



## **Institutional Controls Bibliography:** Institutional Control, Remedy Selection, and Post- Construction Completion Guidance and Policy

### **Purpose:**

The purpose of this document is to serve as a reference for policy guidelines concerning the use of institutional controls (ICs). The *IC Bibliography* covers 40 guidance and policy documents and provides citations and brief synopses of the IC use and policy information contained in each. It is anticipated that this document will prove useful to the Superfund program as it identifies, selects, plans, and implements ICs at sites nationwide.

### **I. Institutional Controls-Specific**

- ❖ ***Sample Federal Facility Land Use Control ROD Checklist with Suggested Language***, June 2005, <http://www.epa.gov/fedfac/documents/icchecklist.pdf>
  - Describes the critical LUC commitments and descriptions which can be used to ensure protectiveness in federal facility RODs
- ❖ ***Institutional Controls: A Citizen's Guide to Understanding Institutional Controls at Superfund, Brownfields, Federal Facilities, Underground Storage Tank, and Resource Conservation and Recovery Act Cleanups***, February 2005, OSWER 9355.0-98, EPA- 540-R-04-003, <http://www.epa.gov/superfund/action/ic/guide/citguide.pdf>
  - Defines and describes basic components of institutional controls and how they may be used
- ❖ ***Strategy to Ensure Institutional Control Implementation at Superfund Sites***, September 2004, OSWER 9355.0-106, <http://www.epa.gov/superfund/action/ic/strategy.htm>
  - Describes EPA's plan for ensuring that institutional controls (ICs) are successfully implemented at Superfund sites, with an emphasis on evaluating ICs at sites where construction of all remedies is complete
- ❖ ***ICs: 3rd Party Beneficiary Rights in Proprietary Controls***, April 2004, <http://www.epa.gov/compliance/resources/policies/cleanup/superfund/ic-thd-pty-rights.pdf>
  - Explains an approach EPA can consider at both Superfund and RCRA Corrective Action cleanups that will allow EPA to maintain the right to enforce a proprietary control when it is determined that EPA will not be the grantee of a property interest.
- ❖ ***Institutional Controls: A Guide to Implementing, Monitoring and Enforcing Institutional Controls at Superfund, Brownfields, Federal Facility, UST and RCRA Corrective Action Cleanups***, (Draft), February 2003, OSWER 9355.0-89, EPA 540-R-04-002, <http://www.epa.gov/superfund/action/ic/guide/index.htm>
  - Provides an overview of responsibilities for the implementation, monitoring, and enforcement of institutional controls (ICs) and discusses some of the common issues site managers and site attorneys may encounter
- ❖ ***Institutional Controls: A Site Manger's Guide to Identifying, Evaluating and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups***, September 2000, OSWER 9355.0-7-4FS-P, EPA 540-F-00-005, <http://www.epa.gov/superfund/action/ic/guide/index.htm>
  - Contains information about IC use, factors to consider for selecting appropriate ICs, and includes a matrix of benefits and limitations of different types of ICs

