



**Texas Commission on Environmental Quality
Texas Risk Reduction Program**

Response Action Plan

Purpose

The purpose of this form is to provide a standard format for the Response Action Plan (RAP).

Objectives

These instructions provide information on the following:

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

Regulatory Citation

30 TAC §350.94

Abbreviations and Acronyms

APAR – Affected Property Assessment Report

COC - chemical of concern

DOQQ – Digital Orthophoto Quarter Quads

EPA – Environmental Protection Agency

ESA - ecological services analysis

GPS – global positioning system

GW – groundwater

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

SQL – method quantitation limit

NAPL – non-aqueous phase liquids

O&M - operation and maintenance

PCL – protective concentration level

PCLE – protective concentration level exceedance

PMZ – plume management zone

PRAC – post-response action care

PRP – potential responsible party

RACR – Response Action Completion Report

RAER– Response Action Effectiveness Report

RAP - Response Action Plan

RBEL – risk-based exposure limit

SWR - solid waste registration

TAC - Texas Administrative Code
TCEQ – Texas Commission on Environmental Quality
TI – technical impracticability
TRRP – Texas Risk Reduction Program
VCP – Voluntary Cleanup Program
WCU – waste control unit

General Instructions

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

To whom does the RAP form apply?

The RAP is submitted by persons who will be conducting response actions under the Texas Risk Reduction Program (TRRP) rule to attain Remedy Standard B or for those persons who choose not to self-implement response actions to attain Remedy Standard A.

When is the RAP submitted?

Submit the RAP to the TCEQ for review and approval prior to commencing response actions to attain Remedy Standard B or non-self-implementing Remedy Standard A. This does not preclude the person from taking interim measures. Submit the APAR with the RAP unless the APAR was submitted previously. If the APAR was previously submitted and additional data has been collected since that time, include an amended APAR with the RAP if the APAR worksheets are needed to convey the information, or include the data in the RAP.

How is the RAP submitted?

Submit a copy of this form to both the applicable TCEQ program area in the Austin Central Office and 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 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.tnrc.state.tx.us/permitting/trrp.htm>. You will have to use the rule and associated guidance to complete your RAP. 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	512/239-2478	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 RAP?

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 and the components of the response action. Complete only the portions applicable to your RAP. 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 RAP Contents list below. 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 as noted in the RAP Contents list on page 5.

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

Worksheets, Attachments, and Appendices

The following instructions are listed in order of the worksheets, attachments, and appendices as specified in the RAP 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. Specify the report date and indicate if this report is the initial RAP for this affected property or if it is a subsequent submittal. 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 copies 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). Note that the physical address is not a P.O. Box or a rural route. Include the following information for the on-site property; 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 intersection 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)(1). 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 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/gispolicy.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.

Executive Summary – Use this section to summarize the major points of the report and provide background information about the affected property.

Chronology – Attach a chronology, listed in chronological order beginning with the most recent activity, of events associated with the assessment, all previous abatement and assessment activities, and all other corrective actions conducted at the affected property. 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 Affected Property 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 worksheets for your RAP and indicate which components are included in your report.

RAP Contents	
	Cover Page
	Executive Summary
	Chronology
	Checklist for Report Completeness
Section 1 Response Action Objectives	
Worksheet 1.0	Response Action Objectives
Attachment 1A*	Maps and Cross Sections
Attachment 1B*	Graphs of Concentrations versus Time
Section 2 Response Action Design	
Worksheet 2.0	Response Action Design
Attachment 2A*	Response Action Diagrams and Component/Equipment Descriptions
Attachment 2B*	Proposed Well Design
Attachment 2C*	ESA and Compensatory Restoration Plan
Worksheet 2.1	Plume Management Zone
Attachment 2D*	Plume Management Zone Map
Attachment 2E*	Attenuation Action Levels Determination
Worksheet 2.2	Waste Control Unit
Attachment 2F*	Map of Waste Control Unit
Worksheet 2.3	Technical Impracticability
Attachment 2G*	Map of Technical Impracticability Area
Worksheet 2.4	Institutional Controls
Section 3 Response Action Performance	
Worksheet 3.0	Performance Measures and Potential Problems
Worksheet 3.1	Monitoring and Sampling
Attachment 3A*	Map of Monitoring and Sampling Points
Worksheet 3.2	Operation and Maintenance
Section 4 Confirmation Sampling	
Worksheet 4.0	Confirmation Sampling Plan
Attachment 4A*	Map of Confirmation Sampling Points
Section 5 Post-Response Action Care	
Worksheet 5.0	Post-Response Action Care
Attachment 5A*	Map of Post-Response Action Care Monitoring and Sampling Points
Attachment 5B*	Post-Response Action Care Costs
Attachment 5C*	Small Business Affidavit
Section 6 Implementation Schedule	
Worksheet 6.0	Implementation Schedule
Appendices	
Appendix 1*	References
Appendix 2*	Data Tables and Boring Logs
Appendix 3*	Studies/tests documentation
Appendix 4*	Proposed Institutional Controls
Appendix 5*	Landowner Concurrence
Appendix 6*	Sampling Procedures
Appendix 7*	Statistical Methodology
Appendix 8*	Split Media Approval

