Guidance for Documenting and Reporting RCRA Subtitle C Corrective Action Land Revitalization Indicators and Performance Measures

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1.0 Introduction

In October 2006, the Environmental Protection Agency (EPA) released the *Interim Guidance for OSWER Cross-Program Revitalization Measures,* (CPRM Guidance)[1]. The CPRM guidance presents a collection of indicators and performance measures related to land revitalization. These indicators and measures represent the Agency's latest effort to document progress toward land revitalization across all of the Office of Solid Waste and Emergency Response's (OSWER) various cleanup programs.

Today's guidance, presented here, the "Guidance for Documenting and Reporting RCRA[2] Subtitle C Corrective Action Land Revitalization Indicators and Performance Measures" (RCRA-LRM Guidance) is to assist EPA and State officials in documenting and reporting these measures and indicators for RCRA Corrective Action facilities.

1.1 Purpose of Land Revitalization Indicators and Performance Measures

The purpose of these land revitalization indicators and performance measures is to improve EPA's ability to promote and communicate cleanup and revitalization related accomplishments and associated benefits/values to society. These new measures have the ability to track progress in acres to communicate more clearly environmental results and to enable the program to account for incremental progress at a site.

1.2 Applicability

Today's RCRA – LRM guidance is not a regulation itself, nor does it change or substitute for any regulations. Thus, it does not impose legally binding requirements on EPA, States, Tribes, or the regulated community.[3]

[1] CPRM Guidance can be found at http://www.epa.gov/swerrims/landrevitalization/docs/cprmguidance-10-20-06covermemo.pdf

[2] RCRA represents the Resources Conservation and Recovery Act. Subtitle C of RCRA provides for the regulation of hazardous wastes, and the cleanup of certain RCRA facilities.

[3] This RCRA-LRM guidance does not confer legal rights or impose legal obligations upon any member of the public. Interested parties are free to raise questions and objections about the substance of this guidance and the appropriateness of the application of this guidance to particular situations. EPA and other decision makers retain the discretion to adopt approaches on a case-by-case basis that differ from those described in this guidance.

This guidance does not change any existing policies and practices for carrying out investigations and cleanups. Furthermore, achieving any of the performance measures or indicators in this guidance does not provide any legal rights or legally enforceable commitments regarding EPA's enforcement intentions or any party's potential liability at the facility and does not preclude EPA from taking any necessary enforcement action at the facility. Additionally, any determination made for the purposes of the measures described in this guidance is based on the information available at the time the determination is made and may change if the facility's conditions change or if new or additional information is discovered regarding the contamination or conditions at the facility. As such, parties (e.g., land owners or developers) interested in finding out what uses would be protective for a particular property should

1.3 Overview of Cross-Program Revitalization Measures

In 2003, recognizing the need to establish a consistent set of measures related to land revitalization that could be applied across each of the OSWER cleanup programs, EPA formed a workgroup of headquarters and Regional staff to develop recommendations. This workgroup was later expanded to include representatives from various state agencies. A report was developed discussing measurement activities in OSWER, "Measuring Revitalization of Contaminated Properties in America's Communities – Past Accomplishments and Future Activities" which is available at: http:www.epa.gov/oswer/landrevitalization/docs/revitalizationmeasuresreport9-06.pdf

Based upon information gathered to develop that report, and working with both EPA Regions and States, on October 20, 2006, EPA issued guidance for reporting land revitalization indicators and performance measures: *Interim Guidance for OSWER Cross-Program Revitalization Measures* (to be referred to as the CPRM Guidance in this document). The CPRM Guidance establishes three indicators (two are optional) and two performance measures.

Indicators
- Universe
- Status of Use (optional)
- Type of Use (optional)

Performance Measures
- Acres "Protective for People Under Current Conditions" (PFP)
- Acres "Ready for Anticipated Use" (RAU)

The CPRM Guidance establishes the overarching framework for these indicators and performance measures, but left it to each of the OSWER programs to develop companion guidance for program-specific implementation. Today's RCRA-LRM guidance addresses implementation for the RCRA Corrective Action Program with respect to these indicators and performance measures:

Universe Indicator – For 2007 and 2008, reports the number and acreage of facilities in the RCRA Corrective Action GPRA 2008 universe. For 2009 and beyond, reports the number and acreage of facilities in the RCRA Corrective Action 2020 universe[4,5].

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rely on facility-specific cleanup documents and facility-specific institutional controls for property-specific information.

