

OHIO CORRECTIVE ACTION PLAN

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FOREWORD

This document provides the framework for the Ohio EPA Division of Hazardous Waste Management's implementation of the RCRA Corrective Action program. It was developed by a Division of Hazardous Waste Management (DHWM) workgroup that included representatives of all five district offices, DHWM Central Office, the Legal Office and the Division of Drinking and Ground Waters. It can be termed Ohio's Corrective Action Plan and is based on U.S. EPA's final Corrective Action Plan (OSWER Directive Number 9902.13-2A) that was issued in May, 1994. Ohio's plan is not meant to recreate or duplicate U.S. EPA's Corrective Action Plan (CAP) but instead is intended to be a revised, streamlined version that takes advantage of the flexibility offered in U.S. EPA's CAP while remaining consistent with the CAP. This document is subject to change based on legislative and regulatory changes currently being debated and contemplated on the national level.

Ohio EPA, through the DHWM, will use this framework in implementing RCRA Corrective Action through hazardous waste installation and operation permits issued pursuant to Ohio Revised Code Section 3734.05 and administrative orders issued pursuant to Ohio Revised Code Section 3734.20. Rule 3745-55-011 of the Ohio Administrative Code provides Ohio EPA the authority to implement RCRA Corrective Action through permits. RCRA Corrective Action requirements contained in administrative orders will be developed on a site-specific, order by order basis in conjunction with the individual facility.

DHWM stresses its willingness to work with facilities to require only that information that is truly necessary for a facility to fulfill its RCRA Corrective Action obligations and achieve final environmental remediation goals. As stated by U.S. EPA, the CAP provides an overall model for the RCRA Corrective Action process. U.S. EPA further states that the scopes of work in the CAP are not boilerplate and should only be considered menus of possible activities most facilities may be required to conduct. As represented in this document, Ohio EPA has selected only the activities from those menus that the Agency believes are necessary for a facility to conduct in order to realize the goal of the RCRA Corrective Action program. This approach should enable the Agency and facilities to move through the RCRA Corrective Action process effectively and efficiently and measurably reduce risk to human health and the environment.

**GOAL OF THE RCRA CORRECTIVE ACTION PROGRAM, AS APPLIED TO
BOTH THE OHIO EPA AND HAZARDOUS WASTE FACILITIES SUBJECT TO
RCRA CORRECTIVE ACTION:**

*TO EVALUATE THE NATURE AND EXTENT OF THE RELEASE OR THREAT OF
RELEASE OF HAZARDOUS WASTE OR CONSTITUENTS; TO EVALUATE
RELEVANT FACILITY CHARACTERISTICS (WHICH ALSO OCCURS AS PART OF
THE INITIAL ASSESSMENT OF THE FACILITY); AND TO IDENTIFY, DEVELOP AND
IMPLEMENT THE APPROPRIATE CORRECTIVE MEASURE OR MEASURES
ADEQUATE TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT.*

CHAPTER 1

The Corrective Action Process

I. Introduction

Implementation of RCRA Corrective Action at Ohio RCRA facilities necessitates Ohio EPA and the facility owner/operator going through several steps to complete the process. The degree to which each step is necessary, if it is in fact necessary, depends on the available quantity and quality of environmental data and information for a particular facility, the analysis of that data and information and the collective decisions made by both the Ohio EPA and the facility, with public input, on how to respond to that data and information. A general listing and description of the steps follows.

II. Steps in the Corrective Action Process

FACILITY ASSESSMENT - Updated or conducted by Ohio EPA. It answers the questions: Is there a current release and/or imminent threat? Is there a potential release and/or imminent threat? See Chapter 2.

INTERIM MEASURE(S) - Undertaken by the facility, it addresses in the near term a release or potential release and/or an imminent threat or potential imminent threat. An Interim Measure may be required to be implemented at any step in the process. See Chapter 3.

INVESTIGATION - Undertaken by the facility. It answers the questions: How significant is the release or potential release and/or imminent threat or potential imminent threat? and provides further definition of the release or potential release and/or imminent threat or potential imminent threat. See Chapter 4.

CORRECTIVE MEASURE(S) STUDY AND DECISION - Shared responsibility by both the facility and Ohio EPA. It determines how to best address the release or potential release and/or imminent threat or potential imminent threat. See Chapter 5.

