring a responsible person to remove all waste or other contaminants to background levels or to contain these materials and perform appropriate post-closure care. Through the use of quantitative health-based risk assessment procedures, these rules recognize for the first time that limited quantities of contaminants may remain in soil or groundwater at a site and not present an unacceptable threat to human health or the environment.

Most persons who submitted comments during the public comment period expressed their general agreement with the goals and structure of the proposed rules but requested that the commission modify or allow variance

to one or more aspects of the proposed rules. Upon review of these letters, the commission is issuing these final rules with only those minor changes which are necessary to improve their function, clarity, or implementation and are maintaining all essential requirements and procedures from the proposed rules. In adopting these rules, the commission realizes that they are more conservative and prescriptive and allow less site-specific analysis than was endorsed by a number of the respondents. The commission considers these rules to be a prudent first step for the formal incorporation of risk assessment practices into its waste management programs. This analysis is based both upon the desire to be cautious when embarking upon a fundamentally different regulatory approach and the need to minimize adjustment problems that commission staff and regulated persons will have becoming acquainted with and using these new and rather complicated rules. While we are not adopting many of the proposals espoused by the respondents in this rulemaking, the commission remains open to exploring new approaches. Based upon the familiarity and experience that we gain over time, the commission will be in a better position to judge whether the flexibility or modified procedures requested by the respondents are warranted and should be incorporated into future rulemakings.

The commission is adopting these regulations to specify a consistent risk management policy which will be uniformly applied across hazardous/industrial solid waste, Superfund and spill programs to define what cleanup actions are necessary to protect human health and the environment. While the nature of the various programs requires certain administrative and procedural differences, the same substantive cleanup requirements need to apply across programs in order to avoid a fragmented system without an underlying consistent approach for managing public health and environmental risks. The coherent program described in these rules should assist the TWC in effectively pursuing the cleanup of industrial/hazardous solid waste units, superfund sites, and spills of hazardous substances and other contaminants.

The commission is promulgating these rules to require closures, corrective actions, and remediations to provide risk reduction to levels that are protective of human health and the environment through the use of remedies that are permanent or have a high degree of long-term effectiveness. Long-term effectiveness refers to a remedy's ability to maintain the required level of protection over time. A remedy is permanent when it will endure indefinitely without posing the threat of any future release that would increase the risk above levels established for the facility or area.

The TWC is establishing three closure/remediation performance standards which persons may use to satisfy their cleanup responsibilities at contaminated facilities and areas. Each of the three closure/remediation performance standards are designed to be protective of human health and the environment when combined with the post-closure care and deed recordation requirements for that

performance standard. While conformance with any of these standards would result in a high level of risk reduction with an appreciable degree of long-term effectiveness, the residual threat of possible future endangerment of human health or the environment would vary depending upon the performance standard achieved. As a result, varying degrees of post-closure care and deed recordation requirements are coupled with each closure/remediation standard so that the combined requirements will provide long-term protection for human health and the environment.

The commission is also adopting these regulations to establish an incentive-based program which encourages responsible persons to perform remedies with a high degree of long-term effectiveness. These rules require responsible persons to close/remediate a facility or area to meet one or more of the risk reduction performance standards. Unless another regulation, order, or permit of the commission specifies a different approach, the actual performance standard selected for a specific site will be left to the discretion of the person responsible for taking the action. These rules, however, provide significant incentives for a responsible person to achieve permanence or a high degree of long-term effectiveness so as to avoid the more burdensome post-closure care and deed recordation responsibilities that are to be imposed on remedies with a lesser degree of long-term effectiveness.

These risk reduction rules have also been designed with the goal of increasing the efficiency and timeliness of environmental cleanup activities by streamlining the process for review and approval of closure and remediation plans. These rules reduce, where appropriate, the paperwork burden on both regulated parties and the commission. We have crafted these rules to require responsible persons to prepare and submit information and reports which are commensurate with the degree of risk posed by an area and the type of remedy to be performed. We have also sought in these rules to remove impediments which preclude the voluntary and timely implementation of remedial measures in those instances where prior approval of the commission is not warranted. At the same time, the commission recognizes its responsibility to provide a sufficient degree of review and oversight to ensure that these rules will be implemented in a manner which will be protective of human health and the environment. We have sought in these rules to achieve an appropriate balance between these two objectives.

In this same vein, under the present circumstances there are few promulgated standards that are available for use as cleanup levels. This is a significant hindrance to the prompt remediation of contaminated sites. In the absence of readily available, previously agreed upon cleanup standards, the remediation levels for each site must be independently determined using quantitative risk assessment procedures. Without carefully prescribed procedures, this process can be fraught with disagreements, time delays, and unjustifiable differences among sites. These regulations

establish generic cleanup levels that can be used immediately unless special circumstances apply at a site, as well as standardized risk assessment procedures that can be used for the development of site-specific cleanup levels. The speed and defensibility of the cleanup process should be enhanced by this standardization of the procedures used.

The next section of this preamble presents a brief summary of the requirements for each of the three risk reduction standards. This is followed by a section which discusses the persons to whom and the facilities to which these rules are applicable. Next comes a section which discusses the relationship of these risk reduction rules to the hazardous waste closure and remediation program. That section is followed by a discussion of the summary statements of support, or lack thereof, made by respondents who submitted letters during the public comment period for these rules. The following portion of this preamble presents a sequential, section-by-section analysis of the final rule. That portion of the preamble briefly describes the effect that a section will have, the comments that we received pertaining to that section, any modifications we are making to the text of that section, and our rationale for not making any other changes that were suggested. And finally, we are republishing a small section of the preamble for the proposed rules in which numbers expressed in scientific notation were not accurately represented.

Risk Reduction Standard 1 as promulgated at §335.8(b) requires a responsible person to remove and/or decontaminate all waste, waste residues, leachate, and contaminated media to background levels unaffected by waste management or industrial activities. The requirements for conforming to this standard are specified in §335.553(a) (relating to Required Information) and §335.554 (relating to Attainment of Risk Reduction Standard Number 1: Closure/Remediation to Background).

The fundamental requirement for compliance with the first standard is that wastes and contaminated media must be removed and/or decontaminated to background levels. Through removal, the waste materials and contaminated media would be transported from the facility for off-site treatment and/or disposal. Through decontamination, the contaminated materials would be treated to destroy or eliminate its hazardous properties. Both removal and decontamination are irreversible processes that result in permanent risk reduction at a site.

