Texas Commission on Environmental Quality
Texas Risk Reduction Program

Response Action Completion Report

Purpose

The purpose of this form is to provide a standard format for the Response Action Completion Report (RACR).

Objectives

These instructions provide information on the following topics:

- To whom does RACR form apply?
- When is the RACR submitted?
- How is the RACR submitted?
- How do I obtain more information?
- How do I complete the RACR?

Regulatory Citation

30 TAC §350.95

Abbreviations and Acronyms

AMSL – above mean sea level
APAR – Affected Property Assessment Report
BMSL – below mean sea level
COC – chemical of concern
ID No. – Identification number assigned by the program area to the facility/site. Appropriate case/ tracking numbers include Solid Waste Registration (SWR) ID Number, VCP ID Number, etc.
LNAPL – light non-aqueous phase liquids
MC – mail code used by TCEQ for routing mail within the agency
NAPL – non-aqueous phase liquids
PCL – protective concentration level
PCLE – protective concentration level exceedance
POE – point of exposure
PMZ – plume management zone
PRP – potential responsible party
QC – quality control
RACR – Response Action Completion Report
RAER – Response Action Effectiveness Report
RAP – Response Action Plan
SIN – Self Implementation Notice
SQL – sample quantitation limit
SWR – solid waste registration
TCEQ – Texas Commission on Environmental Quality
TRRP – Texas Risk Reduction Program
VCP – Voluntary Cleanup Program

General Instructions

Read these instructions carefully because the form itself does not contain all the instructions. You cannot adequately complete the RACR without following these instructions. The RACR is not a guidance document. You must consult the TRRP rule and associated guidance documents to complete your response action.

To whom does the RACR form apply?

Persons who have completed a response action under the Texas Risk Reduction Program (TRRP) rule to attain Remedy Standard A or B must submit the RACR.

When is the RACR submitted?

Submit the RACR to the TCEQ for review and approval within 90 days of completion of the response action. Include the Affected Property Assessment Report (APAR) unless an APAR was previously submitted.

How is the RACR submitted?

Submit a copy of this form to both the applicable TCEQ program area in the Austin Central Office and, except for VCP sites, to the appropriate TCEQ Region Office. The mailing address and phone number for each of the Regional Offices may be found at http://www.tceq.state.tx.us/AC/about/directory/region/reglist.html. The TCEQ mailing address should include the appropriate TCEQ program name and the corresponding mail code (MC). The address for the Central Office is:

TCEQ
[specify program area], MC-___
P.O. Box 13087
Austin, Texas 78711-3087

How do I obtain more information?

The TRRP rule and guidance are available at http://www.tnrcc.state.tx.us/permitting/trrp.htm. You will have to use the rule and associated guidance to complete this form. Questions regarding your affected property should be addressed to the program area that is handling your case. Phone numbers for the TCEQ programs are listed below.

Voluntary Cleanup Section	512/239-5891	Corrective Action Section	512/239-2276
Superfund Cleanup Section	512/239-2486	Municipal Solid Waste Permits	512/239-6784
RPR Section	512/239-2200		

How do I complete the RACR?

Carefully review these instructions and all instructions on the worksheets themselves. Failure to complete the report as indicated may result in return of your report or a notice of deficiencies. **Note that except for expanding the narrative boxes with text, the form must not be modified in any way. Do not change the numbering or the order of submittal of the worksheets, attachments, and appendices even when portions are not included.** When possible, please print the report on both sides of the pages. Be sure to always include appropriate units of measurement in your answers.

All data must be supported with references and documentation. Unsubstantiated information may be considered invalid.

The form is designed so that only the relevant worksheets are submitted depending on the site-specific conditions. Complete only the portions applicable to your response action. Complete the Checklist for Report Completeness to determine which sections are applicable for your report. Arrange the worksheets, attachments, and appendices as specified in the RACR Contents list below. Please note that the form does not include many of the attachments and appendices because they do not have prescribed formats (for example, laboratory reports). Place tabs in your bound report to clearly identify each major section of the report.

If the on-site property is covered under a permit, any permit requirements that conflict with the information in this document supercede these instructions.

RACR Contents	
	Cover Page
	Executive Summary
	Chronology
	Checklist for Report Completeness
Worksheet 1.0	Confirmation of Response Action Objectives
Attachment 1A	Maps and Cross Sections
Attachment 1B	Graphs
Attachment 1C	Response Action Diagrams
Worksheet 2.0	Plume Management Zone
Attachment 2A	Map of Plume Management Zone
Worksheet 3.0	Technical Impracticability
Attachment 3A	Map of Technical Impracticability Area
Worksheet 4.0	Institutional Controls
Worksheet 5.0	Performance Measures and Problems
Worksheet 6.0	Operation and Maintenance
Worksheet 7.0	Post-Response Action Care
Appendix 1	References
Appendix 2	ESA and Compensatory Restoration
Appendix 3	Institutional Controls and Landowner Concurrence
Appendix 4	Data Tables, Boring Logs, and Well Completions
Appendix 5	Sampling Procedures
Appendix 6	Laboratory Data Packages and Data Usability Summaries
Appendix 7	Statistical Methodology
Appendix 8	Waste Disposition

Worksheets and Appendices

The following instructions are listed in order of the worksheets, attachments, and appendices as specified in the RACR Contents list. All pages should include the regulatory ID number assigned to the on-site property, the date of the report, and page numbers.