CORRECTIVE MEASURE(S) IMPLEMENTATION - Performed by the facility, it designs the solution and addresses the release or potential release and/or imminent threat or potential imminent threat. See Chapter 6.

OPERATION AND MAINTENANCE of the corrective measure addressing the release or potential release and/or imminent threat or potential imminent threat (if necessary). See Chapter 6.

CHAPTER 2

The RCRA Facility Assessment

The RCRA Facility Assessment, often referred to as either the RFA or a Preliminary Assessment/Visual Site Inspection (PA/VSI), is conducted by U.S. EPA or Ohio EPA. U.S. EPA has conducted most of the assessments by utilizing the services of one of its contractors. Ohio EPA, through its Division of Emergency and Remedial Response, has conducted some assessments. Future assessments will be conducted by the Division of Hazardous Waste Management.

The RFA documents environmental conditions at the facility in regard to past and present waste management activities. All related facility files are reviewed and a visual on-site evaluation is also performed. The final RFA document identifies all (solid) waste management units and areas of concern and indicates if either a release of hazardous waste or constituents has occurred or if the potential for such a release exists. Conclusions and recommendations are included for each unit or area regarding the need for further investigation and/or some type of corrective action.

The RFA is used in several different ways. First, it is used to determine the facility's priority for corrective action purposes under U.S. EPA's National Corrective Action Prioritization System (NCAPS). Second, it provides the factual basis for both corrective action permit terms and conditions and the findings of fact in a state administrative order. Finally, it can help determine if an interim measure is necessary to be implemented in the short term to "stabilize" a site.

If a new assessment has to be conducted, Ohio EPA will access all available sources of information in order to conduct a comprehensive, accurate facility assessment. Ohio EPA will not redo already existing assessments but will update those existing assessments as necessary. Additional information to supplement or update an existing assessment will be gathered by performing a comprehensive file review and by sending an information request letter to the subject facility. Information obtained through a response to this letter and any other information obtained from other Ohio EPA divisions, other agencies or departments or any other source will be used to build upon or update existing information. Ohio EPA will determine if field sampling (including ground water) is necessary to further document environmental conditions at a facility on a case by case basis.

CHAPTER 3

Interim Measures/Stabilization

U. S. EPA's Stabilization Initiative was developed in 1992. According to U.S. EPA, the Initiative is an implementation approach that focuses resources on near-term activities to control or abate threats and/or to prevent or minimize the further spread of contamination across many facilities rather than following the traditional process of pursuing final, comprehensive remedies at a few facilities. Interim Measures are the stabilization tools used to address obvious environmental problems in either the short or long term. Several Interim Measures may be used in combination. Examples of Interim Measures are found on the following page. These examples were taken from U.S. EPA's Corrective Action Plan (CAP).

Although the Stabilization Initiative is an approach that should be considered for all facilities subject to RCRA Corrective Action, Ohio EPA emphasizes that the need for Interim Measures is determined on a site specific basis and may be identified at any point in the corrective action process. If the need for Interim Measures is identified, Ohio EPA will require its implementation. The facility may be required to gather data to facilitate the design and implementation of Interim Measures. Interim Measures are more likely to be effective if a specific aspect of the overall contamination at a facility can be isolated in conjunction with an exposure threat to humans or ecosystems. Under these conditions, the act of implementing Interim Measures is designed to stop or slow contamination migration, thereby potentially reducing risk to human health and the environment. Site-specific data must be generated to increase the chance of success of Interim Measures. It is possible for an Interim Measure to be the final remedy at a facility. However, for facilities where additional corrective measures are necessary, Ohio EPA and the facility will ensure that the implementation of Interim Measures will complement or be consistent with the final corrective measure.

Ohio EPA will be evaluating facilities to determine the need for Interim Measures throughout the RCRA Corrective Action process as it is being implemented by the facility. This will occur on an ongoing basis as environmental data and information is generated and analyzed.

Example Interim Measures

Site Security and Fencing

Ground Water

- Interceptor trench/sump/subsurface drain
- Pump and treat system (source removal and containment)
- Physical barriers (covers/slurry walls)

Soils

- Run-off/run-on control (diversion or collection devices)
- Cap/cover
- Source removal/excavation

Surface Water Release (point and non-point)

- Overflow/underflow dams
- Filter fences
- Run-off/run-on control (diversion or collection devices)
- Regrading/revegetation

Gas Migration Control

- Barriers/collection (e.g., vapor extraction)/treatment/monitoring
- Evacuation (buildings)

Particulate Emissions

- Truck wash (decontamination unit)
- Revegetation
- Application of dust suppressant
- Cover/cap

Note: Most of these examples were taken directly from U.S. EPA's CAP.

