United States Environmental Protection Agency | Office of Solid Waste and Emergency Response | OSWER 9355.0-79FS
EPA/540/F/01/009
June 2001

Superfund Post Construction Completion: An Overview

The purpose of this fact sheet is to provide an overview of Superfund Post Construction Completion (PCC), an integral part of the Superfund remedial program. The fact sheet lays out the goal and objectives for Superfund PCC work, describes why this work is important, identifies the activities included under the banner of PCC, and describes the roles and responsibilities of involved parties. The fact sheet addresses these topics at an overview level of detail. Key references and a bibliography are provided for more detailed information. The fact sheet addresses response actions completed under the Superfund program, including response actions completed by Federal facilities under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The activities described in this fact sheet do not address response actions taken under the EPA Brownfields program.

A. OVERVIEW

What is Superfund Post Construction Completion?

Superfund PCC is the name given for several activities generally undertaken at sites following the construction of response actions. These activities include operation and maintenance and long-term response actions (or LTRAs); institutional controls; five-year reviews; optimization of remedies; and deletion from the NPL. The goal of Superfund PCC is to ensure that response actions provide for the long-term protection of human health and the environment. The PCC activities described in this fact sheet contribute toward achieving this goal.

Why is this work important?

As of January 2001, more than 50% of the sites on the Superfund National Priorities List (NPL) were designated construction complete. An additional 400 sites have completed initial stages of remediation, and many of these should achieve construction completion over the next five years. Many of these sites have, or will have, remedies that only allow for restricted future uses due to contamination remaining on-site, with combinations of engineering and institutional controls to limit unacceptable exposures. Also, many of these sites with ground water contamination will require ongoing remediation over many years to achieve protective cleanup levels. Superfund

PCC activities will help ensure that these response actions perform as intended and remain protective of human health and the environment. Finally, EPA, States, potentially responsible parties (PRPs), and other Federal agencies have invested millions of dollars in site characterization, and in the design and implementation of response actions. Superfund PCC activities will help preserve these financial investments.

Who is involved in conducting PCC activities?

Roles and responsibilities for the long-term care of sites following a cleanup are specifically addressed in CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). EPA, States, PRPs, and other Federal agencies all play an integral role in Superfund PCC and should fulfill their respective responsibilities to ensure that response actions remain protective. The primary responsibility for the long-term care of response actions is vested in States for Fund-financed sites, in viable and responsible PRPs where they assume the lead for cleanup, and in other Federal agencies for Federal facility sites. Specific responsibilities for States, PRPs and Federal agencies include operation and maintenance of waste containment structures; operation and maintenance of ground water restoration or containment systems; environmental monitoring; and implementation, oversight and enforcement of institutional controls required to ensure protectiveness. Federal agencies assume additional responsibilities when transferring property to external parties during or after remediation.

EPA's role in PCC also is extensive. It may include operating Fund-financed surface and ground water restoration systems for up to ten years (LTRAs); ensuring that operation and maintenance and environmental monitoring is performed; ensuring that institutional controls are implemented and remain effective; evaluating remedy performance and conducting five-year reviews (or reviewing reports and evaluating the protectiveness of response actions when five-year reviews are performed by States or other Federal agencies); and deleting sites from the NPL once all response actions are completed. EPA also has responsibility for evaluating Federal agency demonstrations that a remedial action is "operating properly and successfully" as a precondition to the transfer of Federally-owned property.

Local government officials and citizens living and working near Superfund PCC sites also can play an important role. Site managers should notify, and when appropriate involve, local citizens and officials when conducting five-year reviews, when considering changes to response actions, and when deleting sites from the NPL once the remediation process is complete. Local citizens and officials frequently can provide useful information related to the performance of O&M, compliance with physical and institutional controls, and redevelopment activities that might be planned or under consideration. These perspectives are valuable when assessing if the remedy is performing as intended, and whether the remedy remains protective.

How do external stakeholders view PCC activities?

