

**APPENDIX E**  
**EXAMPLE DOCUMENT TEMPLATES**

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## **D) General**

The purpose of this Appendix (D) is to provide the recommended reporting and document formats for corrective action documents under this Consent Order. Although this Appendix provides recommendations for reporting information and document formats, the Respondent is encouraged to follow these proposals as closely as possible because the information below reflects NMED's expectations for reporting and documentation. The described formats include the general reporting recommendations and formats for site-specific RCRA Facility Investigation (RFI) work plans, RFI reports, periodic monitoring reports, risk assessment reports, and corrective measures evaluations (CME). This Appendix is not intended to provide reporting formats for every potential corrective action document prepared under this Consent Order. Additionally, the recommendations for reporting and format of documents listed in this Appendix (D) may not include all sections that may be necessary to complete each type of document listed. Either Party may determine that additional sections are needed to address additional site-specific issues or information collected during corrective action or monitoring activities not listed below. Sections that do not apply to a particular plan or report may be omitted from that document.

## **II) RCRA Facility Investigation (RFI) Work Plan**

The Respondents should prepare work plans for site investigations or corrective action activities at the Facility using the general outline below. The data quality objectives (e.g., define nature and extent of contamination) should be clearly stated and the research, locations, depths and schedules of proposed sampling should be included in the work plan. General descriptions of proposed methods of exploration, field procedures and data collection methods should be included in each work plan. The general work plan outline is described below.

### **a) Title Page**

The title page should include the type of document; Facility name; TA designation; SWMU or AOC name, site, and any other unit name; and the submittal date. A signature block providing spaces for the name and title of the responsible representatives should be provided on the title page in accordance with 20.4.1.900 NMAC incorporating 40 C.F.R. 270.11(d)(1).

### **b) Executive Summary (Abstract)**

The executive summary or abstract should provide a brief summary of the purpose and scope of the investigation to be conducted at the subject site. The Facility, SWMU or AOC name, site name, any other unit name, location, and TA designation should be included in the executive summary.

### **c) Table of Contents**

The table of contents should list all text sections, tables, figures, and appendices or attachments included in the work plan. The corresponding page numbers for the titles of each section of the work plan should be included in the table of contents.

#### d) Introduction

The introduction should include the Facility name, TA designation, unit location, and unit status (e.g., closed, corrective action). General information on the current site usage and status should also be included in this section. A brief description of the purpose of the investigation and the type of site investigation to be conducted should be provided in this section.

#### e) Background

The background section should describe relevant background information. This section should briefly summarize historical site uses by the U.S. Government and any other entity since 1940, including the locations of current and former site structures and features. A labeled figure should be included in the document showing the locations of current and former site structures and features. The locations of pertinent subsurface features such as pipelines, underground tanks, utility lines, and other subsurface structures should be included in the background summary and labeled on the figure, unless none exist.

This section should identify potential receptors, including groundwater, and include a brief summary of the type and characteristics of all waste and all contaminants managed or released at the site, the known and possible sources of contamination, the history of releases or discharges of contamination, and the known extent of contamination. This section should include brief summaries of results of previous investigations including references to pertinent figures, data summary tables, and text in previous reports. At a minimum, detections of contaminants encountered during previous investigations should be presented in table format, with an accompanying figure showing sample locations. If references to previous reports are presented, they should include page, table, and figure numbers for referenced information. Summary data tables and site plans showing relevant investigation locations should be included in the Tables and Figures sections of the document, respectively.

#### f) Site Conditions

##### i) Surface Conditions

A section on surface conditions should provide a detailed description of current site topography, features and structures including a description of topographic drainages, man-made drainages, vegetation, erosional features, and basins. It should also include a detailed description of current site usage and any current operations at the site. In addition, descriptions of features located in surrounding sites that may have an impact on the subject site regarding sediment transport, surface water runoff, or contaminant fate and transport should be included in this section.

##### ii) Subsurface Conditions

A section should provide a brief, detailed description of the site conditions observed during previous subsurface investigations, including relevant soil horizons, stratigraphy, presence of groundwater, and other relevant information. A site plan showing the locations of all borings and excavations advanced during previous investigations should be included in the Figures section of the work plan. A brief description of the anticipated stratigraphic units that may be

encountered during the investigation may be included in this subsection if no previous investigations have been conducted at the site.

g) Scope of Activities

A section on the scope of activities should describe the data quality objects of the proposed work scope as well as briefly describe a list of anticipated activities to be performed during the investigation. This could include background information research, health and safety requirements that may affect or limit the completion of tasks, drilling, test pit or other excavations, well construction, field data collection, survey data collection, chemical analytical testing, aquifer testing, remediation system pilot tests, and IDW storage and disposal.

h) Investigation Methods

A section on investigation methods should provide a description of anticipated locations and methods for conducting the activities intended to achieve the data quality objectives. This section could include research methods, health and safety practices that may affect the completion of tasks, drilling methods, test pit or other excavation methods, sampling intervals and methods, well construction methods, field data collection methods, geophysical and land survey methods, field screening methods, chemical analytical testing, materials testing, aquifer testing, pilot tests, and other proposed investigation and testing methods. This information may also be summarized in table format, if appropriate.

i) Monitoring and Sampling Program

A section on monitoring and sampling should provide a description of the groundwater, ambient air, subsurface vapor, remediation system, engineering controls, and other monitoring and sampling programs currently being implemented at the site.

j) Schedule

A section should set forth the anticipated schedule for completion of field investigation, pilot testing, and monitoring and sampling activities. In addition, this section should set forth a schedule for submittal of reports and data to the Department.

k) Tables

The following summary tables may be included in the investigation work plans, if previous investigations have been conducted at the site. Data presented in the tables should include information on dates of data collection, analytical methods, detection limits, and significant data quality exceptions. The analytical data tables should include only detected analytes and data quality exceptions that could potentially mask detections.

1. Summaries of regulatory criteria, background, and applicable cleanup levels (may be included in the analytical data tables instead of as separate tables).
2. Summaries of historical field survey location data.