## **II. Remedy Selection**

- ❖ ***National Oil and Hazardous Substances Contingency Plan***, <http://www.epa.gov/oilspill/pdfs/40cfr300.pdf>
  - RI/FS, remedy selection expectations; 40 CFR 300.430 (a) (1) (iii) C & D, p.67
    - ICs expected to be part of remedies, as appropriate, and to serve as a supplement to engineering controls
    - ICs may be used during RI/FS, RA, and/or completed remedy
    - ICs shall not substitute for active response measures as the sole remedy unless active measures are not practicable
  - FS, developing alternatives for source control actions, 40 CFR 300.430 (e) (3) (ii), p.71
    - As appropriate, one or more alternatives that involves little or no treatment but provides protection via engineering controls (e.g., containment), and, as necessary, institutional controls to assure continued effectiveness
- ❖ ***A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents***, July 1999, OSWER9200.1-23.P, EPA 540-R-98-031, <http://www.epa.gov/superfund/action/guidance/remedy/document.htm>
  - 3.3.7 Summary of Remedial Alternatives, p. 3-5 and 3-15
    - ICs are components of the remedy
  - 4.3.2 Documenting Significant Changes (Proposed Plan), Significant Changes to a Component of the Preferred Alternative, p. 4-4
  - 6.2.4 Description of Selected Remedy, p. 6-4
  - 6.3.9 Description of Alternatives, p.6-26 through p.6-28
    - footnotes 16 & 17 provide IC definitions, p. 6-26, -27
    - Description of Remedy Components, include ICs, p.6-27
    - Highlight 6-32: Examples of remedy components for each alt.: ICs included in MNA, soil, ground water, p. 6-28
  - Highlight 6-24: Example Comparative Analysis of Alternatives: ICs part of consideration for overall protectiveness and long-term effectiveness, p. 6-30, 31
  - 6.3.12 Selected Remedy, Description of Selected Remedy, p. 6-41
    - IC information from the Alternatives section should be expanded with details in the Selected Remedy section
  - Highlight 6-30: Cost Estimate, p.6-44
    - ICs included in part of O&M costs
  - 6.3.13 Statutory Determinations, p.6-48
    - ICs part of means remedy could use for protection of human health and the environment
  - Highlight 6-36: Determination of Five-Year Reviews, p.6-54
    - Statutory reviews where ICs are part of ensuring protectiveness
  - Highlight 6-39: Management Review Checklist, p.6-59
    - Question #2 (RAOs) and #9 (ICs)
  - 9.4.1 Ground water remedies
    - ICs as part of MNA remedies, p.9-7
  - Appendices A & B: Examples
    - Proposed Plan Summary of Alt., p. A-5
    - Sample language for documenting MNA remedies p. B-6,-7
- ❖ ***Rules of Thumb for Superfund Remedy Selection***, August 1997, OSWER 9355.0-69, EPA 540-R-97-013, <http://www.epa.gov/superfund/action/guidance/remedy/remedies/principles.htm>
  - Exhibit 1, p. 2 Goals

- EPA expects to use ICs for short- and long- term site management
- Risk Assessment, #4, 3<sup>rd</sup> bullet, p. 6
  - Risk calculations for current and future risk should be done without including ICs for risk reduction
  - An IC-only remedy is considered limited action
- Developing Appropriate Remedial Alternatives
  - ICs can limit productive reuse, p.11
  - Evaluation of alternatives should include combination of engineering and institutional controls, p.12, #1
  - Low level threat waste treatment may be preferable to containment to minimize long-term IC requirements, p.13, #5
  - ICs shall only be used alone if active measures are not practicable, p.13, #7
- ❖ ***Role of Costs in the Superfund Remedy Selection Process***, September 1996, OSWER 9200.3-23FS, EPA 540/F-96/018, <http://www.epa.gov/superfund/action/guidance/remedy/remedies/principles.htm>
  - Repeats some basic information that is contained in *Rules of Thumb*
- ❖ ***Land Use in the CERCLA Remedy Selection Process***, May 1995, OSWER 9355.7-04, <http://www.epa.gov/superfund/resources/landuse.pdf>
  - IC section, p.9
  - Document contains general principles to be considered, much is captured in other documents
- ❖ ***CERCLA Orientation Manual***, October 1992, EPA/542/R-92/005, <http://www.epa.gov/superfund/action/guidance/remedy/remedies/principles.htm>
  - Remedial Activity: O&M, p. VII-19
    - ICs as part of O&M responsibility of State or PRP
  - State and Indian Tribal Involvement, p. VIII-4
    - State assurances to maintain ICs along with holding any interest in real property
  - Manual also contains some definitional information captured in other documents
- ❖ ***Role of Baseline Risk Assessments in Superfund Remedy Selection Decisions***, April 1991, OSWER 9355.0-30, <http://www.epa.gov/superfund/action/guidance/remedy/remedies/principles.htm>
  - Implementation, Risks Warranting Remedial Actions, p. 4
    - RME for all media should not assume that ICs will account for current and future risk reduction
- ❖ ***Getting Ready: Scoping the RI/FS***, November 1989, OSWER Directive 9355.3-01FS1, <http://www.epa.gov/superfund/action/guidance/remedy/rifs/overview.htm>
  - Contains basic information captured in other documents
- ❖ ***Guidance for Conducting RI/FS under CERCLA***, October 1988, OSWER Directive 9355.3-01, EPA 540/G-89/004, <http://www.epa.gov/superfund/action/guidance/remedy/rifs/overview.htm>
  - Contains basic information about considerations and criteria that is captured in other documents
  - Sample scenarios that include ICs: Alternative 2-5, p. F-5, -6, -12