External stakeholder interest in PCC issues has been extensive. (Please see the bibliography for a partial listing of recent external stakeholder research reports.) Several external groups have coined the term "stewardship" when referring to the long-term care of sites following remediation. This term has evolved around large and complex Federal facility sites (e.g., DOE installations) but can apply to non-Federal Superfund sites as well. Definitions for stewardship suggested by these groups vary, but generally include the following concepts: site monitoring and maintenance; implementation, monitoring and enforcement of land use controls; environmental monitoring; oversight and enforcement; information collection and dissemination; and periodic evaluation of remediation systems (including the availability of new technology). These groups suggest clear roles and responsibilities and reliable funding as essential components of stewardship.

Other parties, including the EPA Office of Inspector General, the Environmental Law Institute, and Resources For The Future, have reviewed the Agency's performance of PCC activities. This level of interest and review will likely continue as the PCC workload grows.

B. POST CONSTRUCTION COMPLETION ACTIVITIES

As noted, Superfund PCC encompasses a number of related activities including: operation and maintenance of engineered containment remedies as well as ground water and surface water restoration systems (including LTRAs); implementation and management of institutional controls; five-year reviews; optimization of remedies based on actual operating experience; and deletion from the NPL. These PCC activities support four broad objectives:

- Maintain the integrity of Superfund response actions;
- Provide relevant information to stakeholders;
- Ensure the efficiency of post construction operations; and
- Delete sites from the NPL

The following is an overview of the PCC activities presented in this fact sheet, with references and a bibliography for more detailed information.

Operation and Maintenance and Long-term Response Action

Operation and Maintenance. Operation and Maintenance (O&M) are important components of a Superfund response to ensure that the remedy performs as intended. The NCP, Subpart A, section 300.5, defines O&M as the ". . . measures required to maintain the effectiveness of response actions." O&M typically begins after the remedy is determined to be "operational and functional" (see NCP Subpart E, section 435(f)), and may be required indefinitely for remedies that contain waste on-site or include institutional controls. O&M activities include maintaining engineered containment structures; operating leachate and gas collection systems; operating ground water containment and restoration systems (following

the LTRA period for Fund-financed sites with restoration remedies); monitoring to ensure that the remedy is performing as expected and the environment is protected; and maintaining and enforcing institutional controls and access restrictions. See **Highlight 1** for an example.

Under CERCLA and the NCP, performance of O&M generally is the responsibility of the States, PRPs or Federal facilities. EPA is responsible for ensuring that the O&M work is adequately performed. Specific EPA actions may include ensuring that O&M and monitoring reports are submitted through routine oversight, or enforcement when necessary; reviewing reports and evaluating monitoring results; performing on-site inspections and documenting the results. When appropriate, EPA may also troubleshoot problems, and develop or evaluate proposals for additional response actions or adjustments to existing remedies, to achieve objectives, improve performance, or reduce costs.

Specific actions and roles and responsibilities are defined in O&M Manuals and O&M Plans. These documents provide technical and administrative details regarding the performance of O&M and should be prepared during remedial design/remedial action for sites requiring O&M. (See the EPA fact sheet *"Operation and Maintenance in the Superfund Program"* for a more detailed summary of the O&M Manual and O&M Plan.)

Highlight 1: Typical O&M Activities for Landfill Caps

- Maintenance of Landfill Cap
  - < Mowing
  - < Reseeding
  - < Ensuring appropriate controls for run off
  - < Repairing cracks, animal burrow damage, and areas of settlement and erosion
- Operation and Maintenance of Active Components
  - < Leachate collection and treatment system
  - < Gas collection and treatment system
- Monitor Land Use Controls
  - < Monitor and enforce institutional controls
  - < Maintenance of access controls (e.g., security fences)
- Environmental Monitoring
  - < Monitoring to ensure that waste in the containment area is not migrating to ground water or affecting the environment

Cap maintenance and land use restrictions generally are required as long as waste remains in place. Active leachate and gas collection and treatment systems could be terminated if measurements indicate the collected gas and leachate can be released directly to the environment.

Long-term Response Action. A variation to EPA's normal oversight role during O&M is LTRA. The NCP, Subpart E, section 300.435, addresses financing of ground water and surface water restoration systems as Fund-financed remedial actions for up to ten years after the remedy becomes operational and functional. (LTRA generally does not apply for sites where the remedial action objective is limited to containment of ground water or surface water contamination.) EPA may assume a direct role in operating the restoration system during the LTRA period, or system operations can be assigned to the State (or to a unit of local government or a political subdivision) with funding provided from the Trust Fund.