3. Summaries of historical field screening and field parameter measurements of soil, rock, sediments, groundwater, surface water, and air quality data.
4. Summaries of historical soil, rock, or sediment laboratory analytical data should include the analytical methods, detection limits, and significant data quality exceptions that could influence interpretation of the data.
5. Summaries of historical groundwater elevation and depth to groundwater data. The table should include the monitoring well depths, the screened intervals in each well, and the dates and times measurements were taken.
6. Summaries of historical groundwater laboratory analytical data. The analytical data tables should include the analytical methods, detection limits, and significant data quality exceptions that could influence interpretation of the data.
7. Summary of historical surface water laboratory analytical data. The analytical data tables should include the analytical methods, detection limits, and significant data quality exceptions that could influence interpretation of the data.
8. Summary of historical air sample screening and chemical analytical data. The data tables should include the screening instruments used, laboratory analytical methods, detection limits, and significant data quality exceptions that could influence interpretation of the data.
9. Summary of historical pilot or other test data, if applicable, including units of measurement and types of instruments used to obtain measurements.

l) Figures

The following figures should be included with each investigation work plan for each site, including presentation of data where previous investigations have been conducted. All figures should include an accurate bar scale and a north arrow. An explanation should be included on each figure for all abbreviations, symbols, acronyms, and qualifiers. All maps should contain a date of preparation.

1. A vicinity map showing topography and the general location of the site relative to surrounding features and properties.
2. A site plan that presents pertinent site features and structures, underground utilities, well locations, and remediation system locations and details. Off-site well locations and other relevant features should be included on the site plan, if appropriate. Additional site plans may be required to present the locations of relevant off-site well locations, structures, and features.
3. Figures showing historical and proposed soil boring or excavation locations and sampling locations.
4. Figures presenting historical soil sample field screening and laboratory analytical data.
5. Figures presenting the locations of all existing and proposed borings and vapor monitoring well locations.

6. Figures showing all existing and proposed wells and piezometers, presenting historical groundwater elevation data, and indicating groundwater flow directions.
7. Figures presenting historical groundwater laboratory analytical data, if applicable. The chemical analytical data corresponding to each sampling location can be presented in tabular form on the figure or as an isoconcentration map.
8. Figures presenting historical and proposed surface water sample locations and field measurement data, if applicable.
9. Figures presenting historical surface water laboratory analytical data, if applicable.
10. Figures showing historical and proposed air or vapor sampling locations and presenting historical air quality data.
11. Figures presenting historical pilot and other testing locations and data, where applicable, including site plans and graphic data presentation.
12. Figures presenting geologic cross-sections, based on outcrop and borehole data acquired during previous investigations.

m) Appendices

A description of IDW management should be included as an appendix to the investigation work plan. Additional appendices may be necessary to present additional data or documentation not listed above.

### **III) RCRA Facility Investigation (RFI) Report**

The Respondents should prepare investigation reports at the Facility using the general outline below. The Investigation Report should be the reporting mechanism for presenting the results of completed RFI Work Plans. This section (I.C) describes recommendations for reporting on SWMU and AOC investigations.

a) Title Page

The title page should include the type of document; Facility name; TA designation; SWMU or AOC name, site, and any other unit name; and the submittal date. A signature block providing spaces for the name and title of the responsible representative(s) should be provided on the title page in accordance with 20.4.1.900 NMAC incorporating 40 C.F.R. 270.11(d)(1).

b) Executive Summary (Abstract)

The executive summary or abstract should provide a brief summary of the purpose, scope, and results of the investigation; site names; location; and TA designation. In addition, this section should include a brief summary of conclusions based on the investigation data collected and recommendations for future investigation, monitoring, remedial action or site closure.

#### c) Table of Contents

The table of contents should list all text sections, subsections, tables, figures, and appendices or attachments included in the report. The corresponding page numbers for the titles of each section of the report should be included in the table of contents.

#### d) Introduction

The introduction section should include the Facility name, TA designation, unit location, and unit status (e.g., closed, corrective action). General information on the site usage and status should be included in this section. A brief description of the purpose of the investigation, the type of site investigation conducted, and the type of results presented in the report also should be provided in this section.

#### e) Background

The background section should describe relevant background information. This section should briefly summarize historical site uses by the U.S. Government and any other entity since the 1940s, including the locations of current and former site structures and features. A labeled figure should be included in the document showing the locations of current and former site structures and features. The locations of any subsurface features such as pipelines, underground tanks, utility lines, and other subsurface structures should be included in the background summary and labeled on the figure, as appropriate. In addition, this section should include a brief summary of the possible sources of contamination, the history of releases or discharges of contamination, the known extent of contamination, and the results of previous investigations including references to previous reports. The references to previous reports should include page, table, and figure numbers for referenced information. A site plan, showing relevant investigation locations, and summary data tables should be included in the Figures and Tables sections of the document, respectively.

#### f) Scope of Activities

A section on the scope of activities should briefly describe all activities performed during the investigation event including background information research, implemented health and safety measures that affected or limited the completion of tasks, drilling, test pit or other excavation methods, well construction methods, field data collection, survey data collection, chemical analytical testing, aquifer testing, remediation system pilot tests, and IDW storage or disposal.

#### g) Field Investigation Results

A section should provide a summary of the procedures used and the results of all field investigation activities conducted at the site including the dates that investigation activities were conducted, the type and purpose of field investigation activities performed, field screening measurements, logging and sampling results, pilot test results, construction details, and conditions observed. Field observations or conditions that altered the planned work or may have influenced the results of sampling, testing, and logging should be reported in this section. The following sections should be included.

#### h) Surface Conditions

A section on surface conditions should describe current site topography, features, and structures including topographic drainages, man-made drainages, vegetation, and erosional features. It should also include a description of current site uses and any operations at the site. In addition, descriptions of features located in surrounding sites that may have an impact on the subject site regarding sediment transport, surface water runoff, or contaminant transport should be included in this subsection.

#### i) Exploratory Drilling or Excavation Investigations

A section should describe the locations, methods, and depths of subsurface explorations. The description should include the types of equipment used, the logging procedures, the soil or rock classification system used to describe the observed materials, exploration equipment decontamination procedures, and conditions encountered that may have affected or limited the investigation.

A description of the site conditions observed during subsurface investigation activities should be included in this section, including soil horizon and stratigraphic information. Site plans showing the locations of all borings and excavations should be included in the Figures section of the report. Boring and test pit logs for all exploratory borings and test pits should be presented in an appendix or attachment to the report.

#### j) Exploratory and Monitoring Well Boring Geophysical Logging

A section should describe the methods, dates of measurement, depth intervals measured, and the results of geophysical logging. The relative merits and limitations of each geophysical logging method employed should be discussed, along with any field conditions or instrument malfunctions that occurred that may have affected the results of the geophysical logging.

#### k) Subsurface Conditions

A section on subsurface conditions should describe known subsurface lithology and structures, based on observations made during the current and previous subsurface investigations, including interpretation of geophysical logs and as-built drawings of man-made structures. A description of any known locations of pipelines and utility lines and observed geologic structures should also be included in this section. A site plan showing boring and excavation locations and the locations of the site's above- and below-ground structures should be included in the Figures section of the report. In addition, cross-sections should be constructed, if appropriate, to provide additional visual presentation of site or regional subsurface conditions.