Cover Page - Specify the regulatory ID number assigned by the program area to the on-site property. Appropriate ID numbers include Solid Waste Registration (SWR) ID Number, VCP ID number, or other assigned number. If you do not know your regulatory ID number, contact the appropriate program area to obtain that number before submitting this report. Identify the TCEQ Region in which the affected property is located. The list of region numbers is located at the end of the instructions.

Check the appropriate box to indicate the specific TCEQ program to which the report is submitted. The TCEQ mailing address should include the appropriate TCEQ program and the corresponding mail code (MC). If the report is being submitted to more than one program area, mail the reports separately and address one copy to each program with that program indicated on the cover page.

On-Site Property Information
Indicate the address of the on-site property (the area at which the assessment took place). Do not list a P.O. Box or a rural route as the physical address. Include the following information for the on-site property address. (example: **814 North 35th Street West**)

- street number (example: ***814***) Leave blank if none.
- street predirectional - compass direction of the street address that occurs before the street name (example: ***North***). Leave blank if none.
- street name (example: ***35th***) Leave blank if none.
- street type (example: ***Street***) Leave blank if none.
- street postdirectional - compass direction of the street address that occurs after the street name (example: ***West***). Leave blank if none.
- city
- county
- county code (see list at end of instructions)
- zip code

Specify the nearest street intersection or location description. For example, a location description may be: "On FM 1055, 1 mile south of the intersection of FM 1055 and US Highway 57" or "On Main Street at the northwest corner of Main Street and Broad Street."

Specify the latitude and longitude near the center of the on-site property, either in terms of degrees, minutes, seconds or decimal degrees. Indicate the units used. Refer to the definition of on-site property in §350.4(a)(60). Horizontal positions collected using certified GPS units or by interpretation from 1-meter Digital Orthophoto Quarter Quads (DOQQs) must maintain a minimum level of accuracy of at least 25 meters. Use of GPS equipment is strongly encouraged in the acquisition of coordinates for all affected property and sampling locations tracked by the TCEQ. Refer to the TCEQ document *Attribute Standards for TCEQ Geographic Locational Data* and the TCEQ policies 8.11 and 8.12, available on the agency's web page at http://www.tnrcc.state.tx.us/gis/gisplcy.html.

Affected Off-Site Property Information
Include the address information in the format specified above for any affected off-site property(ies). If there is more than one affected off-site property, attach additional pages to list the same information for all affected off-site properties.

Contact Person for On-Site Property Information and Acknowledgement
Provide the identity and address of the person undertaking the response action (not the consultant). Please refer to the definition of "person" in §350.4. The person should review the acknowledgement carefully and must sign and date this form. The consultant is not allowed to sign this form.

RACR Executive Summary – Identify which remedy standard was chosen for this affected property. Note whether post-response action care is needed. Note whether an institutional control was/or is to be completed for this affected property. Identify the worksheets submitted by checking the appropriate box in the RACR Form Contents section.

Chronology – Attach a chronology, listed in chronological order beginning with the most recent activity, of all major response actions conducted at the affected property and all reports submitted. Include the date of actions taken and a brief description of all release abatement activities, assessment activities, and response actions conducted. Illustrate and label all locations of relevant information on the site map in Attachment 1A. List all references, including the date, title, and preparer of previously submitted reports, in the reference list in Appendix 1.

Checklist for Report Completeness - Use this checklist to identify the applicable portions of the response action completion report by answering all questions. Indicate which components are included in your report.

Worksheet 1.0 –Confirmation of Response Action Objectives – Complete this worksheet to document completion of the response action and compliance with all response action objectives. Refer to *Application of Remedy Standards A and B* (RG-366/TRRP-28) and *Soil and Groundwater Response Objectives* (RG-366/TRRP-29) for more information on response action objectives.

Attachment 1A Maps and Cross Sections – Unless the most recent and current data was included in a previously submitted report, provide the following to document the most current and recent data:

> **Affected Property Map** – Include a large-scale map that illustrates all aspects of the affected property. Indicate the original affected property boundary (this is not the legal property boundary) as defined by the assessment levels, the maximum overall PCLE zone, and any current PCLE zone as defined by the critical PCLs. Include legal property boundaries, buildings and other structures, adjacent roads, all potential source areas and known release areas, land uses, type of surface cover, subsurface utilities, surface drainage, surface water bodies, boring and monitor well locations, other sampling points, cross-section lines, water supply wells, and any other potential receptors. Required legend information: north arrow, fractional and bar scales, map source and identification of all symbols used on the map.
>
> **COC Concentration Maps** - Provide affected property map(s) to visually present analytical data. The maps, typically one map per significant and representative COC per media, drawn to scale, should illustrate all sampling points, COC concentrations, isoconcentration contours including a contour of the critical PCL to delineate the PCLE zone, sample depth intervals, and relevant surface and subsurface features. When there is sufficient time series data, also construct maps for significant COCs using previous sampling dates to illustrate PCLE zone changes over time. Required legend information: north arrow, fractional and bar scales, and identification of all symbols used on the map.
>
> **Parameters Maps** - Provide maps as necessary to effectively illustrate the distribution of geochemical and geotechnical parameters (such as fraction organic carbon and dissolved oxygen) when such information is collected. Illustrate on maps drawn to scale all sampling points,

geochemical and geotechnical concentrations and values, isoconcentration contours as appropriate to accurately depict the data in each media, sample depth intervals, and relevant surface and subsurface features. Required legend information: north arrow, fractional and bar scales, and identification of all symbols used on the map.