[4]EPA developed the RCRA Corrective Action GPRA universes in conjunction with the States as a result of a mandate in the Government Performance & Results Act (GPRA) which requires EPA to measure and track program progress toward achieving clearly defined results. A short discussion of the GPRA can be found at: http://www.epa.gov/epaoswer/hazwaste/ca/gpratxt.pdf

[5] There are 1968 "Treatment, Storage and Disposal Facilities" (TSDs) in the RCRA Corrective Action GPRA 2008 universe. The Corrective Action Program is currently working to identify the facilities that will be in the RCRA

Status of Use Indicator (optional) – For facilities in the Universe Indicator, reports the status of use (e.g. unused, reused) of acres at a facility at the time that the information is reported.

Type of Use Indicator (optional) – For facilities in the Universe Indicator, reports the type of use (e.g. industrial, residential) of acres at a facility at the time that the information is reported.

Protective for People under Current Conditions (PFP) Measure – For facilities in the Universe Indicator, reports the number of acres of an entire facility or number of acres for specific area(s) of a facility that meets the requirements of OSWER's Protective for People Under Current Conditions definition.

Ready for Anticipated Use (RAU) Measure – For facilities in the Universe Indicator, reports the number of acres of an entire facility or specific area(s) of a facility that meets the requirements of OSWER's Ready for Anticipated Use definition.

2.0 RCRA Corrective Action Indicators

This RCRA-LRM Guidance is designed to assist RCRA managers in reporting the three revitalization indicators, two of which are optional. The Agency is not establishing targets for these indicators. In implementing the indicators, EPA will request that Regions and States report information for each fiscal year in RCRA Info, no later than October 10th of each year.

2.1 Universe Indicator

The Universe Indicator provides information on the number of facilities and acres that are being addressed by EPA's programs.

2.1.1 RCRA Corrective Action Facilities in Universe Indicator

Through 2008, the RCRA facility Indicator Universe will consist of all RCRA Corrective Action 2008 GPRA baseline facilities (a total of 1968 facilities). [See Footnote 4 for information on the GPRA and 2008 baseline]. A list of these facilities will be posted at: http://www.epa.gov/epaoswer/hazwaste/ca/facility.htm

For 2009 and beyond, the RCRA facility Indicator Universe will consist of all RCRA Corrective Action 2020 facilities. The list of RCRA facilities in the RCRA CA 2020 universe will be posted at: http://www.epa.gov/epaoswer/hazwaste/ca/facility.htm

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Corrective Action 2020 universe. More information on the 2008 and the 2020 universes will be able posted at http://www.epa.gov/epaoswer/hazwaste/ca/facility.htm

2.1.2 Calculating the Number of Acres

The acres for RCRA Corrective Action facilities are calculated from fenceline-to-fenceline. Off-site acres are not included in these calculations.

Fenceline-to-Fenceline acres include:

- All areas of the RCRA Corrective Action facility, as defined in 40 CFR 260.10. This includes contiguous property under the control of the owner/operator if it meets the definition of corrective action facility.

- Areas that have been parceled off from the facility after January 1, 2007, should be included in the fenceline-to-fenceline calculation, even if these acres have been removed from the permit. [6]

- Areas that were originally part of the facility, but were parceled off prior to January 1, 2007 may be counted if the State or Region chooses to.

Fenceline-to-fenceline acres do not include:

- Areas adjacent to the regulatory-defined facility that are impacted by contamination from the facility (e.g., via groundwater release), property under the control of the owner/operator that is nearby, but that is not contiguous, and land that is contiguous, but that has never been under the control of the owner/operator.[7]

2.1.3 Reporting the Number of Acres

In 2006, Regions and States were asked to report the number of acres for each facility in the RCRA Corrective Action GPRA 2008 universe. The Regions compiled this information and submitted it, in a spreadsheet, to the Office of Solid Waste (OSW) in September 2006.

The next version of EPA's RCRA information system, RCRA Info, will include a data element for acres. That version will be available for use sometime in 2007 or 2008. It is expected as part of this effort that the data element for "acres" will be able to be attributed to an "area of a facility" or attributed as "facility-wide." This data element will likely require information on the source and the date that the information was input into RCRA Info. When the new acres data element is incorporated into RCRA Info, details related to the construct of this information will be provided to the RCRA programs.

[6] There may be instances where a facility included in the 2020 universe is parceled after January 1, 2007, but before it is evaluated for a RAU. In this instance, the Region or State may count the parceled acreage at their discretion.
[7] Some State RCRA programs may have slight variations in their definitions of a facility boundary. The State RCRA definition can use used in calculating fenceline-to-fenceline acres.