### **III. Related specifically to Remedy Updates**

- ❖ ***Strategy to Ensure Institutional Control Implementation at Superfund Sites***, September 2004, OSWER 9355.0-106, <http://www.epa.gov/superfund/action/ic/strategy.htm>
  - Section III., D #9, p. 11-14
    - Describes scenarios and appropriate decision documents to use

- ❖ *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents*, July 1999, OSWER9200.1-23.P, EPA 540-R-98-031, <http://www.epa.gov/superfund/action/guidance/remedy/document.htm>
  - Chapter 7: Documenting Post-ROD Changes
    - Specific IC example given in Highlight 7-1 on p. 7-4 under “significant changes”

#### **IV. Ground Water Remedies**

- ❖ *Use of Alternate Concentration Limits (ACLs) in Superfund Cleanups*, July 19, 2005, OSWER Directive 9200.4-39, <http://www.epa.gov/superfund/resources/gwdocs/acls.htm>
  - Background, #9, p.3
    - CERCLA 121(d)(2)(B)(ii) contains site-specific conditions which must be met in order to establish CERCLA ACLs. Regions should consider whether enforceable ICs can be implemented to prevent exposure
  - Implementation, p.4
    - The details of how the site will meet the site-specific conditions, including enforceable measures that will preclude human exposure, should be described in the ROD.
- ❖ *The DNAPL Remediation Challenge: Is There a Case for Source Depletion?* December 2003, EPA/600/R-03/143, [http://www.epa.gov/superfund/resources/gwdocs/non\\_aqu.htm](http://www.epa.gov/superfund/resources/gwdocs/non_aqu.htm)
  - Potential Benefits and Adverse Impacts of DNAPL Mass Depletion in the Source Zone, p. xi
    - ICs should be part of the consideration for remedies involving DNAPL mass depletion
- ❖ *Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites*, April 1999, OSWER Directive 9200.4-17P, <http://www.epa.gov/superfund/resources/gwdocs/monit.htm>
  - Footnote 8, p. 7
    - IC definition
  - Potential disadvantages of MNA, p. 10
  - Sites Where MNA May Be Appropriate, p. 18
    - Availability of reliable ICs, implementers, monitors, and enforcers should be part of consideration for use of MNA
  - Reasonable Timeframe for Remediation, p. 20
    - Reliability of ICs over long time periods is a consideration
  - Performance Monitoring and Evaluation, p.23
    - Efficacy of ICs should be evaluated by the monitoring program
- ❖ *Presumptive Response Strategy and Ex-Situ Treatment Technologies for Contaminated Ground Water at CERCLA Sites*, October 1996, OSWER Directive 9238.1-12, EPA/540/R-96/023, [http://www.epa.gov/superfund/resources/gwdocs/pum\\_tre.htm](http://www.epa.gov/superfund/resources/gwdocs/pum_tre.htm)
  - Highlight 2: Early Actions that Should Be Considered, p. 7
  - 2.6.5 Natural Attenuation, p.19
    - ICs should be a component of these remedies
  - 2.6.6 Alternate Concentration Limits
- ❖ *Methods for Monitoring Pump and Treat Performance, Part 2*, June 1994, ORD publication, EPA/600/R-94/123, [http://www.epa.gov/superfund/resources/gwdocs/pum\\_tre.htm](http://www.epa.gov/superfund/resources/gwdocs/pum_tre.htm)
  - 4.3 Treatment Termination in Long-term Analysis, p. 67
    - Standards can't be relaxed based on the presence of ICs