#### l) Monitoring Well Construction and Boring or Excavation Abandonment

A section should describe the methods and details of monitoring well construction and the methods used to abandon or backfill exploratory borings and excavations. The description should include the dates of well construction, boring abandonment, or excavation backfilling. In addition, well construction diagrams should be included in an appendix or attachment with the



associated boring logs for monitoring well borings. The Respondents may submit well abandonment reports as an appendix to the investigation report.

m) Groundwater Conditions

A section should describe groundwater conditions observed beneath the subject site and relate local groundwater conditions to regional groundwater conditions. A description of the depths to water, aquifer thickness, and groundwater flow directions should be included in this section for alluvial groundwater, shallow perched groundwater, intermediate perched groundwater, and regional groundwater, as appropriate to the investigation. Figures showing well locations, surrounding area, and groundwater elevations and flow directions for each hydrologic zone should be included in the Figures section of the report.

n) Surface Water Conditions

A section should describe surface water conditions and include a description of surface water runoff, drainage, surface water sediment transport, and contaminant transport in surface water as suspended load and as a dissolved phase in surface water via natural and man-made drainages, if applicable. A description of contaminant fate and transport should be included, if appropriate.

o) Surface Air and Subsurface Vapor Conditions

A section should describe surface air and subsurface vapor monitoring and sampling methods used during the site investigation. It should also describe observations made during the site investigation regarding subsurface flow pathways and the subsurface air-flow regime.

p) Materials Testing Results

A section should discuss the materials testing results, such as core permeability testing, grain size analysis, or other materials testing results. Sample collection methods, locations, and depths should also be included. Corresponding summary tables should be included in the Tables section of the report.

q) Pilot Testing Results

A section should discuss the results of any pilot tests. Pilot tests are typically conducted after initial subsurface investigations are completed and the need for additional investigation or remediation has been evaluated. Pilot tests, including aquifer tests and remediation system pilot tests, should be addressed through separate work plans and pilot test reports. The format for pilot test work plans and reports should be approved by the Department prior to submittal.

r) Regulatory Criteria

A section should set forth the cleanup standards, risk-based screening levels, and risk-based cleanup goals for each pertinent medium at the subject site. The appropriate cleanup levels for each site should be included if site-specific levels have been established at separate Facility sites or units. A table summarizing the applicable cleanup standards or levels or inclusion of

applicable cleanup standards or levels in the data tables should be included as part of the document. The risk assessment, if conducted, should be presented in a separate document or in an appendix to this report. If cleanup or screening levels calculated in a Department-approved risk evaluation are employed, the risk evaluation document should be referenced and should include pertinent page numbers for referenced information.

s) Site Contamination

A section should provide a description of sampling intervals and methods for detection of surface and subsurface contamination in soils, rock, sediments, groundwater, and surface water, and as vapor-phase contamination. Only factual information should be included in this section. Interpretation of the data should be reserved for the summary and conclusions sections of the report. Tables summarizing all sampling, testing, and screening results for detected contaminants should be prepared in a format approved by the Department. The tables should be presented in the Tables section of the report.

i) Soil, Rock, and Sediment Sampling

A section should describe the sampling of soil, rock, and sediment. It should include the dates, locations and methods of sample collection; sampling intervals; sample logging methods; screening sample selection methods; and laboratory sample selection methods including the collection depths for samples submitted for laboratory analyses. A site plan showing the sample locations should be included in the Figures section of the report.

ii) Soil, Rock, and Sediment Sample Field Screening Results

A section should describe the field screening methods used during the investigation and the field screening results. Field screening results also should be presented in summary tables in the Tables section of the document. The limitations of field screening instrumentation and any conditions that influenced the results of field screening should be discussed in this subsection.

iii) Soil, Rock, and Sediment Sampling Analytical Results

A section should summarize the results of laboratory analysis for soil, rock, and sediment samples. It should also describe the analytical methods used and provide a comparison of the analytical results to background levels, cleanup standards, or established cleanup levels for the site. The laboratory results also should be presented in summary tables in the Tables section of the document. Field conditions and sample collection methods that could potentially affect the analytical results should be described in this section. If appropriate, soil analytical data should be presented with sample locations on a site plan and included in the Figures section of the report.

iv) Groundwater Sampling

A section on groundwater sampling should describe the dates, locations, depths, and methods of sample collection; methods for sample logging; and methods for screening and laboratory sample

selection. A map showing all site and surrounding area well locations should be included in the Figures section of the report.

v) Groundwater General Chemistry

A section on the general groundwater chemistry should describe the results of measurement of field purging parameters and field analytical measurements. Field parameter measurements and field analytical results also should be presented in summary tables in the Tables section of the document. The limitations of field measurement instrumentation and any conditions that may have influenced the results of field screening should be discussed in this section. As determined by the Respondents and the Department, relevant water chemistry concentrations should be presented as data tables or as isoconcentration contours on a map included in the Figures section of the report.

vi) Groundwater Chemical Analytical Results

A section should summarize the results of groundwater chemical analyses. It should describe the groundwater chemical analytical methods and analytical results. It should also provide a comparison of the data to cleanup standards or established cleanup levels for the site. The rationale or purpose for altering or modifying the groundwater sampling program outlined in the site investigation work plan should also be provided in this section. Field conditions should be described in this section that may have affected the analytical results during sample collection. Tables summarizing the groundwater laboratory, field, and field sample QA/QC chemical analytical data; applicable cleanup levels; and modifications to the groundwater sampling program should be provided in the Tables section of the report. Relevant contaminant concentrations should be presented as individual analyte concentrations, data tables, or as isoconcentration contours on a map included in the Figures section of the report.

vii) Surface Water Sampling

A section should describe the surface water sampling and should include the dates, times, locations, depths, and methods of sample collection. It should also describe methods for sample logging, sample-screening methods, and laboratory sample selection methods. A map showing all surface-water sampling locations should be included in the Figures section of the report.

viii) Surface Water General Chemistry

A section on the surface water general chemistry should describe the results of measurement of field parameters and field analytical measurements. Field parameter measurements and field analytical results also should be presented in summary tables in the Tables section of the document. The limitations of field measurement instrumentation and any conditions that influenced the results of field screening should be discussed in this section. Relevant water chemistry concentrations should be presented as data tables on a map included in the Figures section of the report.

#### ix) Surface Water Chemical Analytical Results

A section should summarize the results of surface water chemical analyses. It should describe the analytical methods and analytical results, and provide a comparison of the data to the cleanup standards or established background or cleanup levels for the site. The rationale or purpose for altering or modifying the surface-water sampling program outlined in the site investigation work plan also should be provided in this section. Field conditions that may have affected the analytical results during sample collection should be described in this section. Tables summarizing the surface water laboratory, field, and analytical field sample QA/QC analytical data; applicable cleanup levels; and modifications to the surface-water sampling program should be provided in the Tables section of the report. Relevant contaminant concentrations should be presented as individual analyte concentrations or as data tables on a map included in the Figures section of the report.