The CPRM Guidance notes that "EPA currently does not have a data standard that would dictate the needed quality for measuring acres. However, the following three basic elements of the Agency's Measure Data Standard are applicable to acre-based measurements in this RCRA – LRM guidance: (1) measure numerical value, (2) unit of measurement (such as acres), and (3) measurement qualifiers used to identify issues that could affect the results (e.g., source of acre information). [For more information on the Agency's Measure Data Standard, see standard EX100010.1 available at http://www.epa.gov/edr/MeasureFD_01062006.pdf][8]

2.1.4 Counting Acres at Facilities Addressed by More Than One OSWER Cleanup Program

Facilities are sometimes regulated by more than one OSWER cleanup program. Each OSWER program will report the number of acres for the facilities in their universes. Based upon program specific factors, each program defines which acres should be collected somewhat differently. The RCRA program will count acres "fenceline-to-fenceline" for all facilities, including Federal Facilities with RCRA activities. OSWER will develop a list of RCRA facilities that are also being addressed by Superfund, the Brownfields Program, and the Federal Facilities Program.[9] OSW will work with the Regions and States on a facility specific basis for facilities where more than one OSWER cleanup program is active to identify overlap in acres counted. When OSWER reports national totals, we will adjust the national total to eliminate or minimize, to the extent possible, the multiple counting of acres.

2.2 Status of Use Indicator – Optional

This indicator can be voluntarily tracked and reported by States and Regions. This indicator is not being required at a national level. OSW will be working with the RCRA Info team to incorporate a data element for this indicator into RCRA Info. Until there is an appropriate data element for this indicator in RCRA Info, States and Regions that are collecting this information can submit it to OSW in a simple spreadsheet at the end of each fiscal year. For information on this indicator, see Appendix I and the CPRM Guidance[10].

The CPRM Guidance lays out four categories for the "Status of Use" indicator.

- Continued Use

[8]). For more information on the Agency's Measure Data Standard, see standard EX100010.1 available at http://www.epa.gov/edr/MeasureFD_01062006.pdf

[9] EPA's Underground Storage Tank Program will not be identifying specific properties in it's reporting of the Land Revitalization Measures. Thus, the RCRA program will not be working to identify RCRA cleanup facilities that overlap with tank cleanups.

[10] More information on these categories can be found in the CPRM Guidance at http://www.epa.gov/swerrims/landrevitalization/docs/cprmguidance-10-20-06covermemo.pdf

- Reused
- Unused
- Planned Reuse

EPA recommends that Regions and States choosing to collect this information utilize these categories for purposes of consistency. OSW will make available a generic form for collecting this information that the Regions and States may use if they choose.

2.3 Type of Use Indicator – Optional

This indicator can be voluntarily tracked and reported by States and Regions.
This indicator is not being required at the national level. OSW will be working with the RCRA Info team to incorporate a data element for this indicator into RCRA Info. Until there is an appropriate data element for this indicator in RCRA Info, States and Regions that are collecting this information can submit it to OSW in a simple spreadsheet at the end of each fiscal year. For further information on this indicator, see Appendix II and the CPRM Guidance.

The CPRM Guidance lays out ten categories, grouped in six areas, for this indicator.

<u>Commercial and Public Service</u>
- Commercial Use
- Public Service Use

<u>Green Space</u>
- Agricultural Use
- Recreational
- Ecological Use

<u>Industrial</u>
- Industrial Use

<u>Military and Other Federal</u>
- Military
- Other Federal Use

<u>Mixed</u>
- Mixed Use

<u>Residential</u>
- Residential Use

EPA recommends that the Regions and States choosing to collect this information use these categories for purposes of consistency. OSW will make available a generic form for collecting this information that the Regions and States may use if they choose.

3.0 Performance Measures

3.1 Protective for People Under Current Conditions (PFP) Measure

The Protective for People under Current Conditions measure recognizes the near-term progress associated with protecting human exposures based on the current uses at the site. The PFP measure is equivalent to, and requires the same documentation as, the Current Human Exposures Under Control Environmental Indicator (HE EI). The PFP measure, however, enables this milestone to be communicated in acres - either incrementally or for all the acres of a facility. Receiving a PFP determination does not equal being done with the response action.

3.1.1 Reporting PFP Determination for the Entire Facility

The Current Human Exposures Under Control Environmental Indicator (HE EI) is reported in RCRA Info with the CA725 data element. OSW will use RCRA Info to identify all RCRA facilities in the universe that have a facility-wide CA725 determination of yes (YE) and report these facilities as having met the PFP measure.