Closure or remediation to achieve the first standard is highly desirable since it represents a permanent remedy with a great degree of risk reduction. Conformance to this standard would result in a property being restored to background conditions via processes that will remain protective over time. These rules encourage responsible persons to pursue closure/remediation in accordance with this highly protective standard by removing any requirement for post-closure care or deed recordation.

Risk Reduction Standard 2 as promulgated at §335.8(b) requires a responsible person to remove and/or decontaminate all waste,

waste residues, leachate, and contaminated media to standards and criteria such that any substantial present or future threat to human health or the environment is eliminated. The requirements for conforming to this standard are specified in §335.553 (relating to Required Information) and §§335.555-335.560.

Closure/remediation to achieve Risk Reduction Standard 2 provides a permanent remedy with a high degree of risk reduction, although somewhat less than the first standard, and is therefore also favored. This standard requires the use of the irreversible processes of removal and decontamination to restore a site to highly protective levels. These protective levels are derived either by conservative quantitative health-based risk assessment procedures or by directly using other appropriate promulgated standards. This standard establishes separate levels for residential and nonresidential use of contaminated properties.

To encourage closures/remediations under this standard, these rules release the responsible person from all post-closure care responsibilities, such as groundwater monitoring. These rules, however, impose a deed certification requirement on the responsible person so that future prospective owners would be informed of any residual levels of contaminants remaining on the property. For a site which has been restored to nonresidential or residential levels, the responsible person or any future owner has a continuing obligation to perform any additional closure or remediation actions required by the rules of the commission if a substantial change in circumstances occurs at the facility such that it is no longer protective of human health and the environment.

Risk Reduction Standard 3 as promulgated at §335.8(b) requires a responsible person to remove, decontaminate, and/or control all waste, waste residues, leachate, and contaminated media to levels and in a manner such that any substantial present or future threat to human health or the environment is eliminated or reduced to the maximum extent practicable. The requirements for conforming to this standard are specified in §335.553 (relating to Required Information) and §§335.561-335.566.

The third performance standard provides flexibility in those instances where closure or remediation strictly by removal or decontamination would not be feasible. The third performance standard allows the use of measures to control the contaminated materials or the property where the contaminated materials are located. Such measures may consist of engineering controls such as construction of a fence, placement of a cap, installation of a slurry wall, or stabilization/solidification/fixation of the waste or waste residues. These measures may also involve institutional controls such as voluntary deed restrictions.

Under the third standard, the responsible person would use removal and decontamination processes where feasible to remove the principal threats at a site. Where decontamination or removal is not appropriate, then treatment methods that significantly reduce the mobility, toxicity, and/or volume of the waste and waste residues would be used to address the

principal threats at a site. Treatment that does not achieve the standard of eliminating substantial present or future threats is considered to be a control measure rather than decontamination. Treatment could be used in combination with other control measures such as capping to reduce present and future threats from the site.

Among other requirements, §335.561 requires remedies conforming to the third standard to be permanent or, if that is not practicable, achieve the highest degree of long-term effectiveness possible. Thus, the responsible person would have the burden of being able to demonstrate that the particular mix of removal, decontamination, and/or control that he wishes to use is the optimal blend to eliminate or abate present and future threats to human health and the environment to the maximum extent practicable. The responsible person would also need to demonstrate that he has selected the control measure(s) which most effectively abates present and future threats from the site. Institutional controls are most effective as a supplement to engineering controls. Institutional controls should not substitute for active response measures (i.e., removal, decontamination, and/or engineering controls) as a sole remedy unless such active measures are determined to not be practicable.

Due to the more reversible nature of control measures, these rules require post-closure care for those closures or remediations under the third standard which involve either engineering or institutional controls. The type, extent, and duration of these measures would be determined during the remedy evaluation process and would be dependent upon the permanence or degree of long-term effectiveness afforded by the selected remedy. The responsible person would also be required to file a deed recordation which states that continued post-closure care or institutional control measures are required to protect human health and the environment.

In addition to this discussion of the general aspects of Risk Reduction Standards Numbers 1, 2, and 3, a more thorough explanation of the requirements for each of the standards was included in the preamble for the proposed rule. In addition, subsequent sections of this preamble expand upon and in some areas will replace the previous preamble through presentation of a section-by-section response to comments and a description of changes made to the text of the rule.

This section provides an overview of the applicability of these final rules. A substantial number of comments were submitted by respondents regarding the applicability of these rules. These comments, our response to the comments, and changes we are making to these rules are discussed more thoroughly in the section-by-section analysis for §335.8.

These final rules will become effective 20 days after they are filed with the *Texas Register* for publication. These rules seek to provide greater consistency in both the extent and types of closures and remediation that are performed in response to the various contaminant cleanup programs managed by this agency. Accordingly, these rules will have broad applicability. Revised §335.8(a)

(pertaining to Applicability) describes the activities to which and the persons to whom these rules apply.

These rules supplement but do not replace any requirements for closure or remediation that are present in the regulations for the various programs subject to these rules. These rules set consistent standards for the level of cleanup and types of analyses that will be required by the various programs subject to these rules. In instances where the regulations for a specific program have other more stringent or supplemental requirements pertaining to closure or remediation, persons shall comply with those more stringent requirements in addition to the requirements of these regulations.

The amendments to §335.8 and the requirements of new Subchapter S apply to persons who undertake the closure of facilities used for the storage, processing, or disposal of industrial solid waste or municipal hazardous waste. These regulations also apply to persons who undertake the remediation of contaminated media resulting from unauthorized spills from such facilities, either as a part of closure or at any time before or after closure.

Permitted facilities used for the storage, processing, or disposal of industrial solid waste (including industrial hazardous waste) or municipal hazardous waste must be closed in accordance with the closing provisions of the permit unless specifically modified by other order of the commission. The TWC will use these rules along with program-specific requirements to develop the closure provisions to be placed into new and amended permits for industrial solid waste and municipal hazardous waste facilities. The TWC will also use these regulations to determine appropriate remediations pursuant to the corrective action program for solid waste management units (SWMUs) at permitted hazardous waste management facilities.

These rules also apply to persons conducting closures or remediations at nonhazardous industrial solid waste units. Additionally, these regulations apply to owners and operators of hazardous waste storage, processing or disposal facilities who are exempt from a permit, or are operating under interim status, and are conducting closure or remediation activities.

Even though these closure/remediation performance standards are contained in Subchapter A of this title (relating to Industrial Solid Waste and Municipal Hazardous Waste Management in General), the requirements of §335.8 (relating to Closure and Remediation) and of Subchapter S (relating to Risk Reduction Standards) apply to a substantially broader array of materials than just industrial solid waste and municipal hazardous waste.