CHAPTER 4

The RCRA Facility Investigation

I. Introduction

The purpose of the investigation is to evaluate thoroughly the nature and extent of the releases or threat of releases of hazardous waste and hazardous constituents at a hazardous waste facility. Its purpose is also to gather data necessary to support the Corrective Measures Study, Interim/Stabilization Measures and final Corrective Measure Implementation. Pursuant to a RCRA Corrective Action Order or RCRA permit term or condition, the facility is required to provide Ohio EPA with a plan that furnishes information on all personnel, materials, and services necessary for, or incidental to, performing the RCRA Facility Investigation (RFI). This information, commonly referred to as the RFI Work Plan, is submitted to the Agency for review and approval. The facility is responsible for conducting the RFI. If a facility believes it is not necessary to conduct an investigation, the facility may provide a rationale on why it was not necessary to evaluate a release or threat of a release. This rationale will be subject to Ohio EPA review and approval.

Facilities are urged to work closely with the Ohio EPA project manager to establish streamlined site-specific Data Quality Objectives (DQO) tailored to the purpose(s) for which the data will be used. If applicable generic media cleanup standards are available, the DQO should be established with those standards in mind. Previously existing data generated by the facility and methods used by the facility to analyze such data will be evaluated pursuant to available federal guidance.

Ohio EPA supports a flexible approach to the overall facility investigation. In the following section, Ohio EPA has selected only those activities from the RFI Scope of Work contained in U.S. EPA's Corrective Action Plan (CAP) that the Agency believes are necessary for a facility to prepare an approvable RFI Work Plan and implement the RFI. However, Ohio EPA will consider alternatives to the approach set forth in the following section if a facility is able to justify an alternative approach based on factors specific to that facility. Ohio EPA will use available federal guidance to review the RFI Work Plan.

II. The RCRA Facility Investigation Work Plan - Ohio EPA Approach

Listed below are the components of the RFI Work Plan and their purpose. This is followed by Ohio EPA's view regarding when the component is needed, if it needs to be reviewed and if it needs to be approved. Ohio EPA notes that if generic RCRA Corrective Action cleanup standards or action levels are available for the contaminants of concern at a facility, those standards and other applicable standards will be provided to the facility prior to its submittal of the RFI Work Plan and discussed with the facility in the context of establishing Data Quality Objectives. If such standards or levels are not available, Ohio EPA will work to develop them. In the absence of such standards, the facility shall perform

a baseline risk assessment. The availability of such standards or levels in no way precludes a facility from pursuing a site specific approach to remediation.

The components include:

- 1) *Description of Current Conditions (DCC)*. This component of the Work Plan serves to provide a current, accurate representation of environmental conditions at a facility from the facility's perspective. It shall include a description of the facility's background, a preliminary assessment of the nature and extent of contamination and a description of any Interim or Stabilization Measure that was implemented. Although Ohio EPA recognizes the importance of this information, Ohio EPA will consider alternatives to the development of the DCC, as it's described in U.S. EPA's Corrective Action Plan, as long as the goal of the document is realized. Possible alternatives include use of the RCRA Facility Assessment or its equivalent, a release assessment, a conceptual site model or some combination of these.
- 2) *Objectives of the Investigation*. This component of the Work Plan lists the objectives of the investigation. The permit or order may also list the objectives of the investigation.
- 3) *Field Sampling Plan (FSP)*. This component of the Work Plan serves as a road map on how and where the facility will sample the affected environmental media at the facility. It shall be submitted to Ohio EPA and is subject to Ohio EPA review and approval. If the facility develops a plan for collecting data necessary to demonstrate the possibility of using a specific corrective technology, known as a Corrective Technology Plan (CTP), that plan may be submitted as part of the FSP. However, flexibility regarding the timing of the submittal of the CTP is necessary as development of the CTP might only occur once the Investigation has commenced.
- 4) *Quality Assurance Plan and Procedures (QAPP)*. The purpose of this component of the Work Plan is to specify the field and laboratory procedures necessary to collect, analyze, verify and assure the quality of the data gathered through implementation of the FSP. The field portion of the QAPP is necessary and shall be included with the FSP, which must be reviewed and approved by Ohio EPA. The lab portion of the QAPP may be addressed through development of a site-specific QAPP or use of a generic QAPP, which was developed by U.S. EPA Region 5 and is available. Ohio EPA supports the use of this generic QAPP, which shall be accompanied by a certification statement from the facility attesting to the facility's commitment to follow it. If deviations from the generic QAPP are desired, they shall be proposed to Ohio EPA along with sufficient justification. Such deviations are subject to review and approval by Ohio EPA.