Groundwater Gradient Map - Provide a groundwater gradient map, drawn to scale, illustrating all monitoring wells, groundwater surface elevation in feet AMSL or BMSL, labeled groundwater elevation contours, and groundwater flow direction. If groundwater elevation data was collected at several times and the groundwater flow magnitude or direction has changed over time, submit a sufficient number of maps to illustrate these changes. Required legend information: north arrow, fractional and bar scales, and identification of all symbols used on the map.

Cross Sections - If new data results in modification of data from that provided in the APAR, provide a minimum of two cross-sections perpendicular to each other through the source area and affected property. For sites with monitor wells, construct one cross section approximately parallel to the groundwater flow direction and one approximately perpendicular to flow direction. Illustrate site stratigraphy using the boring logs through the total depth of the borings/monitor wells or water well if used in the cross section. Indicate all groundwater-bearing units, lithologies, designated surface and subsurface soils, areas exceeding the assessment level and critical PCL (PCLE zones) for each media, including the location, depth, and extent of NAPL, static groundwater level, monitor well screened intervals, aquitards, migration pathways, subsurface conduits and the compass directions of the cross sections. Required legend items: horizontal and vertical scales and identification of all symbols used in the cross section. Indicate the cross section lines on the affected property map. Additional cross sections should be submitted as needed to effectively portray subsurface conditions.

Attachment 1B Graphs– Provide graphs of concentration versus time for significant COCs in critical monitor wells or other media sampling points. The most recent and current data must be used in the graphs.

Construct graphs showing time versus COC concentration in each affected media for representative monitoring points from the initial sampling event to the most recent and current sampling event.

Attachment 1C Response Action Diagrams - Illustrate in maps, drawings, and diagrams the design and layout of equipment and components. The plan should clearly show: the location of all key equipment; the location and coverage of any physical control; the area in which the response action occurred; recovery, monitoring, or injection wells; buildings; surface cover types; and surface drainage. Required legend information for maps: north arrow, fractional and bar scales, map source and identification of all symbols used on the map.

Worksheet 2.0 Plume Management Zone – Use this worksheet to document the use of a plume management zone as part of the response action. If a plume management zone was not used as part of the response action, do not submit this worksheet or Attachment 2A.

Attachment 2A Plume Management Zone Map - Provide a map that illustrates the area of the plume management zone, the attenuation monitoring points, alternate groundwater POEs, and the initial, maximum, and any current groundwater PCLE zones. Note all receptors within the PMZ and any potentially threatened receptors outside the PMZ. Illustrate major buildings, structures, roads, and other major site features. Required legend information: north arrow, fractional and bar scales, map source and identification of all symbols used on the map.

Worksheet 3.0 Technical Impracticability – Use this worksheet to document that a portion or all of the groundwater PCLE zone could not be remediated due to technical impracticability. If technical impracticability was not used as part of the response action, do not submit this worksheet or Attachment 3A.

Attachment 3A Map of Technical Impracticability Area - Provide a map that illustrates the area of technical impracticability, the groundwater flow direction, the initial, maximum, and any current groundwater PCLE zone, and all major site features. Required legend information: north arrow, fractional and bar scales, map source and identification of all symbols used on the map.

Worksheet 4.0 Institutional Controls - Complete this worksheet if an institutional control will be or has been used as part of the response action. Repeat this worksheet for each property that requires an institutional control. Refer to *Institutional Controls* (RG-366/TRRP-16) for further information on institutional controls.

Worksheet 5.0 Performance Measures and Problems - Describe the performance measures that were used to determine if reasonable progress was being made by the response action and document that the performance measures were met. If statistical or geostatistical methods were used as part of the effectiveness measures, discuss the assumptions and provide the equations for statistical or geostatistical methodology(ies) in Appendix 7. Describe any problems that occurred with, or during, the response action.

Worksheet 6.0 Operation and Maintenance – Provide a brief overview of the operation and maintenance activities. List the key operating parameters considered important to the proper operation of the response action and critical to its effectiveness.

Worksheet 7.0 Statistical or Geostatistical Methodologies - Define the statistical or geostatistical methodology(ies) applied in the data collection or data evaluation process. Discuss the basis for assumptions and provide all equations that will be used.

Appendix 1 Reference List – In order to document the sources of information included in this report, provide a complete list of references, including personal communications, reports, books, published and unpublished documents, databases, maps, and any other sources of information used in this report. Each reference should specify, as applicable, the author, date, title of article, title of book, periodical, or report, publisher, date of publication, issue information (edition, volume, issue number, date); page reference, and URL. Database references should include the source of the database, the name of the database, and the date the information was acquired. Personal communication references should include the name of the person contacted, the date of contact, and the method of contact (phone, letter, etc). Clearly identify each item in the report that has a reference in this appendix using either superscript numbers or author-date citation (for example, Adams 1999). List references in the order in which they appear in each worksheet and attachment, clearly identifying on which worksheet or attachment the item appears. Please note that unsubstantiated information may be considered invalid.

Appendix 2 Ecological Services Analysis and Compensatory Restoration Plan – Use this attachment to provide documentation of an ecological services analysis (ESA) and compensatory restoration if used as part of the response action. Guidance discussing ESAs and compensatory restoration is provided in *Guidance for Conducting Ecological Risk Assessments in Texas*, available on the TCEQ web page.