The regulations of §335.8 along with other rules, permits, or orders issued by the commission establish the obligation for persons to perform closures or remediations for facilities or areas containing industrial solid and municipal hazardous waste and further specify the mechanism to evaluate such closures or remediations. The obligation to perform remediations for unauthorized discharges of contaminants under the state superfund and spill response programs occurs through the appli-

cation of the commission's rules and statutes pertaining to those programs. However, once such obligation has occurred the regulations of this rulemaking for Subchapters A and S of this chapter will be used to specify the mechanism to evaluate remediation of unauthorized discharges of contaminants subject to these programs.

A definition of the term "contaminant" is added to §335.1 to include not only solid waste materials but also pollutants and hazardous substances as defined by the commission as well as other substances that are subject to the Texas Hazardous Substances Spill Prevention and Control Act. As a result, these regulations apply not only to industrial solid waste and municipal hazardous waste facilities and to discharges from those facilities, but also to areas of unauthorized discharge of other contaminants where response is required by application of regulations pertaining to another of the commission's program areas. However, discharges or spills from storage tanks that are already regulated under Chapter 334 of this title (relating to Underground and Aboveground Storage Tanks) are specifically excluded from coverage by these rules.

The remediation of spills and requirements for immediate response actions will continue to be regulated pursuant to the Texas Water Code, §26.039 and §26.261 and the administrative and procedural requirements of the commission to carry out the Texas Hazardous Substance Spill Prevention and Control Act. As a separate but related action to these risk reduction rules, the commission has been working on and expects to propose spill response rules in the next several months to provide further definition of a person's responsibility to respond to both current and historic unauthorized discharges of contaminants. These two sets of rules will define a consistent, sequential program for response to spills. When initially discovered, spills are not subject to these risk reduction rules. Spills become subject to these risk reduction rules when the responsible person's actions do not achieve remediation to the levels and within the timeframe specified by the commission's spill response program. The spill response program has normally required that spills be removed to levels representative of background conditions. Once these risk reduction rules become applicable to a spill, they will be used to define the level of remediation and appropriate additional controls such as post-closure care and deed recordation.

The State Superfund Program will continue to be performed in accordance with Chapter 335, Subchapter K (relating to Hazardous Substance Facilities Assessment and Remediation) of the TWC's rules. However, in order to develop a uniform and consistent approach for contaminated sites, the portions of these rules which describe the calculation of cleanup levels and the required level of remediation will also apply to state superfund sites. As a result, remedial actions at state superfund sites could be performed to be consistent with the substantive requirements of any of the three risk reduction standards established in new Subchapter S. Specific sections of this rulemaking such as §335.8(c) (relating to Closure and Remediation Notifica-

tion and Initiation Requirements), §335.8(d) (relating to Demonstration of Conformance with Risk Reduction Standards), §335.553 (relating to Required Information), and §335.562 (relating to Remedy Evaluation Factors), which describe administrative, procedural, or informational requirements will not apply to the State Superfund Program. Potentially responsible parties will be required to submit information and to evaluate remedies in accordance with the administrative requirements of Subchapter K even if Subchapter S would require less information or allow abbreviated procedures. In particular, multiple candidate remedies will be evaluated in the feasibility study and a baseline risk assessment will be performed for a state superfund site regardless of which risk reduction standard is pursued. Only the substantive requirements of these rules which describe the required level of remediation or cleanup will apply to the State Superfund Program. The remedy selection criteria for Risk Reduction Standard 3 specified in §335.561 are substantive requirements and will apply to the State Superfund Program.

The risk reduction standards of Subchapter S may be used as applicable or relevant and appropriate requirements (ARARs) under the Federal Superfund Program to the extent that they represent more stringent state standards. The medium specific concentrations (MSCs) developed for Risk Reduction Standard 2 will not by themselves serve as ARARs since their use is not mandatory and a person may use the more site-specific analysis procedure provided by Risk Reduction Standard 3. While the individual parts of this rule will not serve as ARARs, the rules in their entirety do constitute a State ARAR for the Federal Superfund Program in Texas.

The TWC has incorporated closure performance standards for hazardous waste landfills, surface impoundments, and waste piles as provided by federal regulations contained in 40 CFR Parts 264 and 265 into §§335.112(a)(5) and 335.152(a)(5). The TWC has followed the closure interpretation set forth in the preamble to the July 26, 1982 RCRA codification rule, published at (47 FedReg 32274). This interpretation requires that when an owner/operator cannot demonstrate that all hazardous waste and waste constituents have been removed or decontaminated to background conditions, the unit must be closed in-place as a hazardous waste landfill, capped, and must be monitored for 30 years under a post-closure care plan and/or permit.

The commission is adopting these rules to be consistent with the modified closure-by-removal approach discussed by EPA in the March 19, 1987 preamble to a final rule on interim status closure requirements for owners and operators of hazardous waste treatment, storage, and disposal facilities published in 52 Fed.Reg. 8704 et seq. That preamble described the amount of removal or decontamination that obviates the need for post-closure care for both permitted and interim status facilities. EPA recognized that at certain sites limited quantities of hazardous waste constituents might remain in the subsoil and yet present only insignificant risks to human health and the environment. Thus,

EPA states that owners and operators would be required to remove all waste and contaminated liners and may demonstrate that any hazardous waste constituents left in the subsoils will not cause "unacceptable risks to human health or the environment" (52 FedReg 8706) (March 19, 1987).

The TWC incorporated the EPA rule by reference in the *Texas Register* (16 TexReg 6937) on November 29, 1991 with an effective date of December 13, 1991 but has delayed implementation of that approach pending final promulgation of today's rules. These risk reduction rules are consistent with EPA's approach for hazardous waste closures. For Risk Reduction Standards Numbers 1 and 2, all hazardous waste and contaminated design and operating system components such as liners or leachate collection systems must be removed. Unless lower levels are necessary to be in conformance with current hazardous waste regulations, the cleanup levels determined by the processes for Risk Reduction Standards Numbers 1 and 2, as applicable, will be used to determine when media (e.g., soil and groundwater) do not "contain" hazardous waste and do not require post-closure care. These requirements are also discussed in the section-by-section analyses later in this preamble for §335.554(b) and §335.555(b).