When cleanup goals are not achieved upon completion of the ten year LTRA period, the system is transferred to the State for continued O&M, including follow-on monitoring that may be required after cleanup goals have been achieved. EPA should meet with the State one to two years prior to the transfer date to finalize a transfer plan and schedule. EPA and the State should conduct a joint inspection of the system and develop a list of actions that should be completed prior to the transfer. An optimization review (see discussion below) should be considered to ensure that the system is operating effectively and efficiently. Planning for the LTRA transfer can be tied to a five-year review where schedules coincide. A fact sheet summarizing best practice for LTRA transfers is under development.

Ground water remedies generally require active management, and site managers should remain involved in overseeing the performance of these projects during LTRA and O&M. Performance and monitoring data should be maintained to support analysis and decision-making. Specific areas of interest may include ensuring that the public is being protected (e.g., the plume capture zone is being maintained); ensuring that restoration of the aquifer is progressing as planned; determining whether there are significant changes to the assumptions that were relied upon when selecting the remedy; and determining when the active portions of the remedy can be terminated. The Superfund guidance *"Presumptive Response Strategy and Ex-situ Treatment Technologies for Contaminated Ground Water at CERCLA Sites"* describes a phased approach for ground water restoration which acknowledges the complexities and uncertainties involved with this work. The guidance also describes a number of refinements to enhance system performance that can be considered, depending on site conditions, during LTRA/O&M (see **Highlight 2**).

A useful tool that may help guide ground water restoration projects, and in limited cases other remedies involving O&M, is an "exit strategy." Simply stated, an exit strategy should define the decision criteria (response objectives from the decision document), measurement strategies (sampling locations and frequencies), contingency plans (actions to consider when remediation is not progressing as expected), and roles and responsibilities for determining when a response action is complete (information collection, analysis, and decision-making). Preparation of an exit strategy should be considered for ground water and surface water restoration projects, and for long-term monitoring. The concept also may be useful for in-situ soil remediation involving soil vapor

extraction or bioremediation, and containment remedies that include an active operational component (e.g., leachate and/or gas collection and treatment). Exit strategies should provide for sufficient flexibility to address changing site conditions, and should be reviewed and adjusted, as needed, on a periodic basis.

Highlight 2: Examples of Remedy Refinements for Ground Water Pump/Treat Remedies

- Change the extraction rate in some or all wells
- Cease extraction from some wells
- Initiate "pulsed pumping"
- Add or remove extraction or reinjection wells or drains
- Add or remove monitoring wells
- Refine source control components of the remedy
- Refine enhanced recovery or in-situ degradation components of remedy
- Refine ex-situ treatment components

O&M/LTRA Summary

- Purpose – Actions taken following the construction of a response action to achieve the objectives of the remedy (e.g., achieve cleanup levels in the aquifer; prevent waste migration and exposure; maintain the integrity of the remedy)
- When Implemented – O&M and LTRA begin once a remedy is determined to be "operational and functional" (generally up to one year following the completion of construction); O&M can extend indefinitely; LTRA is limited to Fund-financed surface water and ground water restoration remedies and extends up to 10 years
- Who – States, PRPs and other Federal agencies have responsibility for performing O&M; EPA has the responsibility to ensure that O&M is performed properly; EPA has operational responsibility for Fund-financed surface water and ground water restoration systems during LTRA

Key References for O&M/LTRA:

National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300, Subpart E, section 435(f).

"Operation and Maintenance in the Superfund Program," OSWER 9200.1-37FS, EPA 540-F01-004, May 2001. http://www.epa.gov/superfund/pubs.htm

"Presumptive Response Strategy and Ex-situ Treatment Technologies for Contaminated Ground Water at CERCLA Sites," OSWER 9283.1-12, EPA 540-R-96-023, October 1996.
http://www.epa.gov/superfund/pubs.htm