3.1.2 Reporting PFP Determination for a Portion of the Facility

Regions or States may voluntarily document that a portion of the facility (area) meets the HE EI and PFP measure. A State or Region may choose to do an area specific HE EI and PFP determination when the State or Region believes it is appropriate to count those acres as having met the PFP and/or the area is under consideration for, or had been put to, reuse. The reporting PFP for a facility "area" is optional. EPA encourages State and Regions to make a PFP determination for large areas of a facility, when they have enough information about the area to know that the PFP determination is appropriate, and a facility-wide PFP determination is not expected in the near future.

In order to report the PFP for a portion of the facility, the area should be defined as an "area of the facility" in RCRA Info[11]. When the area in question meets the HE EI criteria and the State or Region chooses to document it, a HE EI form should be filled out for the area. OSW encourages the Regions to post these forms on the Regional website along with the other environmental indicator forms. In 2007, EPA will look at revising RCRA Info so that HE EI and acres information can be entered for specific areas. Until that time, to report PFP acres for a facility "area," the State or Region should submit to OSW, at the end of the fiscal year, a spreadsheet that identifies the facility areas and their acres that have met the criteria. This information should then be entered into RCRA Info when it has been revised to accept that information.

[11] RCRA Info uses "areas" to track some Corrective Action progress within a facility. General Information on RCRA Info and the RCRA Info definition of "areas," can be found at http://www.epa.gov/enviro/html/rcris/

If an area of a facility meets the HE EI, but the entire facility does not, the facility will not be counted as having achieved a "facility-wide HE EI."

3.2 Ready for Anticipated Use (RAU) Measure

The Ready for Anticipated Use measure enables EPA and States to track acres determined to be protective for current and reasonably anticipated uses. The criteria for a facility or areas of a facility to meet the Ready for Anticipated Use Measure outlined in the CPRM Guidance are as follows:

- *Criteria for Protective for People under Current Conditions has been met;*

- *Cleanup goals have been achieved for media that may affect current and reasonably anticipated future land uses of the facility so that there are no unacceptable risks; and*

- *All institutional or other controls, identified as part of a response action or remedy as required to help ensure long-term protection, are in place.*

A flowchart for determining whether acres for a RCRA facility or area of a facility meet these criteria and thus can be given a RAU determination is provided below.

3.2.1 Reporting the RAU Measure

A "RCRA Ready for Anticipated Use Documentation" form is being developed to assist in implementing this performance measure. Once this form has been finalized, it will be made available to the RCRA programs and posted on the web.

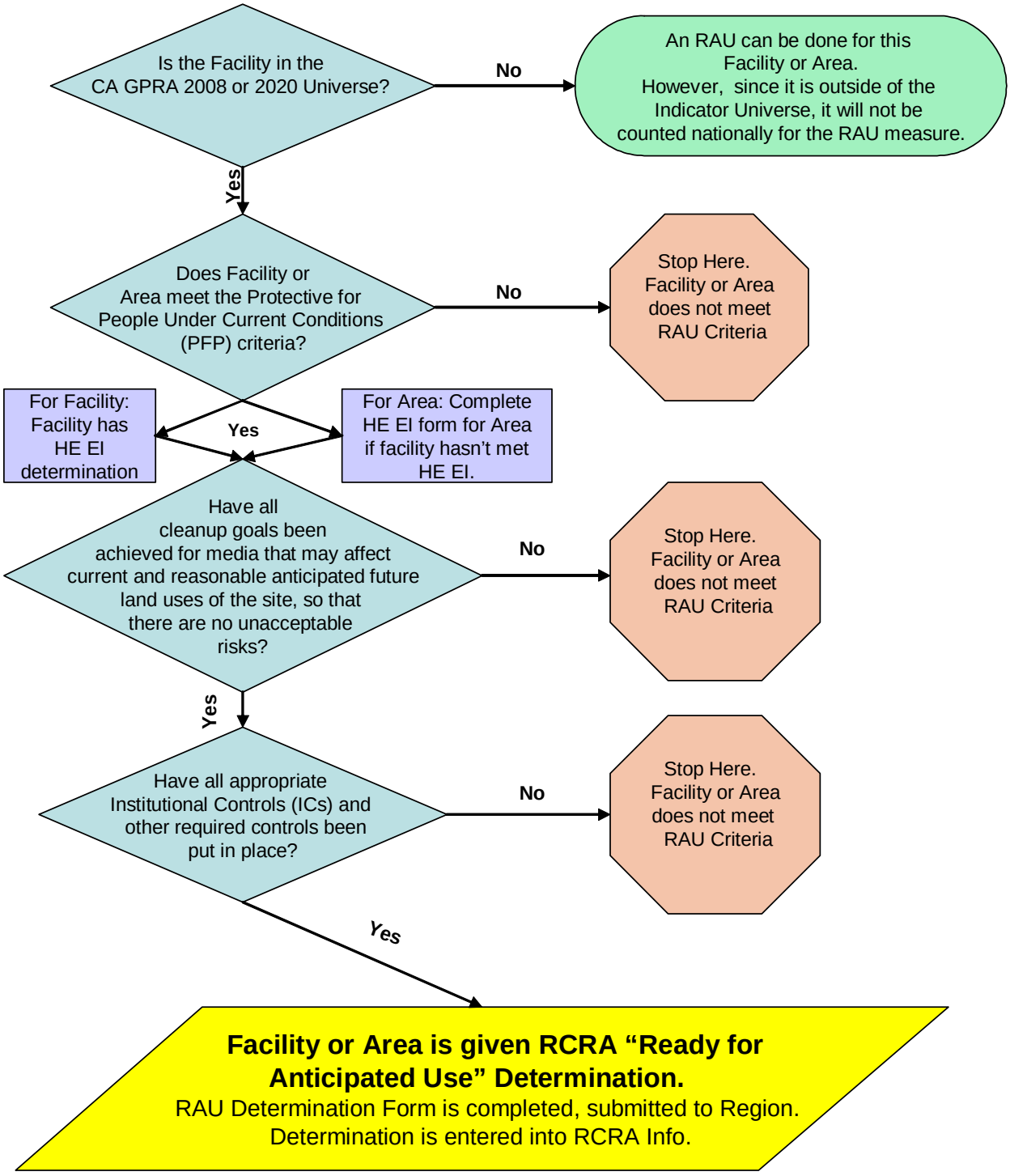
OSW will be working with the RCRA Info team to develop an event code for the RAU measure. This code would be able to be linked to an "area" at a RCRA facility or to the entire facility.