The TWC received a total of 42 letters from respondents during the public comment period for the proposed risk reduction rules. Most of these letters were supportive, and sometimes highly supportive, of the general direction, structure, and requirements of the proposed rules. While expressing general support for the proposed rules, most respondents did make a number of specific comments which they felt the commission should consider prior to making the rules final. This section of the preamble presents a representative sampling of the summary statements made by the respondents.

The Texas Chemical Council's (TCC's) letter stated that: "Texas Chemical Council members support the proposed risk reduction rules and commend the TWC on regulatory actions to speed environmental cleanup. . . TCC strongly supports the concept of voluntary implementation to meet Risk Reduction Standards 1 and 2. This is probably one of the most important features of the proposed regulation since it will both speed cleanup efforts and reduce paperwork delays and costs for both the TWC staff and the regulated community."

Individual companies such as Texas Eastman (Kodak), Merichem Company, Exxon Chemical Americas, and Shell Oil Company expressed their concurrence with the comments submitted by the TCC.

The Texas Mid-Continent Oil and Gas Association (TMOGA) expressed concerns about the proposed rules in four general areas: the economic impact and cost-effectiveness of the rules; the overly broad extension of the rules to spills and discharges; the administrative burden of the rules; and the overly broad definition of background. In spite of these areas of concern, TMOGA's letter stated that: "TMOGA members endorse the concept of risk reduction rules and support the Texas Water Commission (TWC) on all of their work

to streamline environmental cleanup which benefits all citizens of Texas. Regulations which allow industry to initiate quicker, more efficient methods to protect and enhance the environment will result in a better Texas for all of us. We believe that these proposed regulations would have that goal."

Exxon Company USA, Shell Oil Company, Koch Refining Company, Valero Refining Company, Star Enterprise, Amoco Oil Company, and Fina Oil and Chemical Company stated their agreement with the comments provided by TMOGA.

The American Industrial Health Council (AIHC) which is a diverse coalition of companies and trade associations whose mission is to promote the sound use of scientific principles in the assessment and regulation of chronic human health effects and directly related public policy issues was supportive of the rules when it stated: AIHC applauds several aspects of the Proposed Standards and supports the Texas Water Commission's (TWC's) general reliance on health-based risk assessments to establish these types of cleanup standards. In particular, AIHC commends TWC's reliance on good science and science policy in the development of the proposed risk reduction standards.

However, AIHC also expressed a degree of concern by stating: AIHC applauds TWC's recognition of the need to consider site-specific circumstances when setting cleanup levels under Risk Reduction Standards 2 and 3. AIHC feels, however, that even greater consideration of site-specific considerations and the opportunity for substitution of different non-site-specific default values should be incorporated into the proposed standards.

While expressing several major concerns, Exxon Chemical Americas strongly endorsed the goals and structure of the rules by stating: Exxon Chemical Americas (Exxon) supports the proposed amendments concerning solid waste management in general and the new risk reduction standards as they would apply to closure and remediation performance requirements. For the first time, these risk reduction standards have the potential to provide a clear path for the development of reasonable and scientifically based remedies that could be appropriately applied to various circumstances in a cost-effective manner. We are also encouraged by the Texas Water Commission's attempt to develop a consistent risk management policy which would be uniformly applied across the hazardous/industrial solid waste and Superfund programs.

Some of the same sentiments are echoed in this summary statement from the letter submitted by Groundwater Services, Inc.: We feel that the Texas Water Commission (TWC) is to be commended for development of the proposed Risk Reduction Rules package, which, for the first time, establishes comprehensive, risk-based standards for remediation of soil, groundwater, and surface water contamination problems. The optional risk reduction standards provide a workable system for determination of cleanup standards that are appropriate to the level of environmental risk associated with each site. By providing clear guidelines regarding the issue of "how clean is clean", these rules should greatly enhance

both the efficiency and economy of future corrective action projects. In addition, under Risk Reduction Standards Numbers 1 and 2, the rules pre-authorize commencement of cleanup activities for relatively straightforward problems, which should serve to reduce the current administrative burden on the TWC and allow government resources to be focused on significant environmental hazards.

Other respondents recognized and agreed with the approach developed in the proposed rules to encourage the timely completion of remediations. The following comments from the letters submitted by ENSR Consulting and Engineering, Cooper Industries, and Shell Oil Company, respectively, highlight this aspect of the rules: ENSR recognizes the hard work that went into developing the TWC Risk Reduction Rules and commends the Commission staff involved. The rules provide a workable program to expedite the voluntary closures of contaminated sites in the State.

In summary, we applaud the TWC's proposal to define a set of standards to govern cleanup and closure at active, inactive, onsite, and offsite source areas. We believe that the TWC's concept of establishing standards such as Risk Reduction Standard Number 1 and Risk Reduction Standard Number 2, which require the responsible party to make proper notification to the director and then proceed directly to implementation of the requirements under the first and second risk reduction standards will go a long way toward encouraging proactive cleanup of contaminated sites throughout the state.

The proposed three-tiered approach appears to provide the needed flexibility, has a self-implementation feature for Standards 1 and 2, and provides options to deal with a wide variety of remediation situations that would be subject to these rules.

Also, while sometimes expressing a number of concerns, Amoco Oil Company; Texas Eastman (Kodak); TransAmerican Waste Industries, Inc.; ERM-Southwest, Inc.; IT Corporation; Porter & Clements; and Brooks Air Force Base did include positive summary statements in their letters, which are repeated here in the same order: Amoco supports the commission's efforts to expedite the cleanup of waste management units while allowing industry to direct limited resources productively.

"The TWC is to be commended for the foresight to develop and propose these rules. With the proposal of these "risk" regulations, the TWC has made significant progress in optimizing the management of wastes in Texas."

TransAmerican Waste Industries, Inc. is generally supportive of the proposed rules and hopes that the enclosed comments will be considered as constructive suggestions to further improve these rules.

"We believe that the rules as published are scientifically sound and reasonable in scope and that they offer a flexible range of fair and balanced remedial options.

As a risk assessor, I am pleased to see continued movement toward risk-based decision making in the regulatory arena. The

approaches outlined in the proposed amendments are, on the whole, reasonable and if properly applied can expedite site remediation and closure.

Our review of the proposed rules discloses that the Texas Water Commission has performed a very thorough job in preparation of the rules. It is evident that the TWC staff expended considerable effort and diligence in studying both the scientific and practical aspects of risk reduction.

I would like to applaud the Texas Water Commission for taking a reasonable approach to a problem with which many other states are struggling. The dilemma is whether to promulgate "generic" cleanup standards for chemical contaminants in the environment which can be applied to any hazardous waste site or to require compliance to site-specific risk-based cleanup standards."