*These items are not included in the form and are provided by the person.

SECTION 1 – Response Action Objectives

Worksheet 1.0 Response Action Objectives – Use this worksheet to describe the objectives of the response action. For each environmental media (surface soil, subsurface soil, groundwater, surface water, sediment, or air) containing a PCLE zone, state the response objectives for the PCLE zone(s) and how the response action will meet the remedy standard objectives in the proposed reasonable time. Refer to *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 the APAR, 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 affected property boundary (this is not the legal property boundary) as defined by the assessment levels and the overall 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 locations, 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 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 bulk density) 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 may be submitted as needed to effectively portray subsurface conditions.

Attachment 1B Graphs of Concentration versus Time – 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. If the most recent and current data was used to construct these graphs in the APAR, this attachment does not need to be repeated in the RAP.

SECTION 2 – Response Action Design

Worksheet 2.0 Response Action Design – Provide a detailed description of the response action design for each media. Complete a separate worksheet for each different response action.

Attachment 2A Response Action Diagrams and Component/Equipment Descriptions – 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 proposed physical control; the area in which the response action will occur; recovery, monitoring, or injection wells; buildings; surface cover types; and surface drainage. Include equipment manufacturers' documentation that identifies equipment construction and performance measurements. Required legend information for maps: north arrow, fractional and bar scales, map source and identification of all symbols used on the map.

Attachment 2B Proposed Well Design – Illustrate the proposed design and placement of any proposed monitor wells, recovery wells, or injection wells using construction diagrams and a map of proposed locations. Required legend information for maps: north arrow, fractional and bar scales, map source and identification of all symbols used on the map.

Attachment 2C Ecological Services Analysis and Compensatory Restoration Plan – Use this attachment to provide an ecological services analysis (ESA) and compensatory restoration plan if proposed 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.

Worksheet 2.1 Plume Management Zone – Complete this worksheet when a plume management zone is proposed as part of the response action. Refer to *Soil and Groundwater Response Objectives* (RG-366/TRRP-29) for more information on plume management zones.

Attachment 2D PMZ Map - Provide a map that illustrates the area of the plume management zone, the attenuation monitoring points, alternate groundwater POEs, and the groundwater PCLE zone. 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.

Attachment 2E Attenuation Action Levels Determination – Provide in this attachment all equations, calculations, and other methods of determining the attenuation action levels for each attenuation monitoring point. Provide supporting documentation for the justification that the PMZ is appropriate in accordance with §350.33(f)(4).

Worksheet 2.2 Waste Control Unit – Use this worksheet to provide information on the waste control unit if proposed as part of the response action. Do not submit this worksheet if a waste control unit is not part of the response action plan. Refer to *Soil and Groundwater Response Objectives* (RG-366/TRRP-29) for more information on response action objectives.

Attachment 2F Waste Control Unit Map – Include a map that illustrates the waste control unit, the groundwater flow direction, the 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 2.3 Technical Impracticability – Use this worksheet to provide information on a technical impracticability demonstration. If a technical impracticability demonstration is not proposed, do not submit this worksheet or Attachment 2G. Refer to *Soil and Groundwater Response Objectives* (RG-366/TRRP-29) for more information on response action objectives.