Appendix 3 Institutional Control and Landowner Concurrence – Attach copies of filed or proposed institutional controls if not previously submitted. Also attach any landowner concurrence documentation as appropriate.

Appendix 4 Data Tables, Boring Logs, and Well Completions– Use this attachment to provide tables of data, boring logs and well completion information.

COC Data Tables - Provide summary tables of all media sample screening and analytical results. Include the following: COC, the critical PCL for each COC, method quantitation limit, sample ID no., sample date, sample depth, and concentration in mg/kg, mg/L, or other appropriate measure. Highlight the individual results that exceed the critical PCL. If the result was not quantifiable, specify that the concentration was less than the SQL for that sample (for example, <0.01 mg/kg). Results of field screening of soil samples should be specified in a separate table in this attachment. The SQL may be used in place of the MQL if it is satisfactorily demonstrated that all reasonably available analytical technology has been used to show that the COC cannot be measured to the MQL due to sample specific interferences. If such a demonstration is made, include all supporting information in this appendix.

Parameters Data Table - Provide summary tables of the results of any geochemical or geotechnical analyses. The tables should include the parameter analyzed, sample date, method quantitation limit (MQL), analytical method, type of media, sample ID no., sample depth, and result. If the result was nondetect, specify the SQL for that parameter (do not only write "ND").

Groundwater Measurements Table - Include in this attachment a summary table of all monitor well and water well gauging data. The table should include: depth to groundwater, NAPL thickness, groundwater elevation in relation to mean sea level, top of casing and/or ground surface elevations (specify measuring point), corrected water level and well screen interval. The table should be organized with all results for each monitor well or water well listed in date order (oldest first). If measurable LNAPL is present, provide the specific gravity of the LNAPL and the equation used to calculate the corrected groundwater elevation.

Boring Logs and Monitor Well Completions- If any borings or monitor wells were installed and the documentation has not been previously provided, provide soil boring logs which include lithology, identification of groundwater-bearing units, field-screening results, sample locations, sample type (discrete, composite), total depth, sampling tool, boring diameter, depth at which groundwater was encountered while drilling, drilling method, and, if applicable, monitor well completion details including screened interval, diameter, and slot size, casing interval and diameter, cement and grout intervals.

Appendix 5 Sampling Procedures - Attach a written description of sample collection and handling procedures if the procedures are different from the procedures previously provided (if they are the same, specify the report name and submittal date in which the sample collection and handling procedures are described). Identify and describe the field screening and/or sampling method(s) used, the method of sample collection and preservation, and sample handling procedures. Discuss the site-specific reasons for choosing the sample collection and handling method(s). Include a discussion of the data quality objectives for the project.

Appendix 6 Laboratory Data Packages and Data Usability Summaries– Provide copies of analytical reports for all media samples, including samples collected for background determinations, and associated chain-of-custody and quality assurance/quality control documentation not previously submitted. Lab reports must include the following information: name and address of the laboratory, name and address of

client, project name, sample results, detection levels, sample ID number, lab ID number, sample matrix, date and time of sample collection, date of receipt of sample, date of sample preparation and extraction, date of analysis, preparation and analytical method numbers, method quantitation limits, analytical results, signature of laboratory personnel, issue date, QC documentation as appropriate for that analysis, and any other information necessary to convey the results of the analyses. Chain of custody documentation must include: affected property name, address, and regulatory identification number, name of person who collected the samples, date of sample collection, type of analyses requested, sample matrix, sample ID number and sampling location, sample preservation method(s), date(s) and time(s) of transfer to other person, date and time received by lab, signatures of collector, lab, and any intermediary persons, lab assigned job number and sample numbers, and any other pertinent log-in information. If necessary, include the project data quality objectives (DQOs) for media samples in this appendix.

Appendix 7 Statistical or Geostatistical Methodologies - Discuss the data collection effort for each environmental media (e.g., judgmental samples, random sampling design, etc.). Describe the statistical or geostatistical methodology applied to attain the response objective. Include all assumptions used in the statistical/geostatistical method, and how those assumptions are met.

Appendix 8 Waste Disposition - Use this appendix if waste characterization and disposition information has not previously been provided or reported through the State of Texas Environmental Electronic Reporting System (STEERS). Describe the wastes generated and the results from all completed waste classification and disposal/treatment activities. Provide copies of all waste characterization sample analytical reports, chain-of-custody, and quality assurance/quality control documentation. Refer to Appendix 6 for information required in lab reports and chain-of-custody documentation. If soil was removed for reuse, provide documentation that the landowner of the property accepting the soil consented to the relocation for reuse. If soils were used as an asphalt or road base mix, provide documentation that the material meets the required user specifications.