While the majority of the letters submitted by respondents contained positive summary statements regarding the proposed rules, a few letters expressed a high degree of concern. For example, Fina Oil and Chemical Company's letter stated: "While the Texas Water Commission (TWC) is to be commended for proposing Risk Reduction Standards in addition to background cleanup levels, the proposed regulations have severe shortcomings that require substantial revisions."

Shell Pipeline Corporation stated that while the proposed rules seem to provide industry with greater flexibility in the cleanup aspects of spill response, they found "the proposed cleanup levels for Risk Reduction Standard Number 2 for soils to be overly conservative." And finally a respondent from the Department of Soil & Crop Sciences of Texas A&M University challenged the technical adequacy of the rules by stating: "I realize that you seem to be in a hurry to promulgate a set of standards, but the discrepancies I have seen indicate to me that you need to withdraw your proposed cleanup levels at once and start over again with a systematic comprehensive evaluation of the data base and the calculational procedure for each of the contaminants for which you wish to set standards."

The following portion of this preamble proceeds sequentially through each section of these rules and discusses the effect that a section will have, the comments that we received pertaining to the section, any modification we are making to the text of the section, and our rationale for not making any other changes which were suggested.

Section 335.1 contains the definitions which are necessary to describe the requirements of Subchapter A. Upon review of the comments from the respondents, we are amending several definitions previously proposed to describe the planned modifications to Subchapter A.

Respondents regarding §335.1 included: Exxon Company, USA; Texas Mid-Continent Oil and Gas Association (TMOGA); Texas Chemical Council (TCC); Baker & Boits/Beazer; Amoco Oil Company; Fina Oil and Chemical Company; Valero Refining

Company; Exxon Chemical Americas; Porter & Clements; Texas Eastman; Union Carbide Chemical and Plastics Company; and Kelly Air Force Base.

The proposed definition for "contaminant" received a significant amount of attention from the respondents. The thrust of their statements was that the proposed definition was overly broad and that the term should be restricted to those chemicals which have proven toxic properties. Commenters recommended that the phrase "and any other substance, chemical component of a substance or mixture of substances which, when discharged, released or spilled can create a present or future threat to human health and the environment" be removed from the definition. Two commenters also stated that the previously included lists of constituents (i.e., pollutants as in the Texas Water Code and hazardous substances as in the Texas Health and Safety Code) would provide an adequate definition of "contaminant" and that if the commission wished to regulate other constituents as contaminants, they should be added to these source lists. In response to these comments, the commission has modified the definition to remove the problematic language regarding a present or future threat to human health and the environment. We have, however, added additional language to make it clear that the risk reduction rules do extend to any "other substances that are subject to the Texas Hazardous Substances Spill Prevention and Control Act, Texas Water Code, §§26.261-26.268."

Several commenters pointed out that the proposed definition for "contaminated medium/media" did not have a consideration of threshold concentrations so that any detectable level of a contaminant would make a medium, such as soil or groundwater, "contaminated". This was contrary to our intent so we have modified this definition to clarify that the mere presence of a contaminant would not necessarily make a medium contaminated. The definition now states that a contaminated medium contains contaminants "at levels that pose a substantial present or future threat to human health and the environment." This definition was also amended to remove the language "as well as man-made features, such as but not limited to dikes, liners, or other containment or waste handling structures or components." This change was necessary since the new requirements for attainment of Risk Reduction Standards Numbers 1 and 2 in §335.554 and §335.555, respectively, distinguish between "contaminated media" and contaminated design and operating system components and set different requirements for these materials in certain instances. In response to one commenter, we have also augmented the definition to clarify that the media that may be contaminated include "soil, sediment, surface water, groundwater, or air". A broad theme running through a number of the respondents' letters was that conditions "that pose a substantial present or future threat to human health or the environment" had not been clearly defined in the proposed rules and that the phrase was too subjective. The commission believes that use of a broad environmental performance standard which distinguishes

those materials and situations which pose "a substantial present or future threat to human health or the environment" is a necessary component of these rules and is not subjective or vague when viewed in the entire context of these rules. This analysis is explained further in the next paragraph. To minimize confusion, however, we have removed this performance standard from those definitions and sections of this final rule where it is not needed to distinguish those materials or conditions which are subject to these rules. As previously discussed, the definition of "contaminant" has been amended to remove this phrase. Likewise, as discussed later, the definitions for the action verbs "remove" and "control" have been amended to remove this phrase. Also, as discussed previously, this performance standard has been added to the definition for "contaminated medium/media" to distinguish which media will be considered contaminated. We have also maintained this phrase in the definition for "decontaminate" to help distinguish those treatment processes which qualify as decontamination.

The text for Risk Reduction Standards Numbers 2 and 3 in §335.8(b)(2)(B) and (C) both contain this environmental performance language and conclude with the following words, respectively: "as further specified in §335.555 of this title (relating to Attainment of Risk Reduction Standard Number 2)" and "as further specified in §335.561 of this title (relating to Attainment of Risk Reduction Standard Number 3)". Thus, the commission will use the risk-based procedures for the risk reduction standards that are described in Subchapter S to distinguish those materials and conditions that pose "a substantial present or future threat to human health or the environment" and therefore require action under these rules. Of course, a responsible person could also use the background approach incorporated into Risk Reduction Standard Number 1 to fulfill their responsibilities under these rules. In essence, the entire Subchapter S rules (relating to Risk Reduction Standards) define the conditions that "pose a substantial present or future threat to human health or the environment". Given the nature of the subject being addressed we agree that these rules may appear to be somewhat complex; however, we also believe that they are neither subjective nor vague and that they do constitute an understandable and supportable method to make these judgments. This analysis also supports our decision not to add a definition for the term "threats" as was suggested by one commenter.

In this same general subject area, several respondents felt that this environmental performance language should be removed because it does not provide a clear definition of what conditions trigger a responsible person's obligation to investigate, notify, and perform remediation as needed. These respondents are correct that this environmental performance standard does not adequately perform this function; however, it was never intended to be used as the trigger to determine when investigation of a facility or area is needed. Section 335.8(a) has been amended to state more clearly the persons to whom and the conditions under which these risk reduction

rules apply. Section 335.8(a) and other applicable solid waste rules, permits, or orders establish the obligation (i.e., trigger the requirement) for persons to perform closures or remediations for facilities or areas containing industrial solid waste and municipal hazardous waste. However, the obligation to perform remediations for unauthorized discharges of contaminants being addressed through the state superfund and spill response programs occurs (i.e., is triggered) through application of the commission's rules and statutes for those program areas. In other words, for those programs these risk reduction rules become applicable only after the requirement to respond is triggered through application of the commission's rules for these programs. Thus, the procedures described in Subchapter S for interpreting the risk reduction standards are not intended to be used to trigger an investigation. Subchapter S is to be used to determine what response action, if any, is needed, once the obligation to perform such an evaluation has been triggered by other rules, permits, or orders issued by the commission.