Attachment 2G Technical Impracticability Map – Provide a map that illustrates the area of technical impracticability, the groundwater flow direction, the 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 2.4 Institutional Controls – Complete this worksheet if an institutional control will be 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.

Section 3 Response Action Performance

Worksheet 3.0 Performance Measures and Potential Problems – Describe the performance measures that will be used to determine if reasonable progress is being made by the response action. The performance measures must clearly demonstrate that the response actions addressing each media are being accomplished in a reasonable time. If statistical or geostatistical methods will be used as part of the effectiveness measures, discuss the assumptions and provide the equations for statistical or geostatistical methodology(ies) in Appendix 7. The results of the measures of effectiveness will be reported in the RAER and RACR to document that the response action is proceeding in a timely manner.

Describe any potential problems that may occur with, or during, the response action. The description should demonstrate that potential problems have been anticipated and that contingency measures are in place. List potential problem that might be reasonably anticipated for a response action of this type, and that might result in response action failure and/or downtime. Describe the impact of the problem on the response action, and describe how the risk of each scenario will be minimized through duplicate systems, inspection and maintenance, preventive maintenance/parts replacements, and operational guidelines. Also describe the training, equipment, and assets that will be utilized in a timely manner for each response to a problem.

Worksheet 3.1 Monitoring and Sampling – Specify the monitoring and sampling that will be conducted to assess the effectiveness and progression of the response action. Discuss the sampling methods in Appendix 6 unless the planned monitoring or sampling procedure is the same as the media sampling procedures described in the APAR.

Attachment 3A Map of Monitoring and Sampling Points – Provide maps showing the monitoring and sampling points in each media, the PCLE zone, and all major features of the site. Required legend information: north arrow, fractional and bar scales, map source and identification of all symbols used on the map.

Worksheet 3.2 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. Provide the detail necessary to explain how the person will know the response action is functioning properly. List routine tasks required to operate and maintain the response action, including scheduled inspections, maintenance, and component replacement.

SECTION 4 – Confirmation Sampling

Worksheet 4.0 Confirmation Sampling Plan – Specify the COC or other parameter sampling that will be conducted in each media requiring a response action to confirm completion of the response action. Discuss the sampling methods in Appendix 6 unless the methods are the same as the media sampling procedures described in the APAR. Illustrate the sampling locations in Attachment 4A.

Attachment 4A Map of Confirmation Sampling Points – Provide maps, drawn to scale, to illustrate the confirmation sample points in each media requiring a response action 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.

SECTION 5 – Post Response Action Care

Worksheet 5.0 Post-Response Action Care – Complete this worksheet for Remedy Standard B response actions. Describe the proposed post-response action care (PRAC) activities, including the type of monitoring and/or inspection to be performed for each environmental media requiring a response action.

Attachment 5A Map of Post-Response Action Care Monitoring and Sampling Points – Provide map(s) illustrating the affected property, limits of proposed physical controls, all proposed PRAC monitoring, sampling, and inspection points. Required legend information: north arrow, fractional and bar scales, map source and identification of all symbols used on the map.

Attachment 5BA Post Response Action Care Costs – Provide a detailed cost estimate for a third party to operate and maintain the physical control during the post response action care period.

Attachment 5C Small Business Affidavit – When the person is a small business who desires to pursue the reduced amount of financial assurance, include the small business affidavit to meet the requirements of 30 TAC §350.33(n)(2). An example affidavit is included on page 12.

SECTION 6 – Implementation Schedule

Worksheet 6.0 Implementation Schedule – Provide a detailed project schedule of proposed response action activities. Include the proposed duration, start/finish dates, and the proposed date of submittal of the applicable reports or notifications following approval of the RAP. You may list start and finish dates as actual (approximate) dates or as time from RAP approval. The RAER must be submitted a minimum of every three years following from the date of approval of the RAP. The RACR must be submitted

within 90 days of completion of a response action, and the PRACR is due each anniversary of the date of TCEQ approval of the RACR, unless an alternate reporting schedule is approved by the TCEQ.

Appendices

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 Data Tables and Boring Logs – Use this attachment to provide boring logs and tables of data collected since submittal of the APAR (unless previously submitted).