Institutional Controls

Institutional controls (also called land use controls, and activity and use restrictions) are non-engineered, administrative or legal instruments that minimize the potential for exposure to contamination by limiting land or resource use. Institutional controls can play an important role in remedy selection, and generally are used in conjunction with, rather than in lieu of, engineering measures for treatment or containment. Institutional controls can be used during all stages of a cleanup to accomplish various objectives. They are intended to minimize potential exposure when contamination remaining on-site restricts the unimpeded use of a site or a ground water aquifer. Institutional controls also can be used to ensure that engineered remedies are not adversely affected by activities at the site. Examples of institutional controls include "proprietary controls" (e.g., easements and restrictive covenants), "governmental controls" (e.g., zoning restrictions, special permit requirements), "informational devices" (e.g., State registries of contaminated property, deed notices, advisories), and "enforcement controls" (e.g., orders and consent decrees issued under CERCLA). Estimates suggest more than 600 Superfund NPL sites, as of January 2001, include one or more institutional controls as part of the remedy to help ensure protectiveness. Generally, institutional controls selected as part of a remedy should be implemented along with other components of the remedy before Superfund sites can be deleted from the NPL.

The fact sheet *"Institutional Controls: A Site Managers Guide to Identifying, Evaluating and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups"* provides useful guidance when considering institutional controls as part of response actions. This guidance is intended to address concerns with institutional controls frequently raised by external parties. These include unclear legal authorities; unclear roles and responsibilities to implement, monitor, and enforce the controls; and uncertainty regarding the potential to modify or remove controls over time. When selecting institutional controls, the site manager should evaluate the situation at the site, define the needs that the institutional controls are intended to address, identify the kinds of legal and other tools available to meet those needs, and coordinate with the appropriate stakeholders (e.g., State and local government officials).

Implementation of institutional controls frequently lags behind the completion of physical construction. In the PCC time frame, site managers should ensure that appropriate measures are taken by States, PRPs and other Federal agencies to implement and maintain the institutional controls. Once institutional controls are in place, site managers should evaluate the administrative and legal documentation, as well as the physical site evidence, to ensure that they are fully effective. This review should be an integral part of the technical assessment performed during operation and maintenance inspections, as well as during the five-year review process. EPA is developing additional

guidance and piloting a tracking system to aid in the implementation and long-term management of institutional controls.

Institutional Controls Summary

- Purpose – To prevent exposure to contamination left on a site following cleanup; to prevent exposure to contamination until cleanup standards are met (e.g., ground water restoration); to protect components of the remedy
- When – Implemented during or immediately following remedy implementation consistent with the requirements of the decision document; maintained as long as needed to minimize/control/mitigate exposure or protect the remedy
- Who – Determined on a site-specific basis; site managers should work closely with States, PRPs, other Federal agencies, and local governments as appropriate and seek advance written agreements on who will implement, maintain, and enforce institutional controls

Key References for Institutional Controls:

National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300, Subpart E, sections 430 and 510.

"Institutional Controls: A Site Managers Guide to Identifying, Evaluating and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups," OSWER 9355.0-74FS-P, EPA 540-F-00-005, September 2000. http://www.epa.gov/superfund/pubs.htm

"Institutional Controls: A Site Managers Guide to Implementing, Monitoring and Enforcing Institutional Controls at Superfund and RCRA Corrective Action Cleanups" (Guidance under development, should be available during 2002 at http://www.epa.gov/superfund/pubs.htm)

Five-year Reviews

Five-year reviews generally are required following implementation of remedial actions selected under section 121 of CERCLA, when hazardous substances, pollutants, or contaminants remain on-site above levels that allow for unlimited use and unrestricted exposure. In addition, five-year reviews generally are appropriate for sites where completion of the remedial action ultimately will allow for unlimited use and unrestricted exposure, but the remedy will take longer than five years to reach cleanup levels. The purpose of a five-year review is to evaluate the implementation and performance of a remedy in order to determine if the remedy remains protective of human health and the environment. Five-year reviews provide an opportunity to identify potential problems or issues with the remedial action, and adjust O&M where necessary. Five-year reviews are required at more than 800 NPL sites as of January 2001.
EPA expects to release the *"Comprehensive Five-year Review Guidance"* during FY 2001. This document describes the requirements, roles and responsibilities, and procedures for conducting five-year reviews.

EPA typically has the responsibility for conducting five-year reviews for Fund-financed and enforcement-lead NPL sites, while other Federal agencies have responsibility for conducting reviews at Federal facility sites. Through cooperative agreements, EPA can provide funding to a State or Tribe to conduct five-year reviews. Also, EPA can authorize PRPs to conduct studies or investigations in support of a five-year review even though PRPs do not conduct actual reviews. In all cases, EPA retains the responsibility for making the protectiveness determination that is part of the review.