#### x) Air and Subsurface Vapor Sampling

A section should describe the air and subsurface vapor sampling. It should describe the dates, locations, depths or elevations above ground surface, methods of sample collection, methods for sample logging, and methods for laboratory sample selection. A map showing all air sampling locations should be provided in the Figures section of the report.

#### xi) Air and Subsurface Vapor Field Screening Results

A section should describe the air and subsurface vapor field screening results. It should describe the field screening methods used for ambient air and subsurface vapors during the investigation and the field screening results. Field screening results should also be presented in summary tables in the Tables section of the report. The locations of ambient air and subsurface vapor screening sample collection should be presented on a site plan included in the Figures section of the report. The limitations of field screening instrumentation and any conditions that influenced the results of field screening should be discussed in this section.

#### xii) Air and Subsurface Vapor Laboratory Analytical Results

A section should describe the results of air and subsurface vapor laboratory analysis. It should describe the air sampling laboratory analytical methods and analytical results, and provide a comparison of the data to emissions standards or established cleanup or emissions levels for the site. The rationale or purpose for altering or modifying the air monitoring or sampling program outlined in the site investigation work plan also should be provided in this section. Field conditions that may have affected the analytical results during sample collection should be described in this section. Tables summarizing the air sample laboratory, field, and analytical field sample QA/QC data; applicable cleanup levels or emissions standards; and modifications to the air sampling program should be provided in the Tables section of the report. Relevant contaminant concentrations should be presented as individual analyte concentrations, data tables, or as isoconcentration contours on a map included in the Figures section of the report.

t) Conclusions

A section should provide a brief summary of the investigation activities and a discussion of the conclusions of the investigation conducted at the site. In addition, this section should provide a comparison of the results to applicable cleanup or screening levels, and to relevant historical investigation results and analytical data. Potential receptors, including groundwater, should be identified and discussed. An explanation should be provided with regard to data gaps. A risk assessment may be included as an appendix to the investigation report; however, the risk assessment should be presented in the Risk Assessment format described in Section I.E of this document.

u) Recommendations

A section should discuss the need for further investigation, corrective measures, risk assessment and monitoring, or recommendations for corrective action completed, based on the conclusions provided in the Conclusions section. It should include explanations regarding additional sampling, monitoring, and site closure. A corresponding schedule for further action regarding the site should also be provided. No action recommendations should include the anticipated schedule for submittal of a petition for a permit modification.

v) Tables

A section should provide the following summary tables. With prior approval from the Department, the Respondents may combine one or more of the tables. Data presented in the tables should include the current data, dates of data collection, analytical methods, detection limits, and significant data quality exceptions. The summary analytical data tables should include only detected analytes and data quality exceptions that could potentially mask detections.

1. Tables summarizing regulatory criteria, background levels, and applicable cleanup levels (this information may be included in the analytical data tables instead of as separate tables).
2. Tables summarizing field survey location data. Separate tables should be prepared for well locations and individual medium sampling locations except where the locations are the same for more than one medium.
3. Tables summarizing field screening and field parameter measurements of soil, rock, sediments, groundwater, surface water, and air quality data.
4. A table summarizing soil, rock, and/or sediment laboratory analytical data. It should include the analytical methods, detection limits, and significant data quality exceptions that would influence interpretation of the data.
5. A table summarizing the groundwater elevations and depths to groundwater. The table should include the monitoring well depths and the screened intervals in each well.
6. A table summarizing the groundwater laboratory analytical data. The analytical data tables should include the analytical methods, detection limits, and significant data quality exceptions that would influence interpretation of the data.

7. A table summarizing the surface water laboratory analytical data. The analytical data tables should include the analytical methods, detection limits, and significant data quality exceptions that would influence interpretation of the data.
8. A table summarizing the air sample screening and laboratory analytical data. The data tables should include the screening instruments used, laboratory analytical methods, detection limits, and significant data quality exceptions that would influence interpretation of the data.
9. Tables summarizing the pilot test data, if applicable, including units of measurement and types of instruments used to obtain measurements.
10. A table summarizing any materials test data.

w) Figures

A section should provide the following figures. All figures should include an accurate bar scale and a north arrow. An explanation should be provided on each figure for all abbreviations, symbols, acronyms, and qualifiers. All maps should have a date.

1. A vicinity map showing topography and the general location of the subject site relative to surrounding features and properties.
2. A site plan that presents any pertinent site features and structures, underground utilities, well locations, and remediation system location(s) and details. Off-site well locations and other relevant features should be included on the site plan. Additional site plans may be required to present the locations of relevant off-site well locations, structures and features.
3. Figures showing boring or excavation locations and sampling locations.
4. Figures presenting soil sample field screening and laboratory analytical data.
5. Figures displaying the locations of all newly installed and existing wells and borings.
6. Figures presenting monitoring well and piezometer locations, groundwater elevation data, and groundwater flow directions.
7. Figures presenting groundwater laboratory analytical data, including any past data requested by the Department. The laboratory analytical data corresponding to each sampling location may be presented in table form on the figure or as an isoconcentration map.
8. Figures presenting surface water sample locations and field measurement data including any past data requested by the Department.
9. Figures presenting surface water laboratory analytical data including any past data requested by the Department. The laboratory analytical data corresponding to each sampling location may be presented in table form on the figure.
10. Figures showing air sampling locations and presenting air quality. The field screening or laboratory analytical data corresponding to each sampling location may be presented in table form on the figure or as an isoconcentration map.