Several respondents recommended that the definition for "control" be revised to be clearer and less open-ended. As stated previously, we have removed the phrase regarding the "elimination of all substantial present or future threats" from this definition since it is not needed to distinguish which actions constitute "control" of a facility or area. We have also rearranged the wording for the definition to more clearly state its intent; have removed the word "sites" and inserted "facilities or areas" to be consistent with the wording in the rest of the rule; and have added language to make clear that "reversible treatment methods" constitute a control measure.

We made this last change regarding "reversible treatment methods" in partial response to several respondents who requested that we make clearer the definitional differences among "decontaminate", "control", and "remediation". In addition, language moved to §335.553(c) (relating to Required Information) and made applicable to all three standards clearly establishes what a treatment process must achieve in order to be considered "decontamination" rather than a "control" measure. In addition, we have added words to the definition for "decontaminate" to clarify that not only contaminated media but also wastes may be decontaminated. Also, the definition for "remediation" has been revised to make more clear the distinction between that term and "closure". As defined, "closure" refers to the act of permanently taking a waste management unit or facility out of service while "remediation" means the act of eliminating or reducing the concentration of contaminants in contaminated media.

One of the most commented upon areas in the proposed rule was the requirement that in order to achieve either Risk Reduction Standard Number 1 or Number 2 "all waste and waste residues must be removed from the unit." We are modifying this requirement in these final rules and this is discussed more fully in the following sections pertaining to §335.554 and §335.555. What is pertinent here, however, is that several commenters supported their argument that the proposed

rules were inconsistent in this regard by noting that the definition for "remove" contained the environmental performance language regarding "a substantial present or future threat to human health and the environment." They reasoned that since the proposed rules required waste and waste residues to be "removed" that this could be read to mean that the waste and waste residues are considered removed when they no longer pose a substantial present or future threat to human health or the environment. We are clearing up this ambiguity by amending the definition of "remove" to delete the environmental performance language. "Remove" now refers to the physical process of taking materials away from a facility or area and does not define residual levels that may remain. "Remove" is used as an action verb in the risk reduction standards of Subchapter S and the standards define the amount of removal necessary to achieve protection of human health and the environment. The definition for "remove" has also been revised to state more clearly the materials that are to be taken away, where they are to be taken from, and where they are to be taken to.

Two respondents also suggested that the term "environmental media" should not be used in the rule since it has not been defined and is overly broad. We have revised the text of the rule in response to this comment and either use the word "media" or list the particular media that we are addressing (e.g., soil, sediment, surface water, groundwater, or air). And finally, we have added additional language to §335.559(e) which makes it unnecessary to add a definition for the term "volatile organics" to either Subchapter A or Subchapter S.

Section 335.5 describes the requirements that apply to deed recordation of disposal of industrial solid waste or municipal hazardous waste in a landfill. Union Carbide Chemical and Plastics Company, Inc. was the only commenter on this section and recommended that the words "in a landfill" be deleted. This suggestion was made as part of a recommended solution to the question whether all wastes must be removed in order to comply with Risk Reduction Standards Numbers 1 and 2. As explained later, we are addressing this question by amending the language of §335.554 and §335.555. As a result, we are making no changes to the text of this section previously published.

Section 335.6 describes the notification requirements which apply to persons who intend to perform any activity of industrial solid waste or municipal hazardous waste facility expansion not authorized by a permit. The Barton Springs/Edwards Aquifer Conservation District submitted the only comment regarding this section and suggested that notification of the pertinent groundwater district of closure or remediations would also be appropriate. Having heard from only one groundwater district, the commission is not at this time incorporating this requirement into these rules but does remain open to discussing this idea further. We are making no changes to the text of this section previously published.

Section 335.8 is amended to establish three closure/remediation performance standards

which are referred to as "Risk Reduction Standards 1, 2, and 3". This section sequentially defines the persons to whom these rules apply, their closure and remediation obligations, their notification and initiation requirements, and what they must do to demonstrate conformance with the risk reduction standards. A significant number of comments were received on these subjects and this section is discussed extensively below.

Respondents on §335.8 included: Vinson & Elkins; Exxon Company, USA; Texas Chemical Council; Baker & Botts/Beazer; Porter & Clements; Texas Eastman; Kelly Air Force Base; Thompson & Knight; Geraghty & Miller, Inc.; Phillips Petroleum Company; EXIDE Corporation; Texas Mid-Continent Oil and Gas Association; Valero Refining Company; Industrial Service Company; Koch Refining Company; Exxon Chemical Americas; Amoco Oil Company; Colonial Pipeline Company; Fina Oil and Chemical Company; Crain, Caton & James; and TransAmerican Waste Industries, Inc.

These respondents submitted a large number of comments and suggestions regarding what should be the proper purpose, scope, and applicability of §335.8 (relating to Closure and Remediation). These comments relate for the most part to the following questions, which will serve as an introduction to and be used to guide the discussion of this section: What is the effective date for these rules? What is the appropriate applicability of these rules to spills and discharges? Are these rules intended to be applied to permitted discharges as well as unauthorized discharges? What actions or conditions at a facility or area trigger the closure or remediation obligations specified in §335.8(b)? Do these rules establish an independent basis for requiring closures or remediations or, on the other hand, do they only provide a mechanism to evaluate closures/remediations once the obligation to perform such actions has occurred through the application of other commission rules, permits, or orders? How, if at all, should these rules apply to contaminants other than industrial solid waste and municipal hazardous waste? What is the appropriate relationship between these risk reduction rules and the spill response rules under development by the commission? What is the applicability of these rules to the State Superfund program? How will these rules effect closures or remediations that are already in progress or have been approved and not implemented? How will these rules apply to closure or remediation plans contained in previously issued permits? Under what conditions should a person who has initiated or completed a response action in accordance with one of the three risk reduction standards be required to take additional actions? And, finally, what is the rationale for not covering releases from underground storage tanks under these rules?