Determining remedy protectiveness for a five-year review involves examining three questions:

- Is the remedy functioning as intended by the decision document?
- Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of the remedy still valid?
- Has any other information come to light that could call into question the protectiveness of the remedy?

Answers to these questions can be determined through visual observation during site visits; interviews with site stakeholders, and local citizens and officials; review/evaluation of response decision documents and existing O&M and monitoring information; and, when necessary, collection of new data. Findings of the review are documented in a report which should include an identification of issues; recommendations and follow-up actions; and a determination of whether the remedy is, or is expected to be, protective of human health and the environment. The report should identify the party responsible for implementing recommendations and follow-up actions, when needed, as well as a timetable for completion. Once completed, the five-year review report should be made available to the public. Completion of the five-year review should be straightforward when site managers are actively involved in managing LTRAs, overseeing O&M and environmental monitoring, and ensuring institutional controls are implemented and effective.

Priorities for EPA include completing five-year reviews on time, eliminating a backlog of overdue reviews by the end of FY 2002, and improving the quality of reviews and the resulting reports through implementation of the comprehensive guidance, and through training provided to site managers. The program completed more than 665 reviews through September 2000, and more than 180 reviews were completed during FY 2000. Between 140 and 180 reviews per year are scheduled over the next several years.

Five-year Review Summary

- Purpose – To evaluate the implementation and performance of a remedy to determine whether the remedy remains protective of human health and the environment

- When Implemented – Generally five years following the initiation of a CERCLA section 121 response action resulting in contamination remaining on-site after a cleanup that restricts future uses, and every succeeding five years so long as future uses remain restricted; generally five years after the date of construction completion for sites where completion of the CERCLA Section 121 response action ultimately will allow for unlimited use and unrestricted exposure but the remedy will take longer than five years to reach cleanup levels

- Who – EPA or States/Tribes when acting as lead agency under the NCP; Federal agencies for Federal facility NPL sites; EPA retains responsibility for protectiveness determination

Key References for Five-year Review:

National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300, Subpart E, section 430(f)

"Comprehensive Five-year Review Guidance", OSWER Directive 9355.7-03B-P, EPA 540R-98-050. Pending, should be available during FY 2001 at http://www.epa.gov/superfund/pubs.htm

Optimization of Remediation Systems

Once remediation systems have been functioning for a period of time, opportunities may exist to optimize the operations of the system. The purpose of optimization is to identify potential changes that will improve the effectiveness of the system and/or reduce operating costs, without compromising the protectiveness of the remedy or other response objectives, through a comprehensive evaluation of system performance. Optimization recognizes that long-term remedial approaches should not remain static, that conditions change over time, and that better technologies, tools and strategies evolve which allow for continuous improvement of remedy performance.

Optimization can be applied to ground water restoration systems, as well as other remediation technologies (e.g., soil vapor extraction) and approaches (e.g., long-term monitoring). Optimization generally follows three steps: reviewing candidates and selecting sites; conducting the evaluation using an optimization protocol; evaluating results and implementing the best recommendations. Implementation may require an initial capital investment in order to realize long-term improvements and/or cost savings. Optimization techniques can be applied to ongoing response actions by EPA, States, PRPs, and other Federal agencies. The entity conducting the review should coordinate the recommended changes to the remediation system with appropriate

parties (e.g., States) and obtain EPA approval, where appropriate, prior to implementation.

EPA will complete up to 20 pilot optimization studies of Fund-financed ground water restoration systems during FY 2001. The purpose of this initiative is to optimize the performance of the selected remedies, and increase awareness among EPA site managers so that optimization becomes integrated into the cleanup process.
These pilots will use the "Remedial Systems Evaluation" (RSE) approach developed by the U.S. Army Corps of Engineers. An RSE involves an independent team of experts working collaboratively with the site manager and the operating contractor to evaluate the performance of all major components of the operating system (e.g., above ground treatment system, extraction well network, monitoring network and sampling protocols, and data management). An RSE generally includes a review of site data, a site visit, and report preparation. It provides a comprehensive but low-cost evaluation of the remediation system and is an excellent first step in a continuous improvement process. Recommendations can highlight the need for additional information, propose revisions to the extraction system (e.g., well locations and/or depths, pumping rates), and/or modifications to the treatment process.