11. Figures presenting geologic cross-sections based on outcrop and borehole data.
12. Figures presenting pilot test locations and data, where applicable, including site plans or graphic data presentation.

x) Appendices

Each investigation report should include the following appendices. Additional appendices may be necessary to present data or documentation not listed below.

i) Field Methods

An appendix should provide detailed descriptions of the methods used to acquire field measurements of each medium that was surveyed or tested during the investigation. This appendix should include exploratory drilling or excavation methods, the methods and types of instruments used to obtain field screening, field analytical or field parameter measurements, instrument calibration procedures, sampling methods for each medium investigated, decontamination procedures, sample handling procedures, documentation procedures, and a description of field conditions that affected procedural or sample testing results. Methods of measuring and sampling during pilot tests should be reported in this appendix, if applicable. Geophysical logging methods should be discussed in a separate section of this appendix. IDW storage and disposal methods should also be discussed in this appendix. Copies of IDW disposal documentation should be provided in a separate appendix.

ii) Boring/Test Pit Logs and Well Construction Diagrams

An appendix should provide boring logs, test pit logs, or other excavation logs, and well construction details. In addition, a key to symbols and a soil or rock classification system should be included in this appendix. Geophysical logs should be provided in a separate section of this appendix.

iii) Analytical Program

An appendix should discuss the analytical methods, a summary of data quality objectives, and the data quality review procedures. A summary of data quality exceptions and their effect on the acceptability of the field and laboratory analytical data with regard to the investigation and the site status should be included in this appendix along with references to the case narratives provided in the laboratory reports.

iv) Analytical Reports

An appendix should provide the contract laboratory final analytical data reports generated for the investigation. The reports should include all chain-of-custody records and Level II QA/QC results provided by the laboratory. The final laboratory reports and data tables should be provided electronically in a format. Paper copies (or electronically scanned in PDF format) of all chain-of-custody records should be provided with the reports.

#### v) Other Appendices

Other appendices containing additional information should be included as deemed necessary by NMED or as otherwise appropriate.

#### **IV) Periodic monitoring Report**

The Respondents should use the following guidance for preparing periodic monitoring reports. The reports should present the reporting of periodic groundwater, surface water, vapor, and remediation system monitoring at the Facility. The following sections provide a general outline for monitoring reports, and also provide the minimum requirements for reporting for specific Facility sites, watersheds, and regional monitoring. All data collected during each monitoring and sampling event in the reporting period should be included in the reports.

##### a) Title Page

The title page should include the type of document; Facility name; TA designation; SWMU or AOC name, site, watershed, and any other unit name; and the submittal date. A signature block providing spaces for the name and title of the responsible representative(s) should be provided on the title page in accordance with 20.4.1.900 NMAC incorporating 40 C.F.R. 270.11(d)(1).

##### b) Executive Summary (Abstract)

The executive summary or abstract should provide a brief summary of the purpose, scope, and results of the monitoring conducted at the subject site(s) during the reporting period. The watershed, specific sites or areas, SWMU, AOC and site name, location, and TA designation should be included in the executive summary. In addition, this section should include a brief summary of conclusions based on the monitoring data collected.

##### c) Table of Contents

The table of contents should list all text sections, subsections, tables, figures, and appendices or attachments included in the report. The corresponding page numbers for the titles of each section of the report should be included in the table of contents.

##### d) Introduction

The introduction section should include the Facility name, TA designation, unit location, and unit status (e.g. closed, corrective action). General information on the site usage and status should be included in this section. A brief description of the purpose of the monitoring, type of monitoring conducted, and the type of results presented in the report should also be provided in this section.

##### e) Scope of Activities

A section on the scope of activities should briefly describe all activities performed during the monitoring event or reporting period including field data collection, analytical testing,



remediation system monitoring, if applicable, and purge/decontamination water storage and disposal.

f) Regulatory Criteria

A section on regulatory criteria should provide information regarding applicable cleanup standards, risk-based screening levels and risk-based cleanup goals for the subject site. A separate table summarizing the applicable screening levels or standards or inclusion of the applicable cleanup standards or screening levels in the data tables can be substituted for this section. The appropriate cleanup or screening levels for each site should be included, if site-specific levels have been established at separate sites. Risk-based evaluation procedures, if used to calculate cleanup or screening levels, must either be included as an attachment or referenced. The specific document and page numbers must be included for all referenced materials.

g) Monitoring Results

A section should provide a summary of the results of monitoring conducted at the site. This section should include the dates and times that monitoring was conducted, the measured depths to groundwater, directions of groundwater flow, field air and water quality measurements, contaminant surveys, static pressures, field measurements, and a comparison to previous monitoring results. Field observations or conditions that may influence the results of monitoring should be reported in this section. Tables summarizing vapor-monitoring parameters, groundwater elevations, depths to groundwater measurements, and other field measurements can be substituted for this section. The tables should include all information required in Section I.D.11 below.

h) Analytical Data Results

This section should discuss the results of the chemical analyses. It should provide the dates of sampling, the analytical methods, and the analytical results. It should also provide a comparison of the data to previous results and to background levels, cleanup standards, or established cleanup levels for the site. The rationale or purpose for altering or modifying the monitoring and sampling program should be provided in this section. A table summarizing the laboratory analytical data, QA/QC data, applicable cleanup levels, and modifications to the sampling program can be substituted for this section. The tables should include all information required in Section I.D.11 below.

i) Remediation System Monitoring

This section should discuss the remediation system monitoring. It should summarize the remediation system's capabilities and performance. It should also provide monitoring data, treatment system discharge sampling requirements, and system influent and effluent sample analytical results. The dates of operation, system failures, and modifications made to the remediation system during the reporting period should also be included in this section. A summary table may be substituted for this section. The tables should include all information required in Section I.D.11 below.

j) Summary

A summary section should provide a discussion and conclusions of the monitoring conducted at the site. In addition, this section should provide a comparison of the results to applicable cleanup levels, and to relevant historical monitoring and laboratory analytical data. An explanation should be provided with regard to data gaps. A discussion of remediation system performance, monitoring results, modifications, if applicable, and compliance with discharge requirements should be provided in this section. Recommendations and explanations regarding future monitoring, remedial actions, or site closure, if applicable, should also be included in this section.

k) Tables

A section should provide the following summary tables for the media sampled. With prior approval from the Department, the Respondents may combine one or more of the tables. Data presented in the tables should include the current sampling and monitoring data plus data from the three previous monitoring events or, if data from less than three monitoring events is available, data acquired during previous investigations. Remediation system monitoring data also should be presented. The dates of data collection should be included in the tables. Summary tables may be substituted for portions of the text. The analytical data tables should include only detected analytes and data quality exceptions that could potentially mask detections.

1. A table summarizing the regulatory criteria (a Regulatory Criteria text section may be substituted for this table or the applicable cleanup levels may be included in the analytical data tables).
2. A table summarizing groundwater elevations and depths to groundwater data. The table should include the monitoring well depths, the screened intervals in each well, and the dates and times of measurements.
3. A table summarizing field measurements of surface water quality data.
4. A table summarizing field measurements of vapor monitoring data (should include historical vapor monitoring data as described above).
5. A table summarizing field measurements of groundwater quality data (should include historical water quality data as described above).
6. A table summarizing vapor sample analytical data (should include historical vapor sample analytical data as described above).
7. A table summarizing surface water analytical data (should include historical surface water analytical data as described above).
8. A table summarizing groundwater analytical data (should include historical groundwater analytical data as described above).
9. A table summarizing remediation system monitoring data, if applicable (should include historical remediation system monitoring data as described above).