- ❖ ***General Methods for Remedial Operation Performance Evaluation***, January 1992, ORD publication, EPA/600/R-92/002, [http://www.epa.gov/superfund/resources/gwdocs/per\\_eva.htm](http://www.epa.gov/superfund/resources/gwdocs/per_eva.htm)
  - Man-Made Complexities, p. 3
    - Existing well-drilling restrictions may need to be negotiated for implementation of pump and treat
- ❖ ***A Guide to Remedial Actions for Contaminated Ground Water***, April 1989, OSWER Directive 9283.1-2FS, Fact Sheet for 1988 Guidance), [http://www.epa.gov/superfund/resources/gwdocs/rem\\_sel.htm](http://www.epa.gov/superfund/resources/gwdocs/rem_sel.htm)
  - Cleanup Levels, p.3
    - Use of ACLs
  - Restoration Time Frame, p.3
    - Reliability and effectiveness of ICs may impact a decision to select a remedy with a longer restoration time frame
  - Contains information captured in other documents about ICs are part of consideration for response actions
- ❖ ***Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites***, December 1988, EPA/540/G-88/003, [http://www.epa.gov/superfund/resources/gwdocs/rem\\_sel.htm](http://www.epa.gov/superfund/resources/gwdocs/rem_sel.htm)
  - Contains IC information captured in other ground water documents
  - 5.3.3.2 Special Situations Requiring Wellhead Treatment or Alternate Water Supply and ICs, p. 5-8
    - describes some scenarios when restoration may not be possible and ICs may need to be part of the selected remedy
  - Appendix A: Case Study with Site Variations
    - ICs are described to be of dubious reliability in this scenario; mentioned on p. A-8, 10, 12, 13, 14

## **V. Media- and Contaminant-Specific Guidance**

- ❖ ***Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites***, December 2002, OSWER 9355.4-24, <http://www.epa.gov/superfund/resources/soil/index.htm>
  - 2.1 The Screening Criteria, p. 2-2 and 4.1 Factors to Consider in Identifying Future Use Scenarios, p. 4-1
    - ICs should be part of the consideration of future land use assumptions
  - 4.3 Additional Considerations for the Evaluation of Non-Residential Exposure Scenarios
  - 4.3.2 Institutional Controls, p. 4-31
    - ICs should be included in analysis of non-residential screening assessment, which should include an evaluation of multiple IC options
    - Describes the 4 types of ICs and references IC guidance
  - 5.1 Applicability of the Construction Scenario, p.5-2
    - Describes two situations when RPMs may choose not to evaluate the construction scenario, but ICs should still be evaluated to assess the feasibility of restricting site activities
- ❖ ***Principles for Managing Contaminated Sediment Risk at Hazardous Waste Sites***, February 2002, OSWER Directive 9285.6-08, <http://www.epa.gov/superfund/action/guidance/remedy/remedies/media.htm>
  - III. Risk Management Principles, p.8
    - #9 “Maximize the Effectiveness of ICs and Recognize their Limitations”
- ❖ ***Abandoned Mine Site Characterization and Cleanup Handbook***, August 2000, Region 8,9, and 10 publication, EPA 910-B-00-001, <http://www.epa.gov/superfund/resources/remedy/pdf/amscch.pdf>

- 5.6 Fiscal Impacts on Local Governments
  - ICs may affect marketability of local properties and local governments may not be eager to pursue IC options
- 6.4.1 Operable Units: Cleanup Objectives, p.6-5
  - Objectives should be in terms of contaminant level and exposure route, since these are frequently targeted by engineering and institutional controls
- Chapter 10: Remediation and Cleanup Options
  - Definition and background, p.10-2
  - 10.5 ICs, Describes types and applications of ICs, p.10-10 through p.10-12
- 11.5.1 Administrative and Injunctive Authorities
  - Discusses implementation of ICs to reduce endangerment, under the broad authority given EPA by CERCLA
  - Appendix D.5.6 Implementation of SDWA at Superfund Mining Sites, p.D-37
- ❖ **Conducting Remedial Investigations/Feasibility Studies at Municipal Landfills**, February 1991, EPA 540/P-9/001, <http://www.epa.gov/superfund/resources/remedy/pdf/540p-91001-s.pdf>
  - Contains very general information that is captured in more detail in other documents
  - Table 6-1 provides scenarios which include ICs (again very general)
- ❖ **Guidance on Remedial Actions for Superfund Sites with PCB Contamination**, August 1990, OSWER 9355.4-01, EPA 540/G-90/007, <http://www.epa.gov/superfund/action/guidance/remedy/remedies/contaminant.htm#PCBs>
  - Contains general information about the consideration ICs should be given during review of remedy alternatives, which is described in other documents
  - Appendix A: Summary of FY82-FY89 RODs for PCB-contaminated media
    - ICs/deed restrictions at Sullivan’s Ledge, MA (p.A-4), Clothier Disposal, NY (p.A-6), GE Moreau, NY (p.A-7), Douglassville Disposal, PA (p.A-11), Airco Carbide, KY (p.A-12), Goodrich B.F. Chemical Group, KY (p.A-13), AlSCO Anaconda, OH (p.A-15), Sheridan Disposal Services, TX (p.A-24)