COC Data Tables - Provide summary tables of all media sample screening and analytical results obtained since the submittal of the APAR. 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, LNAPL 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 since submittal of the APAR, 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 3 Studies and Tests Documentation – Provide complete details on any studies or tests already conducted or proposed as part of this response action. Include test methods, purpose of the test, results (if already conducted), and how the results will be, or have been, used to choose the response action, design the response action or modify the response action. If modeling was used, provide documentation of the software and model used, all input data assumptions, and all results.

Appendix 4 Proposed Institutional Controls – Provide a draft of the proposed institutional controls identified in Worksheet 2.4.

Appendix 5 Landowner Concurrence – Provide a map of the properties and a list of landowners from whom concurrence will be requested to execute an institutional control. Include documentation of any landowner concurrence already received.

Appendix 6 Sampling Procedures - Attach a written description of sample collection and handling procedures if the procedures are different from the procedures previously provided in the APAR (if so, specify the report name and submittal date in which the sample collection and handling procedures are described). Identify and describe the proposed field screening and/or sampling method(s) to be 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 7 Statistical Methodology – Define the statistical or geostatistical methodology(ies) that will be applied in the data collection or data evaluation process. Discuss the basis for assumptions and provide all equations that will be used.

Appendix 8 Split Media Approval – Use this appendix to provide a copy of the TCEQ-issued approval to apply the procedures on managing media under different plans of action.

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.
Anderson	1	5	Comal	46	13	Grayson	91	4	Kinney	136	16	Orange	181	10
Andrews	2	7	Comanche	47	3	Gregg	92	5	Kleberg	137	14	Palo Pinto	182	4
Angelina	3	10	Concho	48	8	Grimes	93	9	Knox	138	3	Panola	183	5
Aransas	4	14	Cooke	49	4	Guadalupe	94	13	Lamar	139	5	Parker	184	4
Archer	5	3	Coryell	50	9	Hale	95	2	Lamb	140	2	Parmer	185	1
Armstrong	6	1	Cottle	51	3	Hall	96	1	Lampasas	141	9	Pecos	186	7
Atascosa	7	13	Crane	52	7	Hamilton	97	9	La Salle	142	16	Polk	187	10
Austin	8	12	Crockett	53	8	Hansford	98	1	Lavaca	143	14	Potter	188	1
Bailey	9	2	Crosby	54	2	Hardeman	99	3	Lee	144	11	Presidio	189	6
Bandera	10	13	Culberson	55	6	Hardin	100	10	Leon	145	9	Rains	190	5
Bastrop	11	11	Dallam	56	1	Harris	101	12	Liberty	146	12	Randall	191	1
Baylor	12	3	Dallas	57	4	Harrison	102	5	Limestone	147	9	Reagan	192	8
Bee	13	14	Dawson	58	7	Hartley	103	1	Lipscomb	148	1	Real	193	13
Bell	14	9	Deaf Smith	59	1	Haskell	104	3	Live Oak	149	14	Red River	194	5
Bexar	15	13	Delta	60	5	Hays	105	11	Llano	150	11	Reeves	195	7
Blanco	16	11	Denton	61	4	Hemphill	106	1	Loving	151	7	Refugio	196	14
Borden	17	7	DeWitt	62	14	Henderson	107	5	Lubbock	152	2	Roberts	197	1
Bosque	18	9	Dickens	63	2	Hidalgo	108	15	Lynn	153	2	Robertson	198	9
Bowie	19	5	Dimmit	64	16	Hill	109	9	McCulloch	154	8	Rockwall	199	4
Brazoria	20	12	Donley	65	1	Hockley	110	2	McLennan	155	9	Runnels	200	3
Brazos	21	9	Duval	66	16	Hood	111	4	McMullen	156	16	Rusk	201	5
Brewster	22	6	Eastland	67	3	Hopkins	112	5	Madison	157	9	Sabine	202	10
Briscoe	23	1	Ector	68	7	Houston	113	10	Marion	158	5	San Augustine	203	10
Brooks	24	15	Edwards	69	13	Howard	114	7	Martin	159	7	San Jacinto	204	10
Brown	25	3	Ellis	70	4	Hudspeth	115	6	Mason	160	8	San Patricio	205	14
Burleson	26	9	El Paso	71	6	Hunt	116	4	Matagorda	161	12	San Saba	206	9
Burnet	27	11	Erath	72	4	Hutchinson	117	1	Maverick	162	16	Schleicher	207	8
Caldwell	28	11	Falls	73	9	Irion	118	8	Medina	163	13	Scurry	208	3
Calhoun	29	14	Fannin	74	4	Jack	119	3	Menard	164	8	Shackelford	209	3
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