County Codes and TCEQ Region Numbers

County	County Code	Region No.	County	Code	Reg No.	County	Code	Reg No.	County	Code	Reg No.	County	Code	Reg. No.	County	Code	Reg No.
Anderson	1	5	Comal	46	13	Grayson	91	4	Kinney	136	16	Orange	181	10	Tom Green	226	8
Andrews	2	7	Comanche	47	3	Gregg	92	5	Kleberg	137	14	Palo Pinto	182	4	Travis	227	11
Angelina	3	10	Concho	48	8	Grimes	93	9	Knox	138	3	Panola	183	5	Trinity	228	10
Aransas	4	14	Cooke	49	4	Guadalupe	94	13	Lamar	139	5	Parker	184	4	Tyler	229	10
Archer	5	3	Coryell	50	9	Hale	95	2	Lamb	140	2	Parmer	185	1	Upshur	230	5
Armstrong	6	1	Cottle	51	3	Hall	96	1	Lampasas	141	9	Pecos	186	7	Upton	231	7
Atascosa	7	13	Crane	52	7	Hamilton	97	9	La Salle	142	16	Polk	187	10	Uvalde	232	13
Austin	8	12	Crockett	53	8	Hansford	98	1	Lavaca	143	14	Potter	188	1	Val Verde	233	16
Bailey	9	2	Crosby	54	2	Hardeman	99	3	Lee	144	11	Presidio	189	6	Van Zandt	234	5
Bandera	10	13	Culberson	55	6	Hardin	100	10	Leon	145	9	Rains	190	5	Victoria	235	14
Bastrop	11	11	Dallam	56	1	Harris	101	12	Liberty	146	12	Randall	191	1	Walker	236	12
Baylor	12	3	Dallas	57	4	Harrison	102	5	Limestone	147	9	Reagan	192	8	Waller	237	12
Bee	13	14	Dawson	58	7	Hartley	103	1	Lipscomb	148	1	Real	193	13	Ward	238	7
Bell	14	9	Deaf Smith	59	1	Haskell	104	3	Live Oak	149	14	Red River	194	5	Washington	239	9
Bexar	15	13	Delta	60	5	Hays	105	11	Llano	150	11	Reeves	195	7	Webb	240	16
Blanco	16	11	Denton	61	4	Hemphill	106	1	Loving	151	7	Refugio	196	14	Wharton	241	12
Borden	17	7	DeWitt	62	14	Henderson	107	5	Lubbock	152	2	Roberts	197	1	Wheeler	242	1
Bosque	18	9	Dickens	63	2	Hidalgo	108	15	Lynn	153	2	Robertson	198	9	Wichita	243	3
Bowie	19	5	Dimmit	64	16	Hill	109	9	McCulloch	154	8	Rockwall	199	4	Wilbarger	244	3
Brazoria	20	12	Donley	65	1	Hockley	110	2	McLennan	155	9	Runnels	200	3	Willacy	245	15
Brazos	21	9	Duval	66	16	Hood	111	4	McMullen	156	16	Rusk	201	5	Williamson	246	11
Brewster	22	6	Eastland	67	3	Hopkins	112	5	Madison	157	9	Sabine	202	10	Wilson	247	13
Briscoe	23	1	Ector	68	7	Houston	113	10	Marion	158	5	San Augustine	203	10	Winkler	248	7
Brooks	24	15	Edwards	69	13	Howard	114	7	Martin	159	7	San Jacinto	204	10	Wise	249	4
Brown	25	3	Ellis	70	4	Hudspeth	115	6	Mason	160	8	San Patricio	205	14	Wood	250	5
Burleson	26	9	El Paso	71	6	Hunt	116	4	Matagorda	161	12	San Saba	206	9	Yoakum	251	2
Burnet	27	11	Erath	72	4	Hutchinson	117	1	Maverick	162	16	Schleicher	207	8	Young	252	3
Caldwell	28	11	Falls	73	9	Irion	118	8	Medina	163	13	Scurry	208	3	Zapata	253	16
Calhoun	29	14	Fannin	74	4	Jack	119	3	Menard	164	8	Shackelford	209	3	Zavala	254	16
Callahan	30	3	Fayette	75	11	Jackson	120	14	Midland	165	7	Shelby	210	10			
Cameron	31	15	Fisher	76	3	Jasper	121	10	Milam	166	9	Sherman	211	1			
Camp	32	5	Floyd	77	2	Jeff Davis	122	6	Mills	167	9	Smith	212	5			
Carson	33	1	Foard	78	3	Jefferson	123	10	Mitchell	168	3	Somervell	213	4			
Cass	34	5	Fort Bend	79	12	Jim Hogg	124	15	Montague	169	3	Starr	214	15			
Castro	35	1	Franklin	80	5	Jim Wells	125	14	Montgomery	170	12	Stephens	215	3			
Chambers	36	12	Freestone	81	9	Johnson	126	4	Moore	171	1	Sterling	216	8			
Cherokee	37	5	Frio	82	13	Jones	127	3	Morris	172	5	Stonewall	217	3			
Childress	38	1	Gaines	83	7	Karnes	128	13	Motley	173	2	Sutton	218	8			
Clay	39	3	Galveston	84	12	Kaufman	129	4	Nacogdoches	174	10	Swisher	219	1			
Cochran	40	2	Garza	85	2	Kendall	130	13	Navarro	175	4	Tarrant	220	4			
Coke	41	8	Gillespie	86	13	Kenedy	131	15	Newton	176	10	Taylor	221	3			
Coleman	42	3	Glasscock	87	7	Kent	132	3	Nolan	177	3	Terrell	222	7			
Collin	43	4	Goliad	88	14	Kerr	133	13	Nueces	178	14	Terry	223	2			
Collingsworth	44	1	Gonzales	89	14	Kimble	134	8	Ochiltree	179	1	Throckmorton	224	3			
Colorado	45	12	Gray	90	1	King	135	2	Oldham	180	1	Titus	225	5			

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Response Action Completion Report

Cover Page

Regulatory ID number (Solid waste registration number, VCP ID number, etc) _____
check one: ___ Initial RACR submittal for this on-site property ___ Subsequent RACR submittal
Report date: _____ TCEQ Region No.: _____

TCEQ Program (check one)