EPA site managers are encouraged to review other Fund-financed ground water restoration projects not addressed by the pilot, and consider proposals for optimization by external parties, where the potential exists to improve performance and/or reduce operating costs. Additional information on optimization and the RSE methodology is available at the web site noted below.

Optimization Summary

- Purpose – To improve the performance and/or reduce the operating costs of remediation systems without compromising protectiveness
- When Implemented – Once actual performance and cost data are available
- Who – Optimization studies can be initiated by EPA at Fund-financed sites, or by States, PRPs, or other Federal agencies for sites under their lead; recommendations should be reviewed and approved by EPA, in coordination with the State, prior to implementation

Key References for Optimization:

OERR Memorandum "Superfund Reform Strategy, Implementation Memorandum: Optimization of Fund-lead Ground Water Pump and Treat (P&T) Systems", OSWER Directive 9283.1-13, October 31, 2000.
http://www.epa.gov/superfund/pubs.htm

Optimization Web site:
http://www.frtr.gov/optimization

Deletion from the NPL

EPA can delete sites from the NPL once all response actions are complete and all cleanup levels achieved. Procedures for deleting sites are contained in the NCP, Subpart E, section 300.425, and *"Closeout Procedures for National Priorities List Sites."* In making a determination to delete a site from the NPL,

EPA must consider whether any of the following criteria have been met:

- Responsible or other parties have implemented all appropriate response actions required;

- All appropriate Fund-financed response under CERCLA has been implemented, and no further response action by responsible parties is appropriate; or

- The remedial investigation has shown that the release poses no threat to public health or the environment, and, therefore, taking of remedial measures is not appropriate.

EPA should consult with the State when making this determination.

Under Agency policy as described in *"Closeout Procedures for National Priorities List Sites*," site deletion has been separated from the five-year review process. This means that EPA can delete a site from the NPL even when five-year reviews are required. Deletion from the NPL does not preclude eligibility for subsequent response actions. If future site conditions warrant, response actions can be taken by the PRPs, or using the Trust Fund. If there is a significant release from a site deleted from the NPL, the site may be restored to the NPL without calculating a new hazard-ranking score.

EPA also has the ability to delete portions of NPL sites. The Agency may use partial deletions to designate uncontaminated areas of a site, or when portions of a site are cleaned up and potentially available for productive use. Requirements for partial deletion are essentially the same as those noted above for a full deletion. Procedurally, partial deletions require clear documentation that supports the decision and mapping of the portion to be deleted. These are defined in *"Closeout Procedures for National Priorities List Sites*."

EPA has released guidance to streamline and accelerate the deletion process. The *"Direct Final Process for Deletions"* guidance is appropriate for sites where deletion or partial deletion from the NPL is not expected to be controversial, and the Agency does not expect adverse comments from the public. The direct-final process has been used successfully at several sites, and the guidance includes approved templates to aid in developing the required notices.

As of January 1, 2001, EPA had deleted 230 sites from the NPL, and completed 21 partial deletions. Expeditious deletion of sites is a program emphasis. During FY 2001 and beyond, EPA's goal is to delete 30 sites per year.

Deletion Summary

- Purpose – To provide notice and take comments on EPA's decision to remove sites from the NPL
- When – No further CERCLA response is appropriate
- Who – EPA has the responsibility for deletions with State concurrence

Key References for Deletion:

National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300, Section 425(e)

"Closeout Procedures for National Priorities List Sites", OSWER Directive 9320.2-09A-P, EPA 540-R-98-016, January 2000. http://www.epa.gov/superfund/pubs.htm

"Direct Final Process for Deletions", OSWER Directive 9320.2-12-FS-P, October 31, 2000. http://www.epa.gov/superfund/pubs.htm

C. ADDITIONAL INFORMATION

Copies of this document are available at the Superfund web site, http://www.epa.gov/superfund/pubs.htm. Copies of this document may also be obtained from the OERR Document Center (703) 603-9232. General Questions regarding this topic should be referred to the Call Center at 1-800-424-9346. The subject matter specialist for this document is Paul Nadeau of OERR.

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