EXAMPLE
To be used as RAP Attachment 5C

**SMALL BUSINESS AFFIDAVIT
FOR COMPLIANCE WITH 30 TAC §350.33(n)(1)**

STATE OF TEXAS

COUNTY OF {_____}

AFFIDAVIT OF {*NAME OF AFFIANT*}

Before me, the undersigned notary, on this day personally appeared {*name of affiant*}, a person whose identity is known to me. After I administered an oath to {*him/her*}, upon {*his/her*} oath, {*he/she*} said:

My name is {*name of affiant*}. I am capable of making this affidavit. The facts stated in this affidavit are within my personal knowledge and are true and correct.

I am the owner or an authorized officer of {*name of business*} which is a small business as defined by 30 TAC §350.33(n)(2). {*Name of business*} employs, by direct payroll and/or through contract, fewer than one hundred full time employees, has net annual receipts (as defined by 30 TAC §350.33(n)(2)(A)) of less than \$3,000,000, and is not a wholly-owned subsidiary of a corporation which has one hundred or more full time employees and net annual receipts (as defined by 30 TAC §350.33(n)(2)(A)) of \$3,000,000 or more.

SWORN TO AND SUBSCRIBED before me by {*name of affiant*} on _____, (year).

Notary Public in and for
The State of Texas

My commission expires: {*date*}

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY Response Action Plan

Cover Page

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

TCEQ Program (check one)

- | | |
|--|--|
| <input type="checkbox"/> Corrective Action (Mail Code 127) | <input type="checkbox"/> Superfund PRP Lead (Mail Code 143) |
| <input type="checkbox"/> Voluntary Cleanup Program (Mail Code 221) | <input type="checkbox"/> Municipal Solid Waste Permits (Mail Code 124) |
| <input type="checkbox"/> RPR Section (Mail Code 137) | |

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: _____
Physical Address: _____
Street no. _____ Pre dir: _____ Street name _____ Street type: _____ Post dir: _____
City: _____ County: _____ County Code: _____ Zip: _____

Check if 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: _____

RAP Executive Summary	ID No.:
	Report Date:

Use this worksheet to summarize the report. Be sure to complete and submit the Checklist for Report Completeness. **Attach a chronology of activities associated with the affected property.**

Briefly describe the affected property and PCLE zones, the conclusions from the assessment activities, identify any affected or threatened receptors, and describe any other major considerations taken into account when developing this response action plan. If any portion of the response action is necessitated due to an aesthetic or nuisance condition, identify the nature of that condition and identify that portion of the response action proposed to address it. If any media that contains a PCLE zone is not addressed in this RAP, provide justification.

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

List all media that contains a PCLE zone and specify the proposed response action for each media. Indicate the type of removal, decontamination, physical control and/or institutional control action that is proposed.

Media	COCs ¹	Removal	Decontamination	Control		
				Physical Control	Modified Groundwater Response Objective ²	
					PMZ	WCU

Is there a media that contains a PCLE zone that is not addressed in this RAP? ___ yes ___ no
If yes, provide justification for not addressing the PCLE zone in this RAP.

On-site land use: Residential Commercial/Industrial
Off-site land use: Residential Commercial/Industrial (check all that apply)

Is this a re-submittal or revision of a previous RAP? ___ Yes ___ No
If yes, explain why the RAP is being revised or resubmitted.

Were all the appropriate notifications made in accordance with §350.55? ___ Yes ___ No
If no, explain why notifications were not made:

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 is proposed, check the type(s) of proposed modifications.