___ Corrective Action (Mail Code 127)
___ Voluntary Cleanup Program (Mail Code 221)
___ Petroleum Storage Tank Program (Mail Code 137)
___ Superfund PRP Lead (Mail Code 143)
___ Municipal Solid Waste Permits (Mail Code 124)

On-Site Property Information

On-Site Property Name: _____
Street no. _____ Pre dir: _____ Street name: _____ Street type: _____ Post dir: ___
City: _____ County: _____ County Code: _____ Zip: _____
Nearest street intersection or location description: _____

Latitude: Degrees, Minutes, Seconds OR Decimal Degrees (circle one) North _____
Longitude: Degrees, Minutes, Seconds OR Decimal Degrees (circle one) West _____

Off-Site Affected Property Information

Off-Site Affected Property Name: _____
Street no. _____ Pre dir: ___ Street name: _____ Street type: _____ Post dir: ___
City: _____ County: _____ County Code: _____ Zip: _____

____ Check if there are no off-site properties affected

Contact Person Information and Acknowledgement

Person (or company) Name: _____
Contact Person: _____ Title: _____
Mailing Address: _____
City: _____ State: _____ Zip: _____ E-mail address _____
Phone: _____ Fax: _____

By my signature below, I acknowledge the requirement of §350.2(a) that no person shall submit information to the executive director or to parties who are required to be provided information under this chapter which they know or reasonably should have known to be false or intentionally misleading, or fail to submit available information which is critical to the understanding of the matter at hand or to the basis of critical decisions which reasonably would have been influenced by that information. Violation of this rule may subject a person to the imposition of civil, criminal, or administrative penalties.

Signature of Person _____ Name, print: _____ Date: _____

Executive Summary	Page ___ of ___	
	ID No.	Report Date:

Check the reports/forms submitted:

Remedy Standard A

___ Self-Implementation Notice Submittal date: _____

___ Response Action Plan - Approval date: _____

Remedy Standard B

___ Response Action Plan - Approval date: _____

List all media (surface soil, subsurface soil, groundwater, sediment, surface water, air) that contained or contains a PCLE zone and specify the response action taken for each media. Indicate the type of removal, decontamination, physical control, or institutional control action that was used in the response action. If a media with a PCLE zone was not addressed in the response action, provide an explanation below.

Media	COCs[1]	Removal	Decontamination	Physical Control	Institutional Control	Modified Response Objective[2]		
						PMZ	WCU	TI

Is there a media that contains a PCLE zone that was not addressed in the response action? __ yes __ no
If yes, provide justification for not addressing the PCLE zone in the response action.

Current land use of the on-site affected property: ___ Residential ___ Commercial/industrial
Projected future land use of the on-site property (if known): ___ Residential ___ Commercial/industrial

Explain why you believe the response action to be complete.

[1] Specify either a specific COC or, if the response action is the same for all COCs in one type, specify the type of COC (for example, VOCs, SVOCs, metals).
[2] If a modified groundwater response objective was used, check the type(s) of modifications.

Checklist for Report Completeness

Use this checklist to determine the portions of the form that must be submitted for this report. Answer all questions by checking Yes or No. If the answer is Yes include that portion of the report. If the answer is No, do not complete or submit that portion of the report. All form contents that are marked "Required" must be submitted. Form contents marked with an asterisk (*) are not included in the blank form and are to be provided by the person.

			Report Contents	
		Required	**Cover Page**	☐
		Required	**Executive Summary**	☐
		Required	**Checklist for Report Completeness**	☐
		Required	**Worksheet 1.0** Confirmation of Response Action Objectives	☐
		Required	**Attachment 1A*** Maps and Cross Sections	☐
		Required	**Attachment 1B*** Graphs	☐
		Required	**Attachment 1C*** Response Action Diagrams	☐
No ☐	Was a plume management zone used as part of the response action?	☐ Yes	**Worksheet 2.0** Plume Management Zone	☐
			Attachment 2A* Map of Plume Management Zone	☐
No ☐	Was an area of technical impracticability approved for use as part of the response action?	☐ Yes	**Worksheet 3.0** Technical Impracticability	☐
			Attachment 3A* Map of Technical Impracticability Area	☐
No ☐	Were institutional controls used or required as part of the response action?	☐ Yes	**Worksheet 4.0** Institutional Controls	☐
		Required	**Worksheet 5.0** Performance Measures and Problems	☐
No ☐	Did the response action require any operation and maintenance activities?	☐ Yes	**Worksheet 6.0** Operation and Maintenance	☐
No ☐	Has there been any change to the plans for post-response action care from that submitted in the RAP?	☐ Yes	**Worksheet 7.0** Post-Response Action Care	☐
No ☐	Was any information for this report obtained from outside sources?	☐ Yes	**Appendix 1*** References	☐
No ☐	Was an ESA and/or Compensatory Restoration used as part of the response action?	☐ Yes	**Appendix 2*** ESA and Compensatory Restoration	☐
No ☐	Were institutional controls or landowner concurrence required in the response action?	☐ Yes	**Appendix 3*** Institutional Controls and Landowner Concurrence	☐

Checklist for Report Completeness	Page ___ of ___	
	ID No.	Report Date:

Report Contents

No ☐	Is there data or boring/monitor well information not previously submitted?	☐ Yes →	**Appendix 4*** Data Tables, Boring Logs, and Well Completions	☐
No ☐	Did sampling procedures differ from those described in the RAP?	☐ Yes →	**Appendix 5*** Sampling Procedures	☐
No ☐	Has any sampling been conducted for which the analytical results were not previously submitted?	☐ Yes →	**Appendix 6*** Laboratory Data Packages	☐
No ☐	Were statistics or geostatistics used in the response action?	☐ Yes →	**Appendix 7*** Statistical Methodology	☐
No ☐	Were any wastes generated that were not reported through STEERS?	☐ Yes →	**Appendix 8*** Waste Disposition	☐

Confirmation of Response Action Objectives	RACR Worksheet 1.0	Page ___ of ___
	ID No.	Report Date:

Use this worksheet to describe the attainment of the response action objectives in each media.