We start this discussion by noting that one respondent stated that the rules should provide some statement of effective date so that the circumstances where these rules apply could be more clearly defined. The commission agrees with this comment and has inserted an effective date in the first sentence of subsection (a) of this section (relating to

Applicability) which will be 20 days after the date that these rules are filed with the *Texas Register* for publication.

We have made a minor change to the second sentence of subsection (a) so that it addresses the "storage, processing, or disposal" of wastes rather than the "storage, treatment, or disposal" of waste. Also, we have amended the third sentence of subsection (a) to speak of the remediation "of contaminated media" in order to be consistent with the revised definition for "remediation" placed in §335.1.

At least five of the respondents recommended that the following sentence be removed from subsection (a) of this section: "The regulations in this section also apply to persons who undertake remediation of areas that are not otherwise designated as a facility but that contain discharges of industrial solid waste, municipal hazardous waste, or other contaminant. . . ." Note that discussion of how these rules apply to "other contaminants" is examined later in the discussion for this section. Several of the commenters stated that the proposed rule had been well thought out as it pertains to waste management units, but questioned why spills and discharges, from other than waste management units, were to be regulated under Chapter 335, Subchapter A, of the commission's rules, which is titled *Industrial Solid Waste and Municipal Hazardous Waste in General*. Another commenter suggested that by including facilities that would not otherwise be subject to permitting requirements under these closure/remediation rules that the commission would "in effect be increasing the number of regulated facilities by orders of magnitude". This commenter felt that such an extension would act "as a severe regulatory disincentive to cleanup voluntarily initiated by private parties", particularly with regard to releases of "products", and that this would clearly be detrimental to the environment. In short, the commenters expressed the view that these rules should only apply to spills and discharges from facilities used for the storage, processing, or disposal of industrial solid waste or municipal hazardous waste and should not extend to persons who undertake remediation of areas that are not otherwise designated as a facility but that contain discharges of these same waste materials.

In response to these comments, we note that Subchapter A applies to *Industrial Solid Waste and Municipal Hazardous Waste in General* and that the commission's jurisdiction over such wastes is not restricted to their management in or discharge from facilities. The commission considers it fully appropriate for these rules to address areas of discharge of industrial solid waste or municipal hazardous waste whether or not such discharge resulted from a solid waste facility. As a result, the fourth sentence of subsection (a) in this final rule retains the statement regarding the applicability of these regulations to areas not designated as a facility. As discussed later in the preamble for this section, we have, however, amended this sentence to remove the reference to "other contaminant" and the language regarding an exception from these rules for substances discharged from underground storage tanks has been moved to new paragraph (6) of this subsection. We have also made necessary conforming changes to other parts of §335.8 to note that these rules apply not only to facilities but also "areas".

Also, as will be amplified in the following discussion of this section, the commission is not extending these risk reduction rules to additional facilities, areas, situations, or materials that are not presently subject to regulation under one of the commission's program areas. These rules merely specify a consistent risk management approach to evaluate closures or remediations once the obligation to perform such action has occurred through a statutory requirement or rule, order, or permit issued by the commission. The commission has decided to place these risk reduction regulations in a single place (i.e., Chapter 335, Subchapters A and S) in order to achieve uniformity among the programs subject to these rules and to avoid the needless repetition of the lengthy and complex text in several areas of this agency's rules.

Several respondents noted that the commission had not been clear in the proposed rule regarding whether we intended to regulate permitted discharges under these closure and remediation regulations. It was never the commission's intention to regulate permitted discharges under these rules, such as from a wastewater treatment plant with an NPDES permit. As a result, we have inserted language throughout §335.8 which makes clear that these rules apply to "unauthorized discharges".

Several commenters stated that, in contrast to waste management units, the "trigger" which would activate these rules for spills and discharge events was not clear. Additionally, another commenter argued that subsection (b) of this section should not be construed to provide an independent basis for requiring that closures/remediations be conducted in accordance with the provisions of these risk reduction rules. The commenter stated that the proposed language for subsection (b) inappropriately created a new and independent basis for requiring remedial activities and that this subsection should be modified to make it clear that §335.8 "only provides a mechanism by which facilities will be closed once the obligation to close or commence remediation has occurred through the implementation of other commission rules." The language in question from subsection (b) as proposed reads: "Any person who has stored, processed, or disposed of industrial solid waste. . . has a continuing obligation to: . . . (3) perform closure or remediation activities at the facility or area of discharge. . . ."

In response to these comments, the commission has amended §335.8 by inserting language into subsection (a) and removing language from subsection (b). These revisions make clear what actions or conditions at a facility or area of discharge activate or trigger the closure or remediation obligations specified in these rules.

Specifically, all of the aforementioned language from subsection (b) of this section occurring before and including the phrase "has a continuing obligation to" has been deleted from the final rule. This is replaced with the much simpler statement that: "Persons identified in subsection (a) of this section have the obligation to conduct the activities described in paragraphs (1)-(4) of this subsection when performing a closure or remediation." Thus,

subsection (a) describes who is to respond and subsection (b) describes the actions they must perform. With the exception of additional language which has been added to subsection (b) pertaining to "a substantial change in circumstances (which) results in an unacceptable risk to human health or the environment", and which will be addressed later in the discussion for this section, subsection (b) has been amended to remove any independent basis for requiring that closure or remediation must begin.

The same commenter further stated that subsection (a) of this section also does not provide an independent basis for imposing closure or remediation obligations. The commission disagrees, in part, with this statement and has amended subsection (a) accordingly. Specifically, we have added a new fifth sentence to subsection (a) which states "the regulations of this subsection, in addition to other applicable rules, permits, or orders, establish the obligation for persons to perform closures or remediations for facilities or areas containing industrial solid waste and municipal hazardous wastes. . . ." This sentence continues by clarifying that these rules also specify the mechanism to evaluate such closures or remediations involving these types of waste materials. Thus, the requirements of subsection (a) along with other applicable rules, permits, or orders do establish the obligation for persons to perform remediations or closures for facilities or areas containing industrial solid or municipal hazardous waste.

We agree with this commenter; neither subsection (a) nor (b) of this section establishes the obligation for persons to perform the remediation of unauthorized discharges of contaminants. As a result, we have added a new sixth sentence to subsection (b) which states "The obligation to perform remediations for unauthorized discharges of contaminants under the state superfund and spill response programs occurs through the application of the commission's rules and statutes pertaining to those programs; . . ." This sentence continues by concluding ". . . however, once such obligation has occurred the regulations in this section will be used to specify the mechanism to evaluate remediation of unauthorized discharges of contaminants subject to those programs."