- 5) *Health and Safety Plan (HASP)*. This component of the Work Plan is a plan developed to ensure the health and safety of the surrounding community and all persons who may be on-site during the investigation. It shall be submitted and will be reviewed for informational purposes with Ohio EPA reserving its right to comment on it. Some of the regulations governing on-site worker safety may be found in 29 Code of Federal Regulations (CFR) Part 1910 and Ohio Administrative Code (OAC) Chapter 4121:1-5. Other Occupational Safety and Health Administration (OSHA) regulations may apply. Additional regulations governing on-site and community safety are found in 40 CFR Parts 302, 311 and 312 and OAC Chapter 3750. Matters regulated by OSHA will not be evaluated by Ohio EPA. The HASP must be submitted to Ohio EPA prior to the initiation of any field work.
- 6) *Data Management Plan*. This component of the Work Plan is site-specific and describes how the raw data gathered in the field will be analyzed and presented. It shall be submitted and is subject to Ohio EPA review and approval. It may not have to be submitted with the Work Plan but it should be listed in the Schedule of Deliverables. However, if circumstances warrant, the Ohio EPA project manager may require its submittal with the Work Plan. The timing of its submittal is generally flexible as long as it is subject to Ohio EPA approval prior to its implementation. Records management/retention may be addressed in the permit, order or RFI Work Plan.
- 7) *Project Management Plan*. This component of the Work Plan describes the qualifications and responsibilities of each person who will be performing work as part of the investigation. Ohio EPA will only require submittal of a list of contractors and a table of organization. Ohio EPA reserves the right to ask for more information if deemed necessary. The Plan shall be submitted to Ohio EPA prior to the initiation of field work.
- 8) *Public Involvement Plan*. This component of the Work Plan describes how the facility will involve the public during the investigation and throughout the corrective action process. It shall be submitted and is subject to Ohio EPA review and approval. The Plan shall be consistent with the public involvement requirements of RCRA and any guidance available from U.S. EPA or Ohio EPA.
- 9) *Schedule of Activities/Submittal of Deliverables*. This component of the Work Plan describes what activities and deliverables (e.g., progress reports) will be done by whom and by when, and when they will be submitted as draft and final. It shall be submitted and is subject to initial Ohio EPA approval with the possibility of agreed-to modifications occurring subsequent to the initial approval.
- 10) *Corrective Technology Plan* (special data that must be gathered to support the possible utilization of a particular remedial technology). This component of the Work Plan is used to screen potential technologies and also identifies any special field data that may need to be collected in order to evaluate a particular remedial technology

along with the method of collecting it. It shall be submitted and is subject to Ohio EPA review but not necessarily approval. It must be site specific. It is desirable for the CTP to be submitted along with the FSP although it's possible for it to be submitted at a later date.

III. The RFI Report

The purpose of the RCRA Facility Investigation (RFI) Report is to describe the results of the investigation performed by the facility. The Report shall describe the facility's environmental setting and shall also characterize contaminant sources and contaminant characteristics. Potential receptors shall be identified. Data gathered shall be analyzed and summarized and conclusions shall be drawn about the results and the likely next step. Methodologies used for sampling and other investigatory activities shall be documented in detail. The report shall follow up on any specific items in the RFI Work Plan.

Meetings with the facility prior to completion and submission of the Report are necessary in order for the facility and Ohio EPA to agree on the future course of action in a manner that conserves the resources of both the facility and Ohio EPA to the extent practicable. A specific meeting with the facility to agree on the content and scope of the RFI Report is essential. The RFI Report should not be viewed simply as the end of one phase of the corrective action process but more as a bridge geared toward making the transition from investigation to actual cleanup of the facility. The RFI Report must be approved by Ohio EPA to provide assurances to both parties on the desired future course of corrective action at the facility.