Response Action Objectives

What was the selected remedy standard for this affected property? ___ A ___ B

List the environmental media to which this applies _____
Repeat this section for each medium that had a different response action objective.

Provide a detailed description of the response action. Describe the removal actions, decontamination actions, treatment system(s), physical or institutional control actions, and any actions for ecological considerations (ecological services analysis and compensatory restoration plans) that were conducted in each media and indicate if there were any differences between the actions taken and the actions proposed in the SIN or RAP.

Describe how the response action achieved the property-specific response objectives for the PCLE zone in each media in the context of the response objectives set forth in §350.32 or §350.33, as applicable. Explain how the response action was appropriate based on the hydrogeologic and COC characteristics. Describe any unprotective conditions that continued or resulted from the remedial actions and the actions taken to mitigate unprotective conditions.

If different from the information provided in the RAP, explain how the COCs were handled, treated, disposed, or transferred to another media and document that the response action did not result in any additional exposure conditions due to response action activities.

Explain how the response action achieved the objectives within the reasonable time frame.

Were physical controls used as part of the response action? ___ Yes ___ No
If yes, describe the type and purpose of the physical control and discuss how the physical control has proved effective.

Soil Response Action Objectives

When using removal and/or decontamination with controls or controls only, demonstrate that the physical control or combination of measures reliably contained COCs within and/or derived from the surface soil and subsurface soil PCLE zone materials over time.

Explain how the removal or decontamination action reduced the concentration of COCs to the critical surface soil and subsurface soil PCL throughout the soil PCLE zone and prevented COC concentrations above the critical soil PCLs from migrating beyond the original boundary of the soil PCLE zone.

Groundwater Response Action Objectives

Name of groundwater-bearing unit to which this information applies _____

Repeat this section for each groundwater-bearing unit for which a different response action was conducted.

Groundwater classification 1 ___ 2 ___ 3 ___

Was a modified groundwater response action used for any part of the groundwater PCLE zone (§350.33(f)(2), (3), or (4))? ___ Yes ___ No

If yes, complete the appropriate portions of this report.

Explain how the removal or decontamination actions reduced the concentration of COCs to the critical groundwater PCL throughout the groundwater PCLE zone and prevented COC concentrations above the critical groundwater PCL from migrating beyond the original boundary of the groundwater PCLE zone. If COC concentrations above the critical groundwater PCL ever migrated beyond the original boundary of the groundwater PCLE zone, explain the actions taken to address the increase in the PCLE zone.

Explain how the response action prevented COCs from migrating to air at concentrations above the PCLs for air if the groundwater-to-air PCLs ($^{Air}GW_{Inh\text{-}V}$) were exceeded.

Explain how the response action prevented COCs from migrating to surface water at concentrations above the PCLs for groundwater discharges to surface water if surface water was a factor.

Explain how the response action prevented human and ecological receptor exposure to the groundwater PCLE zone.

Waste Management

Describe the volume and final disposition or reuse location of waste or environmental media that was removed from the affected property during the response action, if not previously reported under STEERS. Provide copies of all manifests, other documentation of disposition, and landowner consent for reuse of soil in Appendix 8.

Plume Management Zone	RACR Worksheet 2.0 Page ___ of ___	
	ID No.	Report Date:

Complete this worksheet when a PMZ was used as part of the response action. Include in Attachment 2A a map of the PMZ with alternate POE(s) and attenuation monitoring points identified and the current groundwater PCLE zone (if applicable). If a PMZ was not used, do not submit this worksheet.

Groundwater-bearing unit _____
Repeat this worksheet for each groundwater-bearing unit for which a PMZ was used.
Groundwater classification ____ 2 ___ 3

Is/was NAPL present? ___ Yes ___ No
If so, describe how the response action achieved the performance criteria in §350.33(f)(4)(E).

If this is a Class 2 groundwater, explain how the response action ensured that leachate from the surface soil and subsurface soil PCLE zones did not increase concentration of COCs greater than the measured concentrations at time of RAP submittal. (§350.33(a)(2))

Provide documentation that the COCs did not migrate beyond the downgradient boundary of the PMZ at concentrations above the critical PCL. Include supporting documentation in Attachments 1A, 1B, and 2A.

List the attenuation action level determined for each attenuation monitoring point. Illustrate the attenuation monitoring points, initial, maximum, and final groundwater PCLE zones (or groundwater concentrations if less than the critical PCL) on the map in Attachment 2A.

COC	Attenuation Monitoring Point (well number)	Attenuation Action Level (mg/L)	Maximum concentration measured at the attenuation monitoring point (mg/L)

Technical Impracticability	RACR Worksheet 3.0 Page ___ of ___	
	ID No.	Report Date:

Use this worksheet to document the use of technical impracticability to modify the groundwater response objectives. Also complete Worksheet 2.0 to document the plume management zone for the area of technical impracticability. Include a map of the groundwater PCLE zone and area of technical impracticability in Attachment 3A. If technical impracticability was not used as part of the response action, do not submit this worksheet.