Project Managers will document when a facility or area of a facility has met the criteria for the RAU measure by filling out the RCRA RAU Determination Form, which is being developed. This form will be posted on the web when it is finalized. OSW encourages the Regions to post the completed forms on the Regional websites just as the other RCRA Environmental Indicator forms are posted. The RCRA program will also enter the RAU determination into RCRA Info with the date.

3.2.1.1 Reporting RAU for the Entire Facility or Portion of a Facility

The RAU Determination form can be filled out for an entire facility or for a portion of a facility. States and Regions are not required to make area-specific RAU determinations, but may make these determinations as they deem appropriate. EPA encourages State and Regions to make a RAU

Decision Tree - RCRA "Ready for Anticipated Use" Measure



determination for large areas of a facility, when they have enough information about the area to know that the RAU determination is appropriate, and a facility-wide RAU determination is not expected in the near future.

In order to fill out the form for a portion of the facility, all criteria for the RAU measure must be met for the area being evaluated. The area that is being included in the determination must be clearly defined on the form and clearly defined as an "area of the facility" in RCRA Info. When the RCRA program enters the RAU measure determination into RCRA Info, it should be linked to the area being evaluated. Making a RAU measure determination for a facility area is optional and at the discretion of the States and Regions.

3.2.1.2 Reporting in 2007-2008

RCRA Info will not be changed in time for the 2007 reporting cycle. Until the RCRA Info RAU event code becomes available, instead of entering the information into RCRA Info, the Regions will submit a spreadsheet with the RAU measure determinations at the end of the fiscal year to OSW. For 2007 and 2008, OSW will report the facilities and acres for the facilities in the RCRA 2008 baseline meeting the RAU. Regions and States may submit data on other facilities, but should break these out from the 2008 baseline facilities.

3.2.1.3 Changing a RAU Determination

There are no requirements for States and Regions to periodically reevaluate the RAU Determinations. However, occasionally a project manager may become aware of a change at a facility that might impact this determination. If a program manager becomes aware of a change at the facility or area of a facility which results in the facility or area no longer meeting the RAU criteria, the project manager should complete appropriate section of the RAU Determination form, sending the updated form to the Region for posting and making the appropriate change for the RAU event code in RCRA Info.

3.2.2 Documenting "PFP" Criteria for the RAU Measure

The RAU criteria require that the "C*riteria for Protective for People under Current Conditions" has been met.*

RCRA Corrective Action facilities and areas of facilities that have met the HE EI criteria and have that determination entered into RCRA Info will be considered Protective for People Under Current Conditions.

As noted in Section 3.1.1, an area of a facility can be determined to meet the PFP criteria even if the entire facility does not. If an area is being evaluated for a RAU measure determination, and the facility has not yet met a facility-wide HE EI, a HE EI form should be filled out for the area. OSW encourages Regions to post the form on the web with the other EI forms.