Checklist for Report Completeness	ID No.:
	Report Date:

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	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Cover Page</div> <input type="checkbox"/>
	Required	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Executive Summary</div> <input type="checkbox"/>
	Required	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Checklist for Report Completeness</div> <input type="checkbox"/>
	Required	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Worksheet 1.0 Response Action Objectives</div> <input type="checkbox"/>
No <input type="checkbox"/>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Have new data been collected that was not previously submitted?</div> <input type="checkbox"/> Yes	<input type="checkbox"/> Attachment 1A* Maps and Cross Sections
		<input type="checkbox"/> Attachment 1B* Graphs of Concentration versus Time
	Required	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Worksheet 2.0 Response Action Design</div> <input type="checkbox"/>
	Required	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Attachment 2A* Response Action Diagrams and Component/Equipment Descriptions</div> <input type="checkbox"/>
	Required	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Attachment 2B* Proposed Well Design</div> <input type="checkbox"/>
No <input type="checkbox"/>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Is an ecological services analysis or compensatory restoration plan part of the proposed response action?</div> <input type="checkbox"/> Yes	<input type="checkbox"/> Attachment 2C* ESA and Compensatory Restoration Plan
No <input type="checkbox"/>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Is a plume management zone proposed as part of the response action?</div> <input type="checkbox"/> Yes	<input type="checkbox"/> Worksheet 2.1 Plume Management Zone
		<input type="checkbox"/> Attachment 2D* Plume Management Zone Map
		<input type="checkbox"/> Attachment 2E* Attenuation Action Levels Determination
No <input type="checkbox"/>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Is a waste control unit proposed as part of the response action?</div> <input type="checkbox"/> Yes	<input type="checkbox"/> Worksheet 2.2 Waste Control Unit
		<input type="checkbox"/> Attachment 2F* Map of Waste Control Unit
No <input type="checkbox"/>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Is a technical impracticability area proposed as part of the response action?</div> <input type="checkbox"/> Yes	<input type="checkbox"/> Worksheet 2.3 Technical Impracticability
		<input type="checkbox"/> Attachment 2G* Map of Technical Impracticability Area

Response Action Objectives Associated Information: Attachment 1A, 1B	RAP Worksheet 1.0	Page ___ of ___
	ID No.:	Report Date:

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

Response Action Objectives

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

State 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 is appropriate based on the hydrogeologic characteristics, COC characteristics, and potential unprotective conditions that could continue or result during the remedial period.

Explain how the COCs will be handled, treated, disposed, or transferred to another media and document that the response action will not result in any additional potential exposure conditions due to response action activities.

State the proposed “reasonable time frame” and provide the justification for that time frame in the context of any potential for unprotective exposures to exist or develop, COC characteristics, hydrogeologic and affected property characteristics. If the reasonable time frame is different for the different affected media or for particular tracts of land, be sure to discuss that. Provide how the proposed response action will meet the objectives in a reasonable timeframe.

Soil Response Action Objectives

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

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

Response Action Objectives Associated Information: Attachment 1A, 1B	RAP Worksheet 1.0	Page ___ of ___
	ID No.:	Report Date:

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 is proposed.

Groundwater classification ___ 1 ___ 2 ___ 3

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

If yes, does the affected property meet the qualifying criteria for a modified groundwater response action using a waste control unit, plume management zone, or technical impracticability? ___ Yes ___ No

If yes, complete the appropriate portions of this report.
 If no to either question, complete the following:

Explain how the removal or decontamination action will reduce the concentration of COCs to the critical groundwater PCL throughout the groundwater PCLE zone and prevent COC concentrations above the critical groundwater PCL from migrating beyond the existing boundary of the groundwater PCLE zone.

Explain how the response action will prevent COCs from migrating to air at concentrations above the PCLs for air if the groundwater-to-air PCLs (^{Air}GW_{inh-v}) is exceeded.

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

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

Response Action Design

Use this worksheet to provide detailed descriptions of the response action. Attach design and layout drawings and equipment specifications in Attachment 2A.

Media: _____

List all media to which this information applies. If the response action is different for another media, complete a separate worksheet.

Provide a detailed description of the response action. Describe the removal action, decontamination, treatment system(s), and/or physical or institutional control actions that are proposed for each media and discuss the reasons for choosing the response action(s). Identify and describe any ecological services analysis and compensatory restoration plan that will be utilized (if so, include the complete ESA and compensatory restoration plan in Attachment 2C).

Describe all major treatment system components and equipment of the response action. Illustrate the response action design and provide equipment specifications in Attachment 2A.