## l) Figures

The section should include the following figures. All figures should include an accurate bar scale and a north arrow. An explanation should be provided on each figure for all abbreviations, symbols, acronyms, and qualifiers. All figures should have a date.

1. A vicinity map showing topography and the general location of the subject site relative to surrounding features or properties.
2. A site plan that presents pertinent site features and structures, well and piezometer locations, and remediation system location(s) and features. Off-site well locations and pertinent features should be included on the site plan, if practical. Additional site plans may be required to present the locations of relevant off-site well locations, structures, and features.
3. Figures presenting the locations of piezometer, monitoring and other well locations, groundwater elevation data, and groundwater flow directions.
4. Figures presenting groundwater analytical data for the current monitoring event. The analytical data corresponding to each sampling location may be presented as individual concentrations or in table form on the figure or as an isoconcentration map.
5. Figures presenting surface water sampling locations and analytical data for the current monitoring period.
6. Figures presenting vapor sampling locations and analytical data for the current monitoring event. The analytical data corresponding to each sampling location may be presented as individual concentrations or in table form on the figure or as an isoconcentration map.
7. Figures presenting geologic cross-sections based on outcrop and borehole data, if applicable.

## m) Appendices

Each monitoring report should include the following appendices. Additional appendices may be necessary to present data or documentation not listed below.

### i) Field Methods

An appendix should include the methods used to acquire field measurements of groundwater elevations, vapor and water quality data, and vapor, surface water and groundwater samples. It should include the methods and types of instruments used to measure depths to water, air or headspace parameters, flow measurements, and water quality parameters. In addition, decontamination, well purging techniques, well sampling techniques, and sample handling procedures should be provided in this appendix. Methods of measuring and sampling remediation systems should be reported in this section, if applicable. Purge and decontamination water storage and disposal methods should also be presented in this appendix. Copies of purge and decontamination water disposal documentation should be provided in a separate appendix.

## ii) Analytical Program

An appendix should discuss the analytical program. It should include the analytical methods, a summary of data quality objectives, and data quality review procedures. A summary of data quality exceptions and their effect on the acceptability of the analytical data with regard to the monitoring event and the site status should be included in this appendix along with references to case narratives provided in the laboratory reports.

## iii) Analytical Reports

An appendix should provide the analytical reports and include the contract laboratory final chemical analytical data reports generated during this reporting period. The reports must include all chain-of-custody records and Level II QA/QC results provided by the laboratory. The laboratory final reports and data tables should be provided electronically in a format approved by the Department. Paper copies (or electronically scanned in PDF format) of all chain-of-custody records should be provided with the reports.

## V) Risk Assessment Report

This section (I.E) provides a general outline for risk assessments and also lists the minimum requirements for describing risk assessment elements. NMED recommends that Section I.E.8 and subsequent sections should be presented in separate sections for the human health and ecological risk assessments, but the general risk assessment outline applicable to both sections is provided below.

### a) Title Page

The title page should include the type of document; Facility name; TA designation; SWMU or AOC name, site, and any other unit name; and the submittal date. A signature block providing spaces for the name and title of the responsible representative(s) should be provided on the title page in accordance with 20.4.1.900 NMAC incorporating 40 C.F.R. 270.11(d)(1).

### b) Executive Summary (Abstract)

The executive summary or abstract section should provide a brief summary of the purpose and scope of the risk assessment of the subject site. The Executive Summary should also briefly summarize the conclusions of the risk assessment. The Facility, SWMU, AOC, and site names; location; and TA designation should be included in the executive summary.

### c) Table of Contents

The table of contents should list all text sections, subsections, tables, figures, and appendices or attachments included in the risk assessment. The corresponding page numbers for the titles of each unit of the report should be included in the table of contents.

#### d) Introduction

The introduction section should include the Facility name, TA designation, unit location, and unit status (e.g., closed, corrective action). General information on the current site usage and status should also be included in this section.

#### e) Background

The background section should describe relevant background information. This section should briefly summarize historical site uses by the U.S. Government and any other entity since 1940, including the locations of current and former site structures and features. A labeled figure should be included in the document showing the locations of current and former site structures and features.

#### f) Site Description

A section should describe current site topography, features and structures including topographic drainages, man-made drainages, erosional features, current site uses, and other data relevant to assessing risk at the site. Depth to groundwater and direction of groundwater flow should be included in this section. The presence and location of surface water bodies such as springs or wetlands should be noted in this section. Photographs of the site may be incorporated into this section. Ecological features of the site should be described here, including type and amount of vegetative cover, observed and expected wildlife receptors, and level of disturbance of the site. The LANL ecological checklist for the site may be included as an appendix or attachment to the document and its inclusion may meet the requirement to describe the ecological features of the site. A topographical map of the site and vicinity of the site showing habitat types, boundaries of each habitat, and any surface water features should be included in the Figures section of the document.

#### g) Sampling Results

A section should discuss the results of the sampling at the site. It should include a description of the history of releases of contaminants, the known and possible sources of contamination, and the vertical and lateral extent of contamination present in each medium. This section should include summaries of sampling results of all investigations including site plans (included in the Figures section of the report) showing locations of detected contaminants. This section should reference pertinent figures, data summary tables, and references in previous reports. References to previous reports should include page, table, and figure numbers for referenced information. Summaries of sampling data should include for each constituent: the maximum value detected, the detection limit, the 95 percent upper confidence level (UCL) of the mean value detected (if applicable to the data set), and whether the 95 percent UCL of the mean was calculated based on a normal or lognormal distribution. Background values used for comparison to inorganic constituents at the site should be presented here. The table of background values should appear in the Tables section of the document and include actual values used as well as the origin of the values (e.g. Facility-wide, UCL, upper tolerance level (UTL)). This section should also include a discussion of how “non-detect” sample results were handled in the averaging of data.

#### h) Conceptual Site Model

A section should present the conceptual site model. It should include information on the expected fate and transport of contaminants detected at the site. This section should provide a list of all sources of contamination at the site. Sources that are no longer considered to be ongoing but represent the point of origination for contaminants transported to other locations should be included. The discussion of fate and transport should address potential migration of each contaminant in each medium, potential breakdown products and their migration, and anticipated pathways of exposure for human or ecological receptors. Diagrammatic representations of the conceptual site model should appear in the Figures section of the document.

For human health risk assessments, the conceptual site model should include the current and reasonably foreseeable land use and residential land use for all risk assessments. All values for exposure parameters and the source of those values should be included in table format and presented in the Tables section of the document.