A significant number of respondents commented upon what they considered to be the overly broad and inappropriate nature in which discharges of "other contaminants" were proposed to be regulated under these risk reduction rules. These final rules address these concerns expressed by the respondents in a number of fashions. First, as discussed previously, the definition for "contaminant" in §335.1 has been amended to remove reference to "any substance . . . which, when discharged, . . . can create a present or future threat to human health and the environment." This change will provide more certainty regarding which substances are considered to be contaminants. Second, as mentioned previously, the fourth sentence of subsection (a) of this section has been amended to remove reference to "or other contaminant." Third, as discussed previously, the sixth sentence of subsection (a) has been crafted so that "the obligation to perform re-

1993 Publication Schedule for the *Texas Register*

Listed below are the deadline dates for the January-December 1993 issues of the *Texas Register*. Because of printing schedules, material received after the deadline for an issue cannot be published until the next issue. Generally, deadlines for a Tuesday edition of the *Texas Register* are Wednesday and Thursday of the week preceding publication, and deadlines for a Friday edition are Monday and Tuesday of the week of publication. No issues will be published on July 30, November 5, November 30, and December 28. A asterisk beside a publication date indicates that the deadlines have been moved because of state holidays.

FOR ISSUE PUBLISHED ON	ALL COPY EXCEPT NOTICES OF OPEN MEETINGS BY 10 A.M.	ALL NOTICES OF OPEN MEETINGS BY 10 A.M.
34 Tuesday, May 4	Wednesday, April 28	Thursday, April 29
35 Friday, May 7	Monday, May 3	Tuesday, May 4
36 Tuesday, May 11	Wednesday, May 5	Thursday, May 6
37 Friday, May 14	Monday, May 10	Tuesday, May 11
38 Tuesday, May 18	Wednesday, May 12	Thursday, May 13
39 Friday, May 21	Monday, May 17	Tuesday, May 18
40 Tuesday, May 25	Wednesday, May 19	Thursday, May 20
41 Friday, May 28	Monday, May 24	Tuesday, May 25
42 Tuesday, June 1	Wednesday, May 26	Thursday, May 27
43 *Friday, June 4	Friday, May 28	Tuesday, June 1
44 Tuesday, June 8	Wednesday, June 2	Thursday, June 3
45 Friday, June 11	Monday, June 7	Tuesday, June 8
46 Tuesday, June 15	Wednesday, June 9	Thursday, June 10
47 Friday, June 18	Monday, June 14	Tuesday, June 15
48 Tuesday, June 22	Wednesday, June 16	Thursday, June 17
49 Friday, June 25	Monday, June 21	Tuesday, June 22
50 Tuesday, June 29	Wednesday, June 23	Thursday, June 24
51 Friday, July 2	Monday, June 28	Tuesday, June 29
52 Tuesday, July 6	Wednesday, June 30	Thursday, July 1
53 Friday, July 9	Monday, July 5	Tuesday, July 6
Tuesday, July 13	SECOND QUARTERLY INDEX	
54 Friday, July 16	Monday, July 12	Tuesday, July 13
55 Tuesday, July 20	Wednesday, July 14	Thursday, July 15
56 Friday, July 23	Monday, July 19	Tuesday, July 20
57 Tuesday, July 27	Wednesday, July 21	Thursday, July 22
Friday, July 30	NO ISSUE PUBLISHED	
58 Tuesday, August 3	Wednesday, July 28	Thursday, July 29
59 Friday, August 6	Monday, August 2	Tuesday, August 3
60 Tuesday, August 10	Wednesday, August 4	Thursday, August 5
61 Friday, August 13	Monday, August 9	Tuesday, August 10
62 Tuesday, August 17	Wednesday, August 11	Thursday, August 12
63 Friday, August 20	Monday, August 16	Tuesday, August 17
64 Tuesday, August 24	Wednesday, August 18	Thursday, August 19

65 Friday, August 27	Monday, August 23	Tuesday, August 24
66 Tuesday, August 31	Wednesday, August 25	Thursday, August 26
67 Friday, September 3	Monday, August 30	Tuesday, August 31
68 Tuesday, September 7	Wednesday, September 1	Thursday, September 2
69 *Friday, September 10	Friday, September 3	Tuesday, September 7
70 Tuesday, September 14	Wednesday, September 8	Thursday, September 9
71 Friday, September 17	Monday, September 13	Tuesday, September 14
72 Tuesday, September 21	Wednesday, September 15	Thursday, September 16
73 Friday, September 24	Monday, September 20	Tuesday, September 21
74 Tuesday, September 28	Wednesday, September 22	Thursday, September 23
75 Friday, October 1	Monday, September 27	Tuesday, September 28
76 Tuesday, October 5	Wednesday, September 29	Thursday, September 30
77 Friday, October 8	Monday, October 4	Tuesday, October 5
Tuesday, October 12	THIRD QUARTERLY INDEX	
78 Friday, October 15	Monday, October 11	Tuesday, October 12
79 Tuesday, October 19	Wednesday, October 13	Thursday, October 14
80 Friday, October 22	Monday, October 18	Tuesday, October 19
81 Tuesday, October 26	Wednesday, October 20	Thursday, October 21
82 Friday, October 29	Monday, October 25	Tuesday, October 26
83 Tuesday, November 2	Wednesday, October 27	Thursday, October 28
Friday, November 5	NO ISSUE PUBLISHED	
84 Tuesday, November 9	Wednesday, November 3	Thursday, November 4
85 Friday, November 12	Monday, November 8	Tuesday, November 9
86 Tuesday, November 16	Wednesday, November 10	Thursday, November 11
87 Friday, November 19	Monday, November 15	Tuesday, November 16
88 Tuesday, November 23	Wednesday, November 17	Thursday, November 18
89 Friday, November 26	Monday, November 22	Tuesday, November 23
Tuesday, November 30	NO ISSUE PUBLISHED	
90 Friday, December 3	Monday, November 29	Tuesday, November 30
91 Tuesday, December 7	Wednesday, December 1	Thursday, December 2
92 Friday, December 10	Monday, December 6	Tuesday, December 7
93 Tuesday, December 14	Wednesday, December 8	Thursday, December 9
94 Friday, December 17	Monday, December 13	Tuesday, December 14
95 Tuesday, December 21	Wednesday, December 15	Thursday, December 16
96 Friday, December 24	Monday, December 20	Tuesday, December 21
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