List permits or registrations needed to construct or implement the response action, including permits or registrations needed to conduct studies or tests. For VCP sites, list the permits that would be required if the site was not in the VCP (required by the VCP).

Permitting/Registration Authority	Type of permit/registration	Permit or registration number if already issued	Anticipated application date

Identify and discuss the results of any studies or tests, such as pilot studies, feasibility studies, technical impracticability studies, treatability studies, and/or toxicity studies conducted or proposed to be conducted at the affected property. Discuss the reason for the study or test and how it verifies the effectiveness and appropriateness of the chosen response action or documents that a particular response action is not appropriate for the affected property. Describe how the results of completed studies or tests determined the design or choice of response action. Attach any separate reports and supporting documentation in Appendix 3.

Plume Management Zone Associated Information: Attachments 2D, 2E	RAP Worksheet 2.1	Page ___ of ___
	ID No.:	Report Date:

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

Groundwater-bearing unit _____

Repeat this worksheet for each groundwater-bearing unit for which a PMZ is proposed.

Groundwater classification ___ 2 ___ 3

Provide justification as to why the PMZ is appropriate in accordance with §350.33(f)(4)(A). Include supporting documentation in Attachment 2E.

Is the alternate POE proposed to be beyond the current limits of the PCLE zone? ___ Yes ___ No

If yes, how far? _____ (§350.37(l) or (m) as applicable)

Is it to be off-site? ___ Yes ___ No

On an off-site property that currently does not contain a residential-based groundwater PCLE zone?

___ Yes ___ No

If yes and this is a Class 2 groundwater, provide the basis for concluding that this groundwater does not have a reasonably anticipated future beneficial use (§350.37(l)(3)).

Is NAPL present? ___ Yes ___ No

If so, describe how the response action will achieve the performance criteria in §350.33(f)(4)(E).

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

Provide the basis that the COCs will not migrate beyond the downgradient boundary of the PMZ at concentrations above the critical PCL. Include supporting documentation in Attachment 2E.

Describe the methods used to determine that there are no artificial penetrations which can allow COCs to migrate from the groundwater PCLE zone to currently unaffected groundwater-bearing units. Include supporting documentation in Attachment 2E.

Technical Impracticability Associated Information: Attachment 2G	RAP Worksheet 2.3 Page ___ of ___	
	ID No.:	Report Date:

Use this worksheet to justify the use of technical impracticability (TI) to modify the groundwater response objectives. Also complete Worksheet 2.2 to propose a plume management zone for the TI area. Include a map of the groundwater PCLE zone and area of technical impracticability in Attachment 2G. Include in the attachment any other documentation needed to make the justification. If technical impracticability is not proposed as part of the response action, do not submit this worksheet.

Describe the groundwater PCLE zone and demonstrate in accordance with *Guidance for Evaluating the Technical Impracticability of Ground-Water Restoration* (EPA OSWER Directive 9234.2-25), unless otherwise approved by TCEQ, why it is technically impractical to reduce the COC concentrations to the critical PCLs, taking into account all currently available remediation technologies, and hydrogeologic and chemical-specific factors. Identify the specific COCs and list the PCLs that cannot be achieved.

Are there groundwater COCs in excess of the critical PCLs beyond the TI area? ___ Yes ___ No
If yes, make sure removal/decontamination actions are documented in Worksheet 1.0.

Will actions be required or already completed to prevent COC migration outside the area of technical impracticability and/or outside the existing boundary of the groundwater PCLE zone?

___ Yes ___ No

If yes, make sure removal/decontamination actions are documented in Worksheet 1.0.

Performance Measures

List and describe the performance measures for each environmental medium containing a PCLE zone that will be used to determine if reasonable progress is being made by the response action in a timely manner. Use these measures to document effectiveness of the response action in the RAER.

--

Potential Problems

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

Response Action Name/Designation: _____

List the potential problems that might be reasonably anticipated for the response action, describe the impact of each problem, and the response to the problem.

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

Monitoring and Sampling

Associated Information: Attachment 3A

RAP Worksheet 3.1

Page of

ID No.:

Report Date:

List the monitoring and sampling of COC concentrations or other parameters that will be conducted during the response action. Illustrate the monitoring or sampling locations in Attachment 3A. If statistics or geostatistics will be used, provide details in Appendix 7. If monitoring or observation wells will be constructed for the response action, provide well construction details in Attachment 2B if not previously provided.