Again, Ohio EPA supports a flexible approach to the overall facility investigation including the RFI Report. In the following section, Ohio EPA has set forth the components that shall be included in the overall RFI Report and submitted for approval. The listed components are consistent with the Ohio EPA approach on the RFI Work Plan found in Section II of this chapter. Ohio EPA will use available federal guidance to review the RFI Report.

IV. The RFI Report - Ohio EPA Approach

Ohio EPA's list of the components that shall be included in the overall RFI Report and submitted for approval is as follows.

- 1) *Purpose and Objectives.* The Report shall include an executive summary that identifies the purpose and objectives of the RFI and the RFI Report itself.
- 2) *Data Presentation and Analysis.* The Report shall present the data gathered during the investigation and shall identify any data gaps. The methodologies used to gather, analyze and summarize the data shall be described in detail. The nature and extent of any contamination discovered during the investigation shall be revealed. Potential receptors shall be identified. Ohio EPA strongly recommends that a conceptual site model/diagram be used as a tool to facilitate site-specific conditions. Data gathered

and analyzed during the investigation shall be consistent with the Data Quality Objectives that were established and described in the RFI Work Plan.

- 3) *Evaluation of Data Against Cleanup Standards.* If generic cleanup standards are available, the data shall be evaluated against those standards. In the absence of generic standards, a baseline risk assessment shall be performed. If a site-specific baseline risk assessment was performed, the methodologies and assumptions used to perform it shall be described along with any cleanup standards the facility developed. A human health and ecological risk assessment shall be included in the report. The level of detail necessary in the ecological risk assessment shall be determined as part of the process for establishing the goals of the investigation. Generally, detailed ecological risk assessments are not necessary for facilities located in urban settings.
- 4) *Summary - Identify Potential Remedies/Future Course of Action.* The summary shall fully explore and describe one of the following options/scenarios:
 - a) Identify a presumptive remedy for one or more units/media as appropriate and describe it; or
 - b) Identify units/media for which a Corrective Measures Study (CMS) or limited CMS is necessary and list potential technologies that the CMS or limited CMS will evaluate; or
 - c) Identify any units/media for which a No Further Action finding is appropriate;
 - d) Evaluate the need for an Interim Measure for site stabilization purposes; or
 - e) Evaluate the effectiveness of an already existing Interim Measure and determine if it should be continued and/or what role the Interim Measure may play in the overall corrective action that may be needed at the facility.

V. Identification of RCRA Corrective Action Options

This narrative accompanies Figure V-1 titled *Identification of RCRA Corrective Action Options*. Its purpose is to describe what Ohio EPA views as the RCRA corrective action options available to a facility once the data and information collected during the RCRA Facility Investigation (RFI) have been compiled, analyzed, verified for accuracy and accepted by the Agency. Each option is described below.

Interim Measure

If an Interim Measure (IM) was implemented prior to or during the course of the RFI, the RFI Report should examine its performance/effectiveness to date and determine if it should continue to be implemented. The RFI Report should ascertain the role, if any, the IM, or possibly a modified IM, will play as part of the overall site remedy. In some cases, the RFI Report may be

the basis for initiating an IM.

Performance Based Remedy

Implementation of a Performance Based Remedy relies on a process different from that most commonly utilized to select the remedy or corrective measure, where maximum Agency involvement and oversight drives the process. The process can begin once Ohio EPA is satisfied that all releases from the facility have been adequately identified and evaluated. The facility and Ohio EPA can then attempt to agree on remedial goals and technologies needed to achieve them. The goals and technologies both need to meet the threshold and balancing criteria for corrective measures found in Chapter 5.

Once agreement on the goals and technologies is reached, Ohio EPA will not require a Corrective Measures Study to be conducted nor will it require Corrective Measure Implementation (CMI) final design plans to be submitted for review and approval. Rather, the facility will be expected to design and implement the remedy and achieve the remedial goals within a mutually agreed upon time period. The results of the remedy being implemented will be monitored by Ohio EPA and documented by the facility in a final report that shall be submitted to Ohio EPA.