3.2.3 Documenting "Cleanup Goals" Criteria for the RAU Measure

The RAU criteria require that *"Cleanup goals have been achieved for media that may affect current and reasonably anticipated future land uses of the facility so that there are no unacceptable risks."*

When a facility or area of a facility is being evaluated for a RAU determination, all cleanup goals that are necessary to ensure that there are no unacceptable risks that would affect the current or reasonably anticipated future uses must be achieved, in order to get a RAU determination.

However, media with cleanup goals that will not impact the current or reasonably anticipated future use of the facility or area of the facility do not have to be met for this criterion. As an example, EPA recognizes that facilities or parts of facilities can be protective for specific identified uses even in situations where long-term remedial goals for groundwater have not been achieved, but controls are in place to prevent exposures.

The project manager evaluating a RCRA facility or area of a facility for a RAU measure determination will check to ensure that cleanup goals identified in the remedy selection, statement of basis or similar documents have been met for all media that may affect current and reasonably anticipated future land so that there are no unacceptable risks. The project manager will document this achievement on the RCRA RAU Determination Form and provide the RCRA Info event or reference document that supports this determination.

3.2.3.1 Reasonably Anticipated Future Use

Reasonably anticipated future uses are normally reflected in the remedy selection and decision process. For many currently operating facilities, the reasonably anticipated future use will be continuing industrial use of the property. For facilities that have closed or are expected to go into a new use in the near future, the possible next future use(s) that has been identified by the owner/operator and community would be the reasonably anticipated future use. There is no need to speculate about other feasible, but theoretical uses.

3.2.3.2 Facilities Which Have Achieved Cleanup Complete Determination

A RCRA facility or area of a facility that has achieved a "Corrective Action Activities Terminated" decision, (CA999 in RCRA Info), is considered to have met all RAU measure criteria and will automatically be given a RAU determination[12]. This includes facilities that have received a CA999 prior to, as well as after, January 1, 2007. Facilities that have received a "corrective action complete without controls" determination" or a "cleanup complete with controls" determination (CA900 in RCRA Info) are also considered to have met the RAU measure criteria and will automatically be given a RAU determination.[13]

3.2.3.3 Facilities Which Have Achieved Construction Complete

A RCRA facility or area of a facility that has met the RCRA GPRA milestone Construction Complete (CA550),[14] will be considered to have met the cleanup goals criteria for the RAU determination. These facilities or areas must still meet the PFP/HE EI and the Institutional Control criteria in order to be given a RAU determination.

3.2.3.4 Facilities That Have Not Yet Met Construction Complete Criteria

Some facilities or area of a facility, have not yet met the Construction Complete milestone, but may still meet the RAU cleanup goals criteria through proper assessment or cleanup through interim measures. In this instance, the Project Manager should indicate on the RAU Determination form that the cleanup goals for all media that may affect current and reasonably anticipated future land use have been met, and list the documents where the cleanup goals are identified. The PFP/HE EI and IC criteria must also be met in order for the facility or area of a facility to be given a RAU determination.

3.2.3.5 Media to be Covered

Any media that may affect current and reasonably anticipated future land uses should be considered when making this determination. If on-site wetlands, surface water bodies, soil, sediments or other media pose an unacceptable risk to humans under current and reasonably anticipated future land use, cleanup goals for these should be met prior to giving the facility or area of a facility a RAU determination.

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[12] For more information on completion of corrective action, see EPA February 12, 2003 memorandum: "RCRA's Guidance on the Completion of Corrective Action Activities at RCRA Facilities." The Federal Register Notice with this memo is posted at http://www.epa.gov/correctiveaction/resource/guidance/gen_ca/compfedr.pdf

[13] Facilities which achieve a "corrective action complete without controls" do not need institutional controls. Facilities receiving a "corrective action complete with controls" must have institutional controls in place in order to achieve this designation.

[14] The definition of CA550 is posted on the Corrective Action website at http://www.epa.gov/epaoswer/hazwaste/ca/facility/ca-diction.pdf - page 23

3.2.3.6 Ecological Cleanup Goals

If cleanup goals have been established in a remedy selection document, statement of basis or other similar documents for on-site ecological exposures, they must be met for a facility or area of a facility to meet the RAU criteria. Off-site ecological clean-up goals do not have to be met to get a RAU determination.

3.2.3.7 Facilities with Potential for Vapor Intrusion Exposures

Some facilities may have volatile contaminants in groundwater, soil, and/or soil-gas that, when they underlie occupied buildings, can result in unacceptable exposures if these contaminants intrude into the indoor air of the overlying buildings (via mechanisms similar to that for radon gas). Concerns regarding vapor intrusion are normally included in the facility investigation and cleanup goals and/or controls to limit exposure are included in the remedy. Potential for vapor intrusion exposures can be addressed, either through site-specific assessments demonstrating there is no unacceptable vapor intrusion, or through engineering and/or institutional controls that ensure there are no unacceptable exposures due to vapor intrusion. Where unacceptable vapor intrusion exposures are anticipated, vapor intrusion concerns can be considered to have been met when there are controls in place to prevent unacceptable exposures and risks under current and reasonably anticipated future land uses.