## **VI. Post-Construction Completion**

- ❖ **NCP Guidance on O&M**, <http://www.epa.gov/superfund/action/postconstruction/operate.htm>, citation pulled from NCP, p. 78-79
  - 40 CFR Part 300.435 (f)
    - ICs as part of O&M, States must give assurances
- ❖ **Close-Out Procedures for National Priorities List Sites**, January 2000, OSWER Directive 9320.2-09A-P, EPA 540-R-98-016, <http://www.epa.gov/superfund/resources/closeout/index.htm>
  - Contains general information stating that ICs are a remedy component
  - Exhibit 2-3: RA Report Contents, Section VI. Final Inspections and Certifications, p.2-8 and Exhibit 3-3 PCOR Summary, Section II. Summary of Site Conditions, p.3-4
    - These sections should include details about ICs (e.g., types, monitoring, entity responsible for enforcing, etc.)
  - Exhibit 3-3: PCOR Summary, Section IV. Activities and Schedule for Site Completion, p.3-4

- ICs included as an example item for assuring effectiveness
- 3.5.5 Monitoring and ICs, p.3-7; 4.1 Site Completion Criteria, p.4-1; and 4.4 Site Completion Checklist, p.4-5
  - Sites can be construction complete before ICs are in place if ICs are an activity listed in the PCOR's "Schedule for Site Completion"
  - ICs must be in place for site completion
- 4.2.2 Remedial Authority, Sites Requiring No Remedial Construction in the Final OU, p.4-3
  - These sites meet site completion requirements and are eligible for deletion when ICs are in place, among other criteria
- Exhibit 4-2: FCOR Summary, Section V. Summary of O&M, p. 4-4
  - All necessary ICs must be in place
- 5.1 NPL Deletion Criteria, highlight box, p.5-1
  - NCP citation for ICs are part of O&M [300.510 (c)]
  - 6.4 When You Can Partially Delete, Example 1, p. 6-4
- ❖ **Comprehensive Five-Year Review Guidance**, June 2001, OSWER No. 9355.7-03B-P, EPA 540-R-01-007, <http://www.epa.gov/superfund/resources/5year/guidance.pdf>
  - 1.5.6 How is a ROD that includes institutional controls handled?, p.1-8
  - Implementation of ICs should be considered...
    - when reviewing site documents and status, p.3-4
    - in answering Question A ("Is the remedy functioning as intended by the decision documents?"), p.3-7
    - Reviewers should assess if selected ICs are in place and prevent exposure, p.4-1
    - The status of implementation should also be evaluated at sites in which the remedial action is still under construction, p.4-3
    - If ICs are not in place, determine why not, and obtain the schedule for implementation, p.4-4
  - Potential issues
    - Incomplete response action, including ICs (e.g., environmental easements or well restrictions are not in place), p.4-10
    - Inadequate ICs (e.g., well drilling restrictions are in place but are not preventing exposure), p.4-10
    - Differences found in actual or proposed land use other than those assumed in the selection of the response action, p.4-11
    - Land use changes that are being considered by local officials, p.4-9
  - Potential Recommendations
    - Enforce access controls and ICs...When you have evidence that groundwater wells continue to be installed despite well restrictions that are currently in place, you can recommend an evaluation of the need for further enforcement of institutional controls (e.g., prohibit well drilling), p.4-12
    - For each recommendation, you should identify the party responsible for implementation, the agency with oversight authority, a recommended schedule for implementation and completion, and the impact, if any, on current or future protectiveness, p.4-13
  - Protectiveness
    - "Normally, the remedy should be considered as NOT protective when the following occur: ...Potential or actual exposure is clearly present or there is evidence of exposure (e.g., institutional controls are not in place or not enforced and exposure is occurring), p.4-14