Presumptive Remedy

Once the data and information from the RFI is compiled, analyzed and verified, Ohio EPA and the facility may be able to agree that remedial goals can be achieved through the implementation of a particular remedial technology. This would likely occur at less complex facilities which share common characteristics with other facilities. The goals and the selected technology must meet both the threshold and balancing criteria for corrective measures found in Chapter 5. The plan to implement a Presumptive Remedy shall be documented in the final RFI Report. Under these circumstances, Ohio EPA will not require the facility to conduct a CMS. The facility will only be expected to submit the final CMI design plans for review and approval.

Identify Potential Remedial Technologies

At what could be described as the more complex facilities, it may not be readily apparent from the data and information collected during the RFI which particular remedial technology or combination of remedial technologies may accomplish the site cleanup objectives. Under these circumstances, the facility should identify in the RFI Report which technologies it plans to evaluate in the RFI Report. Depending on the range of possible technologies, the facility may conduct either a limited CMS or a full CMS and describe such in the CMS Work Plan to be submitted for review and approval. If the CMS is to be of limited scope, the RFI Report may include the CMS Work Plan outline.

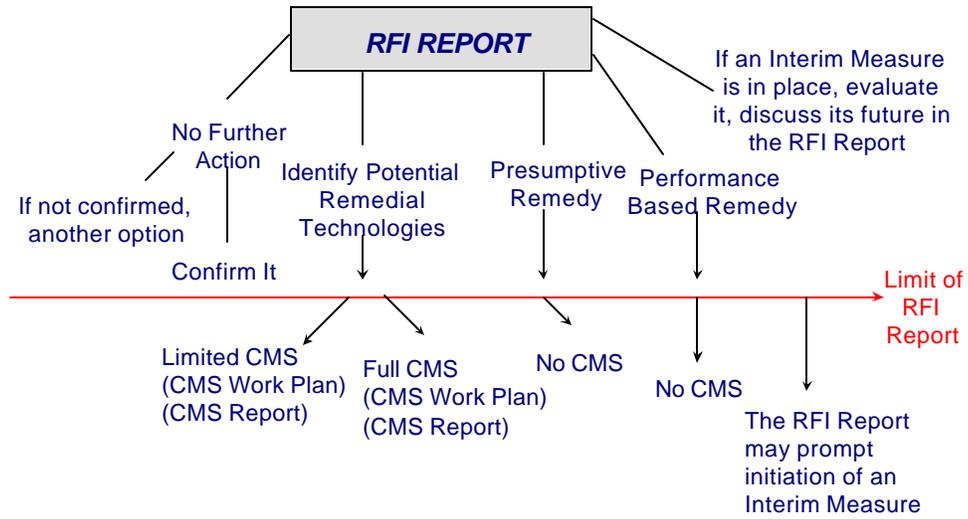
No Further Action

The facility may conclude that, based on the data and information collected during the RFI, no

corrective measure is necessary. Ohio EPA may agree with the facility but may require some type of future monitoring or institutional control(s) for continuing confirmation that no further action is necessary. Such a requirement may actually constitute a type of Presumptive Remedy. In either circumstance, the decision shall be documented in the final RFI Report. If Ohio EPA does not agree with the facility's conclusion that further action is unnecessary, the facility shall select another option that includes eventual implementation of a corrective measure. The option selected would determine the need for a limited or full CMS or if one was necessary.

Figure 4-1

Identification of RCRA Corrective Action Options



CHAPTER 5

The Corrective Measures Study

I. Introduction

The purpose of the Corrective Measures Study (CMS) portion of the RCRA Corrective Action process is to identify and evaluate potential remedial alternatives for any releases identified at a facility. The data and information gathered during the RCRA Facility Assessment (RFA), the RCRA Facility Investigation (RFI) and any Interim Measure will determine the necessity and/or scope and content of the CMS.

Ohio EPA supports a flexible, site-specific approach to development of the appropriate corrective measure(s) to be implemented at a facility. It may not be necessary for a facility to perform a CMS. If it is necessary to perform a CMS or a limited CMS, Ohio EPA, in the following section, has selected only those activities from the CMS Scope of Work contained in U.S. EPA's Corrective Action Plan that the Agency believes are necessary for a facility to prepare an approvable CMS Work Plan and CMS Report. However, Ohio EPA will consider alternatives to the approach set forth in the following section if a facility is able to justify an alternative approach based on factors specific to that facility. Ohio EPA will use available federal guidance to review the CMS Work Plan and CMS Report.