Monitored Media	COC ¹	Other parameter (specify)	Sampling Method ²	Sampling points or locations ³	Depth/Height ⁴ (ft.)	Analytical or Field Screening Method	Sampling or Monitoring Frequency ⁵
Surface Soil							
Subsurface Soil							
Groundwater							
Surface water							
Sediment							
Air							
Other Media (specify)							

Explain the reasons for the above-listed monitoring and sampling plan.

¹ Specify the COCs to be monitored in this media. List either type of COC (such as VOCs, metals) if all the COCs of that type will be monitored the same way.
² Describe the sampling or monitoring methods and QC procedures in Appendix 1 unless the proposed sampling or monitoring procedure is the same as the sampling or monitoring procedure described in the APAR.
³ Specify the sampling or monitoring point, such as the specific monitor well or general sampling or monitoring location.
⁴ Specify the depth or height of the sampling or monitoring points.
⁵ Specify the frequency at which this monitoring or sampling will occur.

Operation and Maintenance	RAP Worksheet 3.2	Page ___ of ___
	ID No.:	Report Date:

Use this worksheet to describe the operation and maintenance (O&M) activities for each response action. In situations where the response action consists of more than one major component, for clarity one worksheet can be completed for each major component.

Response Action Name/Designation: _____

List all portions of the response action to which this information applies.

Describe the O&M and inspection activities that will be required to operate and maintain response action components.

List and discuss the key operating parameters for a properly functioning response action. Address how changes in these parameters will result in operating changes, providing sufficient detail to explain how the operator will know the component is functioning properly.

List the routine tasks required to operate the response action.

List the routine tasks required to maintain the response action, including scheduled inspections, maintenance, and component replacement.

Confirmation Sampling Plan

Associated Information: Attachment 4A

RAP Worksheet 4.0

Page ___ of ___

Report Date: _____

ID No.: _____

List the COCs and other parameters that will be sampled to confirm completion of the response action. Illustrate the monitoring or sampling locations in Attachment 4A. If monitoring or observation wells will be constructed for the response action, provide well construction details in Attachment 2B if not previously provided. If needed, describe the sample collection and handling methods, if not previously provided, in Appendix 6.

Media	COC ¹	Other parameter (specify)	Sampling Method	Sampling points ²	Depth/height (ft.)	Analytical Method	Sampling Frequency
Surface Soil							
Subsurface Soil							
Groundwater							
Surface water							
Sediment							
Air							
Other media (specify)							

Explain the reasons for the above-listed sampling plan. Discuss statistical or geostatistical methodology(ies) which will be applied, if any, in the data collection process. Discuss any assumptions made in the statistical/geostatistical assessment, and how they will be met.

¹ Specify either a specific COC or type of COC (such as VOCs, metals).

² Specify the sampling point to the degree it is known, (for example, MW-1, or near former boring #2).

Post-Response Action Care Associated Information: Attachments 5A-5C	RAP Worksheet 5.0	Page ___ of ___
	ID No.:	Report date:

Complete this worksheet only if Remedy Standard B will be used.

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.

Briefly 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 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 a physical control is proposed (installed hydraulic control system, slurry wall, cap, etc.). Provide in Attachment 5B a detailed cost estimate for a third party to operate and maintain the physical control during the PRAC period, based on current dollar amount.

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, provide a legally binding affidavit as Attachment 5C. Include in the affidavit the information requested in 30 TAC §350.33(l), (m), and (n). An example affidavit is attached in the instructions.

Document the proposed schedule for implementing the response action. Include all major response action activities through the life of the project, including all removal, decontamination, and control actions, component installations, O&M, monitoring, and post-response action care activities.

Implementation of Response Action (specify component or action)	Start	Finish	Duration

List the proposed schedule for report submittals. Add additional lines if more reports than listed will be needed to complete the response action.

Reports	Submittal date
Response Action Effectiveness Report (RAER)	
RAER submittal number 1	
RAER submittal number 2	
RAER submittal number 3	
Response Action Completion Report (RACR)	
Post-Response Action Care Report (PRACR)	
PRACR submittal number 1	
PRACR submittal number 2	
PRACR submittal number 3	