- Exhibit 4-5, example includes IC information, second example p. 4-16 and 4-16, and example on p. 4-20.
- Inspection Checklist, Appendix D
  - In interviews, check on status of ICs w/ local regulatory authorities and response agencies (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deed, or other city and county offices, etc.), p. D-8
- ❖ ***Operation and Maintenance in the Superfund Program***, May 2001, OSWER 9200.1-37FS, EPA 540-F-01-004, <http://www.epa.gov/superfund/action/postconstruction/operate.htm>
  - Contains general information on ICs as part of O&M and, as such, should normally be included in O&M Plans and O&M Manuals
  - F. Transition from RA to O&M, Ownership Agreements, p.9
    - PRPs may retain responsibility for O&M, including maintaining effectiveness of ICs, after site ownership has changed
  - G. EPA Oversight During O&M, Routine Reports, p.10
    - Verification of IC integrity should be included in reports to EPA
- ❖ ***O&M Report Template for Ground Water Remedies (With Emphasis on Pump and Treat Systems)***, April 2005, OSWER 9283.1-22FS, EPA 542-R-05-0101, <http://www.epa.gov/superfund/action/postconstruction/operate.htm>
  - Executive Summary, Interpretation of Progress with Respect to System Goals, 3<sup>rd</sup> and 4<sup>th</sup> bullets, p. 6
    - ICs should be part of evaluation of progress toward short- and long-term goals
  - 1.4.2 Other Remedy Components, p. 10
    - IC details should be included here
  - Other Operations Information, p. 16
    - Effectiveness of ICs should be documented, including stating what information was collected to assess the effectiveness
- ❖ ***Transfer of Long-Term Response Action (LTRA) Projects to States***, July 2003, OSWER 9355.0-81FS, EPA 540-F-01-021, <http://www.epa.gov/superfund/action/postconstruction/operate.htm>
  - Exhibit 2-Typical O&M Plan Elements to Consider for LTRA Transfer
    - Description of all required ICs in O&M Plan, p. 6, and as part of documentation for transfer in year 10, p. 9

## **VII. Land Use/ReUse**

- ❖ ***Guidance for Preparing Superfund Ready for Reuse Determinations***, February 2004, OSWER 9365.0-33, <http://www.epa.gov/superfund/programs/recycle/rfr.htm>
  - I. Introduction, Background, p.2
    - Restating IC information from decision documents can help communicate use limitations to public
  - II. Guidance Applicability, p.4
    - ICs should be in place and working before RfR
    - Describes possible alternatives to the above
  - IV. Format and Content of RfR Determinations, Monitoring and Revising RfRs
    - RfR should list mechanisms for maintaining ICs, p.6
    - EPA can, but isn't obligated to, modify RfRs if site circumstances change, p.6
  - VI. Enforcement Considerations
    - RfRs do not supersede or change state/local land use decisions (including ICs) and should be consistent with them, p. 7



- RfRs should include who will monitor and enforce the ICs, p. 8
  - Attachment 1: Outline for RfR Determination Documents
    - ICs should be included in the Cover Sheet and the Ongoing Limitations and Responsibilities sections
  - Attachment 2; Model Language for RfR Determinations
- ❖ **Reusing Superfund Sites: Commercial Use Where Waste is Left on Site**, Feb. 2002, OSWER 92330.0-100, EPA 540-K-01-008, <http://www.epa.gov/superfund/programs/recycle/tools/commreuse.htm>
  - IC section, p. 26
    - General IC considerations and some specific real site examples
- ❖ **Reuse Assessments: A Tool to Implement the Superfund Land Use Directive**, June 2001, OSWER 9355.7-06P, <http://www.epa.gov/superfund/programs/recycle/tools/recass.htm>
- ❖ **Reusing Superfund Sites: Recreational Reuse of Land Above Hazardous Waste Containment Areas**, March 2001, OSWER 9230.0-0-93, EPA 540-K-01-002, <http://www.epa.gov/superfund/programs/recycle/tools/recreuse.htm>
  - Section 5, Case Studies
    - Timber Butte, MT, p.37
    - Ohio River Park, PA, p.41
  - Appendix C, Sites and Contacts
    - Tar Creek, OK, p. C-1
    - Fulbright Landfill, MO, p. C-5