If additional information beyond that provided in the RAP is available, describe how it was determined that it was technically impractical to reduce the COC concentrations in groundwater to the critical PCLs. Describe the response actions taken that did not prove effective. Provide graphs in Attachment 1B to illustrate COC concentrations over time and with distance from the source for each response action that did not prove effective. Describe in Worksheet 1.0 the removal/decontamination actions that were conducted for any PCLE zone outside the area of technical impracticability.

Did COCs above the critical PCL migrate beyond the area of technical impracticability and/or beyond the initial boundary of the PCLE zone?

___ yes ___ no

If yes, explain the actions taken to mitigate the migration of COCs.

Institutional Controls	RACR Worksheet 4.0 Page ___ of ___	
	ID No.	Report Date:

Complete this worksheet if an institutional control will be or has been used as part of the response action. Include in Appendix 3 copies of filed institutional controls and drafts of the proposed institutional controls, copies of landowner concurrences, and a list of landowners from whom landowner concurrence will be requested.

Specify the property for which this applies. _____

Repeat this worksheet for each different property for which an institutional control will be used.

Institutional Control	Type of Institutional Control[3]				Property Ownership		Anticipated or actual filing date[4]
	Deed notice	Restrictive covenant	VCP Certificate of Completion	Equivalent zoning or governmental ordinance	Check if pertinent tract of land is owned by the person	Check if the pertinent tract of land is owned by an innocent owner or operator	
Document use of commercial/industrial land use (§350.31(g))							
Document use of physical or institutional control under Remedy Standard B §350.31(g))							
Document notice of on-going long term response action (§350.31(h))							
Document use of occupational inhalation criteria as RBELs (§350.74(b)(1))							
Document variance from the default exposure factors (§350.74(j)(2)(L))							
Document the use of a non-default soil exposure area (§350.51(l)(3)&(4))							
Document WCU exclusion area (§350.33(f)(2))							
Document establishing a PMZ (§350.33(f)(4)(C)(I))							
Document the demonstration of technical impracticability (§350.33(f)(3)(F))							
Relocation of soils containing COCs for reuse (§350.36(b)(4) and (c)(4))							
Other (specify)							

[3] Check the appropriate box(es) to indicate the type of institutional control required for the response action.
[4] Specify date or amount of time after RAP approval.

Performance Measures and Problems	RACR Worksheet 5.0 Page ___ of ___	
	ID No.	Report Date:

Performance Measures

List and describe the performance measures for each environmental medium containing a PCLE zone that were used to determine if reasonable progress is being made by the response action in a timely manner. Provide documentation that these performance measures were met. Attach additional information if necessary.

Problems

Complete the table for the response action. When the response action consisted of several components or multiple actions, complete one table for each major component or action.

Response Action Name/Designation: _____

List the problems that were encountered during the response action, describe the impact of each problem, and the response to the problem.

Description of the Problem	Impact	Did this cause a response action failure?		Corrective Response
		Yes	No	

Operation and Maintenance	RACR Worksheet 6.0 Page ___ of ____	
	ID No.:	Report Date:

Use this worksheet to describe the operation and maintenance (O&M) activities conducted for each response action.

Response Action Name/Designation: _____
List all portions of the response action to which this information applies. Repeat this worksheet for each major component or operation.

Describe the O&M and inspection activities that were conducted to operate and maintain response action components.

Post-Response Action Care	RACR Worksheet 7.0 Page ___ of ___	
	ID No.	Report Date:

Complete this worksheet only if the information has changed from that submitted in the RAP. If the information does not apply or if the RAP contains the most current information, do not submit this worksheet.

What is the proposed initial post-response action care period? (default 30 yr.) _____ years

If the proposed initial post-response action care period is less than 30 years, provide a technical justification in accordance with §350.33(h).

What is the foreseeable land use during the post-response action care period? _____

Describe how the future use of the property will not compromise the integrity of the physical controls, will not interfere with the function of the monitoring systems, will not pose a threat to human health or the environment, and will be in accordance with any institutional controls.

Describe the proposed post-response action care activities. Describe the type of monitoring and/or inspections to be performed. Discuss the rationale for not including any COC(s) analyzed during the response action, monitoring or sampling point location, frequency of monitoring and/or inspections, and the duration of the monitoring program.

Will PRAC sampling procedures be the same as those as previously documented for monitoring and/ or confirmation sampling? ____ Yes ____ No
If no, provide in Appendix 6 a description of the monitoring or sampling collection procedures to be conducted during the post-response action care period.

Cost Estimate
Complete this portion of the form only if this information has changed from that submitted in the RAP.

Specify the physical control to which this information applies: _____
Complete this worksheet for each physical control that will be used as part of the response action.

What is the total estimated annual cost of O&M for the PRAC period? $ _____

What is the total estimated cost for a third party to perform PRAC activities? $ _____

Identify the type of financial assurance mechanism to be used, and the contact person managing fiduciary responsibility, if known.

Does the person meet the criteria and definition of a small business? (see §350.33(n)) ____ Yes ____ No
If yes and the person desires to pursue the reduced amount of financial assurance, attach a legally binding affidavit. Include in the affidavit the information requested in 30 TAC §350.33(l), (m), and (n).