3.2.3.8 Facilities With Off-site Contamination

There are instances where the on-site surface media for a facility or area have been cleaned up, and the "on-site" acreage is safe for current and reasonably anticipated future uses (and the acreage meets HE EI criteria and has the needed ICs in place), but off-site contamination has not been fully addressed and/or cleanup goals for off-site contamination have not been met (e.g., off-site groundwater contamination, off-site stream sediments may not yet meet cleanup goals). In these instances, the facility can still be given a facility-wide RAU determination.

3.2.4 Documenting "Institutional or Other Controls" Criteria for the RAU Measure

The RAU criterion requires that "*all institutional or other controls, identified as part of a response action or remedy, as required to help ensure long-term protection, are in place*."

While this RCRA – LRM guidance discusses the process of documenting ICs for the RAU determination, it does not itself include a comprehensive discussion of the development, use and appropriateness of specific ICs for specific RCRA sites.

For more in depth discussion of institutional controls, refer to references listed in section 3.2.4.5, and to additional guidance EPA issues after today, as it becomes available.

EPA defines ICs as non-engineered instruments, such as administrative and legal controls, that help to minimize the potential for human exposure to contamination and protect the integrity of the remedy. Such controls provide information and/or restrictions that help modify or guide human behavior at properties where hazardous waste contamination prevents unlimited use and unrestricted exposure. ICs may be used by themselves or in conjunction with engineering controls. ICs can provide vital safeguards for property that have not been cleaned up to levels safe for unrestricted use. The term "institutional controls in place" is commonly used to mean ICs have been established and are being implemented.

If ICs are identified as being needed for the facility, the project manager should check to see if they are in place, and list the ICs that have been implemented for the facility on the RCRA RAU Determination form.

3.2.4.1 IC, or Package of ICs, Needed For A Specific Facility

The IC, or package of ICs needed for a specific RCRA facility are commonly identified in the Statement of Basis for the remedy selection or in an equivalent decision document. Reasonably anticipated uses are normally identified during remedy selection to inform this process. The project manager making the RAU determination should check the remedy decision documents for any information regarding changes in IC requirements. The facility or area of a facility shall be considered not to have met the IC criteria for a RAU measure determination if ICs identified as being needed by the remedy have not yet been implemented. Facilities that have achieved a "corrective action activities terminated" designation (CA999), a "corrective action complete with controls" designation (which requires ICs to be in place to get the designation), or a "corrective action complete without controls" designation will be assumed to have met the IC criteria.

3.2.4.2 Resources for Project Managers on ICs

There are a number of resources for project managers to help determine an appropriate package of ICs needed at a specific facility.

- Each EPA Region has designated a Regional Institutional Control Legal Coordinator. These Coordinators have experience with the use of ICs at Superfund and RCRA facilities and have knowledge of EPA's policies and guidance documents. They are a helpful resource for providing advice and answering questions on the use of ICs. An up-to-date list of Institutional Controls Legal

Coordinators for each Region is available to EPA employees at http://intranet.epa.gov/oeca/osre/workgroup/ic.html

- OSWER maintains a public website with ICs information at http://www.epa.gov/superfund/action/ic (not all of the information there is RCRA's, but much of it is transferable across programs).

- EPA has issued guidances on Institutional Controls. Additional documents may be developed in the future.

  - "Institutional Controls: A Site Manager's Guide to Identifying, Evaluating and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups", September 2000 (EPA 540-F-00-005, OSWER 9355.0-74FS-P).

  - Draft Guidance, "Institutional Controls: A Guide to Implementing, Monitoring and Enforcing Institutional Controls at Superfund, Brownfields, Federal Facility, UST and RCRA Corrective Action Cleanups", Feb. 2003. http://www.epa.gov/superfund/action/ic/guide/index.htm

  - Advance Notice of Proposed Rulemaking, "Corrective Action for Releases From Solid Waste Management Units at Hazardous Waste Management Facilities," (May 1, 1996, 61 FR 19432) includes a discussion of the use of institutional controls. A copy of this document is at: http://www.epa.gov/EPA-WASTE/1996/May/Day-01/pr-547.txt.html

3.2.4.3 Training for Project Mangers on ICs

OSW is developing comprehensive RCRA training that will have a section on institutional controls. Other entities also offer training on institutional controls.