Conceptual site models presented for ecological risk assessments should identify assessment endpoints and measurement receptors for the site. The discussion of the model should explain how the measurement receptors for the site are protective of the wildlife receptors identified by the Respondents in the Site Description section (see Section I.E.5.a).

#### i) Risk Screening Levels

A section should present the actual screening values used for each contaminant for comparison to all human health and ecological risk screening levels and be consistent with Section XX (Cleanup Objectives).

#### j) Risk Assessment Results

A section should present all risk values, hazard quotients (HQ), and HIs for human health based on current and reasonably foreseeable future land use. This section should also present the HQ and HI for each contaminant for each ecological receptor.

#### k) Uncertainty Analysis

A section should include discussion of qualitative, semi-quantitative, and quantitative uncertainty in the risk assessment and estimate the potential impact of the various uncertainties.

#### l) Conclusions and Recommendations

A section should include the interpretation of the results of the risk assessment and any recommendations for future disposition of the site. This section may include additional information and considerations that the Respondents believe are relevant to the analysis of the site.

#### m) Tables

A section should provide the following summary tables, as appropriate. With prior approval from the Department, the Respondents may combine one or more of the tables. Data presented in the summary tables should include information on detection limits and significant data quality exceptions. The analytical data tables should include only detected analytes and data quality exceptions that could potentially mask detections.

1. A table presenting background values used for comparison to inorganic constituents at the site. The table should include actual values used as well as the origin of the values (Facility-wide, UCL, UTL, or maximum).
2. A table summarizing sampling data should include, for each constituent, all detected values above background, the maximum value detected, the 95 percent UCL of the mean value detected (if applicable to the data set), and whether that 95 percent UCL of the mean was calculated based on a normal or lognormal distribution.
3. A table of all screening values used and the sources of those values.
4. A table presenting all risk values, HQs, and HIs under current and reasonably foreseeable future land use for human health.
5. A table presenting the HQ and HI for each contaminant for each ecological receptor.
6. A table presenting values for exposure parameters and the source of the values.

#### i) Figures

A section should present the following figures for each site, as appropriate. With prior approval from the Department, the Respondent may combine one or more of the figures. All figures should include an accurate bar scale and a north arrow. An explanation should be provided on each figure for all abbreviations, symbols, acronyms, and qualifiers.

1. A vicinity map showing topography and the general location of the subject site relative to surrounding features or properties.
2. For human health risk assessments, a site plan that presents pertinent site features and structures, underground utilities, well locations, and remediation system location(s) and its details. Off-site well locations and other relevant features should be included on the site plan if practical. Additional site plans may be required to present the locations of relevant off-site well locations, structures, and features.
3. For ecological risk assessments, a topographical map of the site and vicinity of the site showing habitat types, boundaries of each habitat, and any surface water features.
4. Conceptual site model diagrams for both human health and ecological risk assessments.

#### n) Appendices

Each risk assessment report should include appendices containing supporting data. Appendices may include the results of statistical analyses of data sets and comparisons of data, LANL

ecological checklists for the site, full sets of results of all sampling investigations at the site, or other data as appropriate.

## **VI) Corrective Measures Evaluation report**

The Respondents should prepare corrective measures evaluations for sites requiring corrective measures using the format listed below. This section (I.F) provides a general outline for corrective measures evaluations.

### a) Title Page

The title page should include the type of document; Facility name; TA designation; SWMU or AOC name, site, and any other unit name; and the submittal date. A signature block providing spaces for the name and title of the responsible representative(s) should be provided on the title page in accordance with 20.4.1.900 NMAC incorporating 40 C.F.R. 270.11(d)(1).

### b) Executive Summary (Abstract)

This executive summary or abstract should provide a brief summary of the purpose and scope of the corrective measures evaluation to be conducted at the subject site. The executive summary or abstract should also briefly summarize the conclusions of the evaluation. The SWMU, AOC, and site names, location, and TA designation should be included in the executive summary.

### c) Table of Contents

The table of contents should list all text sections, subsections, tables, figures, and appendices or attachments included in the corrective measures evaluation. The corresponding page numbers for the titles of each section of the report should be included in the table of contents.

### d) Introduction

The Introduction section should include the Facility name, TA designation, site location, and site status (e.g. closed, corrective action). General information on the current site usage and status should be included in this section. A brief description of the purpose of the corrective measures evaluation and the corrective action objectives for the project should also be provided in this section.

### e) Background

The Background section should describe the relevant background information. This section should briefly summarize historical site uses by the U.S. Government and any other entity since the 1940s, including the locations of current and former site structures and features. A labeled figure should be included in the document showing the locations of current and former site structures and features. The locations of any subsurface features such as pipelines, underground tanks, utility lines, and other subsurface structures should be included in this section and labeled on the site plan, as appropriate.



This section should include contaminant and waste characteristics, a brief summary of the history of contaminant releases, known and possible sources of contamination, and the vertical and lateral extent of contamination present in each medium. This section should include brief summaries of results of previous investigations, including references to pertinent figures, data summary tables, and text in previous reports. References to previous reports should include page, table, and figure numbers for referenced information. Summary tables and site plans showing relevant investigation locations should be referenced and included in the Tables and Figures sections of the document, respectively.

f) Site Conditions

i) Surface Conditions

A section on surface conditions should describe current and historic site topography, features, and structures, including a description of topographic drainages, man-made drainages, vegetation, and erosional features. It should also include a description of current uses of the site and any current operations at the site. This section should also include a description of those features that could potentially influence corrective action option selection or implementation such as archeological sites, wetlands, or other features that may affect remedial activities. In addition, descriptions of features located in surrounding sites that may have an effect on the subject site regarding sediment transport, surface water runoff or contaminant transport should be included in this section. A site plan displaying the locations of all pertinent surface features and structures should be included in the Figures section of the corrective measures evaluation.

ii) Subsurface Conditions

A section on subsurface conditions should describe the site conditions observed during previous subsurface investigations. It should include relevant soil horizon and stratigraphic information, groundwater conditions, fracture data, and subsurface vapor information. A site plan displaying the locations of all borings and excavations advanced during previous investigations should be included in the Figures section of the corrective measures evaluation. A brief description of the stratigraphic units anticipated to be present beneath the site may be included in this section if stratigraphic information is not available from previous investigations conducted at the site.

g) Potential Receptors

i) Sources

A section should provide a list of all sources of contamination at the subject site where corrective measures are to be considered or required. Sources that are no longer considered to be releasing contaminants at the site, but may be the point of origination for contaminants transported to other locations, should be included in this section.

ii) Pathways

A section should describe potential migration pathways that could result in either acute or chronic exposures to contaminants. It should include such pathways as utility trenches,

paleochannels, surface exposures, surface drainages, stratigraphic units, fractures, structures, and other features. The migration pathways for each contaminant and each relevant medium should be tied to the potential receptors (e.g., human receptors, ecological receptors, and groundwater) for each pathway. A discussion of contaminant characteristics relating to fate and transport of contaminants through each pathway should also be included in this section.