II. Corrective Measures Study Work Plan - Ohio EPA Approach

If Ohio EPA and the facility determine it's necessary to be developed and submitted, the CMS Work Plan shall include the following:

- 1) *CMS Objectives and Performance Standards;*
- 2) *A description of corrective measure technologies as a function of the following four threshold criteria and the following five balancing criteria:*
 - a. Threshold Criteria
 - i. Protect human health and the environment
 - ii. Attain media cleanup standards set by the implementing agency
 - iii. Control source of the release(s) to reduce or eliminate, to the extent practicable, further releases that may pose a threat to human health and the environment
 - iv. Comply with applicable standards for management of waste;

- b. Balancing Criteria
 - i. Long term reliability and effectiveness
 - ii. Reduction in the toxicity, mobility or volume of wastes
 - iii. Short term effectiveness
 - iv. Implementability
 - v. Cost;
- 3) *Description of bench scale studies and/or limited fieldwork; and*
- 4) *Timeline/project management (includes progress reports)/outline.*
- 5) *Public involvement plan.* The plan submitted by the facility with the RFI Work Plan should have covered public participation in the CMS phase of the RCRA Corrective Action process. If an update is needed, it shall be included as part of this submittal.

The CMS Work Plan must be approved by Ohio EPA whether it is part of the RFI/RFI Report or is submitted subsequent to it.

III. Corrective Measures Study Report - Ohio EPA Approach

If necessary to be developed and submitted, the CMS report shall include the following:

- 1) *Description of Current Conditions (only if an update is necessary);*
- 2) *Performance Objectives.* Can they be met, have they changed, or have any additional contaminants been discovered? Applicable standards from Ohio EPA's Voluntary Action Program and RCRA closure (in a site-specific context) that are protective of human health and the environment may be used if appropriate;
- 3) *Identify, Screen and Evaluate Alternatives.* Select the corrective measure, including the justification for the chosen alternative;
- 4) *A demonstration that the threshold goals can be met for each chosen technology; and*
- 5) *A description of public involvement efforts and the subsequent results.*

The CMS report must be approved by Ohio EPA.

CHAPTER 6

Corrective Measures Implementation

The purpose of the Corrective Measures Implementation (CMI) portion of the RCRA Corrective Action process is to design, construct, operate, maintain and monitor the performance of the selected corrective measure/remedy.

Subsequent to Ohio EPA's approval of the RFI Report (and possibly a limited or full Corrective Measures Study Report, which is dependent upon the results of the RCRA Facility Investigation [RFI]), Ohio EPA and the facility will participate in a scoping meeting to discuss the conceptual design of the selected corrective measure(s). The facility may elect to prepare some documentation in advance of the meeting to help facilitate the design discussion. Subsequent to the meeting the facility shall submit the following:

1. *Final Design Plans, Design Specifications and an Operation and Maintenance Plan.*

Also to be included with this submittal is a projected schedule of activities, a waste management plan, a sampling and monitoring strategy, a construction work plan and applicable quality assurance/quality control procedures. The level of detail expected for each of these components is dependent on the selected corrective measure. The final plans and supporting documentation must be approved by Ohio EPA.

2. *Health and Safety Plan.* This is a separate document for the final design plans. No approval from Ohio EPA is necessary although review comments may be offered.
3. The *Public Involvement Plan* submitted by the facility with the RFI Work Plan should have covered public participation in the CMI phase of the RCRA Corrective Action process. If an update is needed, it shall be submitted at this time also for Ohio EPA's review and approval.
4. The facility shall submit a *Construction Completion Report* upon completion of construction of the selected corrective measure. This report will serve as a certification that the corrective measure was constructed according to the approved final design plans. Ohio EPA will verify/concur with the conclusions of this report.
5. The facility shall submit *Progress Reports* throughout the implementation and operation and maintenance of the selected corrective measure. The frequency of submittal of the reports will be set forth in the final design plans and will depend on the complexity of and the schedule for the implementation of the corrective measure.
6. The facility shall submit a *Corrective Measures Completion Report* once implementation of the corrective measure is completed,. The timing of the submittal is dependent on the approved schedule for the implementation of the selected corrective measure. This report must be approved by Ohio EPA as it will serve to satisfy the requirements of the order or permit condition that compelled the investigation and implementation of the corrective measure.