Appendix I - Status of Use Indicator[15]

The Status of Use Indicator refers to how the acres[16] of the facilities and acres included in the Universe Indicator are being used at the point in time when this indicator is documented. The Status of Use Indicator has the following sub-indicators:

- ***Continued Use*** – Acres in continued use refer to areas that are being used in the same general manner as they were when the facility became subject RCRA Corrective Action.

- ***Reused –*** Acres at a facility identified as in reuse refer to a facility where a new use or uses are occurring such that there has been a change in the type of use (e.g., industrial to commercial), or the property was unused and now supports a specific use. This means that the developed facility or area is actually used for its intended purpose by customers, visitors, employees, residents, or fauna, in the case of ecological reuse.

- ***Planned Reuse –*** Acres in planned reuse include facilities or acres where a plan for a reuse is in place, but reuse has not yet begun. This could include conceptual plans, a contract with a developer, secured financing, approval by the local government, or the initiation of facility redevelopment.[17]

- ***Unused –*** Acres identified as unused include facilities or acres not being used in any identifiable manner. This could be, for example, because facility investigation and cleanup are ongoing, operations have ceased, the owner is in bankruptcy, or cleanup is complete, but the facility remains unused.

The Status of Use Indicator is independent of the status of response action because it recognizes that facilities or acres could be in various stages of use at various stages of cleanup and because use and reuse can change.

[15] The Status of Use indicator is one of the optional indicators in the CPRM Guidance. The definition, criteria, and implementation information here were taken directly from the CPRM Guidance found at http://www.epa.gov/swerrims/landrevitalization/docs/cprmguidance-10-20-06covermemo.pdf

[16] While acres are used as the unit of measurement for the Status of Use Indicator, the program could also count the number of facilities in the defined Status of Use categories. However, because a site may have more than one land use, the aggregated data may exceed the number of sites in the universe.

[17] In the CPRM Guidance, OSWER acknowledges that the "Planned Reuse" category may be difficult to capture with certainty; nonetheless, OSWER believes it is important to distinguish facilities with "in place" plans for reuse as compared to facilities categorized as unused.

Appendix II - Type of Use Indicator[18]

Commercial and Public Service

- *Commercial Use* – Commercial use refers to use for retail shops, grocery stories, offices, restaurants and other businesses.
- *Public Service Use* – Public service use refers use by a local or state government agency or a non-profit group to serve citizens' needs. This can include transportation services such as rail lines and bus depots, libraries and schools, government offices, public infrastructure such as roads, bridges, utilities or other services for the general public.

Green Space

- *Agricultural Use* – Agricultural uses refers to use for agricultural purposes, such as farmland for growing crops and pasture for livestock. It also can encompass other activities, such as orchards, agricultural research and development, and irrigating existing farmland.
- *Recreational Use* – Recreational use refers to use for recreational activities, such as sports facilities, golf courses, ball fields, open space for hiking and picnicking, and other opportunities for indoor or outdoor leisure activities.
- *Ecological Use* – Ecological use refers to areas where proactive measures, including a conservation easement, have been implemented to create, restore, protect or enhance a habitat for terrestrial and/or aquatic plants and animals, such as wildlife sanctuaries, nature preserves, meadows, and wetlands.

Industrial

- *Industrial Use* – Industrial use refers to traditional light and heavy industrial uses, such as processing and manufacturing products from raw materials, as well as fabrication, assembly, treatment, and packaging of finished products. Examples of industrial uses include factories, power plants, warehouses, waste disposal sites, landfill operations, and salvage yards.

Military and Other Federal

- *Military Use* – Military use refers to use for training, operations, research and development, weapons testing, range activities, logistical support, and/or provision of services to support military or national security purposes.
- *Other Federal Use* – Other federal use refers to use to support the Federal government in federal agency operations, training, research, and/or provision of services for purposes other than national security or military.

Mixed

- *Mixed Use* – Mixed use refers to areas at which uses cannot be differentiated on the basis of acres. For example, a condominium with retail shops on the ground floor and residential use on the upper floors would fall into this category. When selecting Mixed Use, the individual types of uses should be identified, if possible.

Residential

- *Residential Use* – Residential use refers to use for residential purposes, including single-family homes, town homes, apartment complexes and condominiums, and child/elder care facilities.

[18] The Type of Use indicator is one of the optional indicators in the CPRM Guidance. The categories, definition, criteria, and implementation information here were taken directly from the CPRM Guidance posted at http://www.epa.gov/swerrims/landrevitalization/docs/cprmguidance-10-20-06covermemo.pdf
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