#### h) Receptors

A section should provide a listing and description of all anticipated potential receptors that could possibly be affected by the contamination present at the site. Potential receptors should include, but are not limited to human and ecological receptors and groundwater.

#### i) Regulatory Criteria

A section should set forth the applicable cleanup standards, risk-based screening levels, and risk-based cleanup goals for each pertinent medium at the subject site. The appropriate cleanup levels for each site should be included, if site-specific levels have been established at separate sites or units. A table summarizing the applicable cleanup standards or levels, or inclusion of applicable cleanup standards or levels in the summary data tables should be included in the Tables section of the document. The risk assessment should be presented in a separate document or in an appendix to this report. If cleanup or screening levels calculated in a risk evaluation are employed, the risk evaluation document should be referenced including pertinent page numbers for referenced information.

#### j) Identification of Corrective Measures Options

A section should identify and describe potential corrective measures for source, pathway, and receptor controls. Corrective measures options should include the range of available options including, but not limited to, a no action alternative, institutional controls, engineering controls, in-situ and on-site remediation alternatives, complete removal, and any combination of alternatives that would potentially achieve cleanup goals.

#### k) Evaluation of Corrective Measures Options

A section should provide an evaluation of the corrective measures options identified in Section I.F.9 above. The evaluation should be based on the threshold criteria and the balancing criteria identified in Section XVI (Corrective Measures Evaluations). A table summarizing the corrective measures alternatives and the criteria listed in Section XIII should be included in the Tables section of this document. The general basis for evaluation of corrective measures options is defined below.

#### l) Selection of Preferred Corrective Measure

The Respondents should propose the preferred corrective measure(s) at the site and provide a justification for the selection in this section. The justification should include the supporting rationale for the remedy selection and a discussion of short- and long-term objectives for the site.

The benefits and possible hazards of each potential corrective measure alternative should also be included in this section.

m) Design Criteria To Meet Cleanup Objectives

The Respondents should present general descriptions of the preliminary design for the selected corrective measures in this section. The description should include appropriate preliminary plans and specifications to effectively illustrate the technology and the anticipated implementation of the remedial option at the subject area. The preliminary design should include a discussion of the design life of the alternative and provide engineering calculations for proposed remediation systems.

n) Schedule

A section should set forth a proposed schedule for completion of remedy-related activities such as bench tests, pilot tests, construction, installation, remedial excavation, cap construction, installation of monitoring points, and other remedial actions. The anticipated duration of corrective action operations and the schedule for conducting monitoring and sampling activities should also be presented. In addition, this section should provide a schedule for submittal of reports and data to the Department, including a schedule for submitting all status reports and preliminary data.

o) Tables

A section should present the following summary tables, as appropriate. With prior approval of the Department, the Respondents may combine one or more of the tables. Data presented in the summary tables should include information on dates of sample collection, analytical methods, detection limits, and significant data quality exceptions. The analytical data tables should include only detected analytes and data quality exceptions that could potentially mask detections.

1. A table summarizing regulatory criteria, background, and/or the applicable cleanup standards.
2. A table summarizing historical field survey location data.
3. Tables summarizing historical field screening and field parameter measurements of soil, rock, sediments, groundwater, surface water, and air quality data.
4. Tables summarizing historical soil, rock, or sediment laboratory analytical data. The summary tables should include the analytical methods, detection limits, and significant data quality exceptions that would influence interpretation of the data.
5. A table summarizing historical groundwater elevation and depth to groundwater data. The table should include the monitoring well depths and the screened intervals in each well.
6. Tables summarizing historical groundwater laboratory analytical data. The analytical data tables should include the analytical methods, detection limits, and significant data quality exceptions that would influence interpretation of the data.

7. Tables summarizing historical surface water laboratory analytical data. The analytical data tables should include the analytical methods, detection limits, and significant data quality exceptions that would influence interpretation of the data.
8. Tables summarizing historical air sample screening and analytical data. The data tables should include the screening instruments used, laboratory analytical methods, detection limits, and significant data quality exceptions that would influence interpretation of the data.
9. Tables summarizing historical pilot or other test data, if applicable, including units of measurement and types of instruments used to obtain measurements.
10. A table summarizing the corrective measures alternatives and evaluation criteria.
11. A table presenting the schedule for installation, construction, implementation, and reporting of selected corrective measures.

p) Figures

A section should present the following figures for each site, as appropriate. All figures should include an accurate bar scale and a north arrow. An explanation should be provided on each figure for all abbreviations, symbols, acronyms, and qualifiers. All figures should have a date.

1. A vicinity map showing topography and the general location of the subject site relative to surrounding features or properties.
2. A unit site plan that presents pertinent site features and structures, underground utilities, well locations, and remediation system locations and details. Off-site well locations and other relevant features should be included on the site plan if practical. Additional site plans may be required to present the locations of relevant off-site well locations, structures, and features.
3. Figures showing historical soil boring or excavation locations and sampling locations.
4. Figures presenting historical soil sample field screening and laboratory analytical data, if appropriate.
5. Figures showing all existing wells including vapor monitoring wells and piezometers. The figures should present historical groundwater elevation data and indicate groundwater flow directions.
6. Figures presenting historical groundwater laboratory analytical data including past data, if applicable. The analytical data corresponding to each sampling location may be presented as individual concentrations, in table form on the figure or as an isoconcentration map.
7. Figures presenting historical surface water sample locations and analytical data including past data, if applicable. The laboratory analytical data corresponding to each sampling location may be presented as individual concentrations or in table form on the figure.
8. Figures presenting historical air sampling locations and presenting air quality data. The field screening or laboratory analytical data corresponding to each sampling location may

be presented as individual concentrations, in table form on the figure or as an isoconcentration map.

9. Figures presenting historical pilot or other test locations and data, where applicable, including site plans or graphic data presentation.
10. Figures presenting geologic cross-sections based on outcrop and borehole data, if applicable.
11. Figures presenting the locations of existing and proposed remediation systems.
12. Figures presenting existing remedial system design and construction details.
13. Figures presenting preliminary design and construction details for preferred corrective measures.

q) Appendices

Each corrective measures evaluation should include, as appropriate, as an appendix, the management plan for waste, including investigation derived waste, generated as a result of construction, installation, or operation of remedial systems or activities conducted. Each corrective measures evaluation should include additional appendices presenting relevant additional data, such as pilot or other test or investigation data, remediation system design specifications, system performance data, or cost analyses as necessary.