UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
LAND AND EMERGENCY
MANAGEMENT

formerly
OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

DEC 28 2016

OLEM Directive 9200.3-117

MEMORANDUM

SUBJECT: Clarification of the Consultation Process for Evaluating the Technical Impracticability of Groundwater Restoration at CERCLA Sites

FROM: James E. Woolford, Director
Office of Superfund Remediation and Technology Innovation

Charlotte Bertrand, Director
Federal Facilities Restoration and Reuse Office

TO: Superfund National Policy Managers, Regions 1-10

PURPOSE

The purpose of this memo is to clarify the U.S. Environmental Protection Agency's (EPA's) internal consultation process for Superfund groundwater technical impracticability (TI) Evaluations. It also provides recommendations on how to prepare technically sound TI Evaluation documents when considering whether a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) groundwater cleanup site merits an applicable or relevant and appropriate requirement (ARAR) waiver. This memo is applicable to groundwater TI Evaluations for Superfund sites, including federal facilities. The memo establishes **no new TI waiver policies** for Superfund groundwater sites but, rather, provides clarification for **existing** relevant Superfund policy and guidance. It also includes recommendations for planning and developing TI Evaluation packages and describes the recommended process for EPA internal review and approval.

The memo transmits five new recommended products: 1) *Technical Impracticability Evaluation Consultation Process Flowchart*, 2) *Technical Impracticability Evaluation Work-Planning Flowchart*, 3) *Regional Technical Impracticability Evaluation Work-Planning Spreadsheet*, 4) *Technical Impracticability Evaluation Internal EPA Review Routing Slip*, and

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5) *Recommended Summary Checklist for a Superfund Groundwater Technical Impracticability Evaluation.* A workgroup of representatives from the Office of Superfund Remediation and Technology Innovation (OSRTI), Federal Facilities Restoration and Reuse Office (FFRRO), and EPA regional groundwater TI contacts prepared these products. These attachments, as well as the memo, are part of a continuing effort to provide recommendations to help promote technically sound TI Evaluations and facilitate an effective and consistent consultation process.

BACKGROUND

One of the key existing policy principles for groundwater cleanup/restoration in the Superfund program is that "Technical impracticability waivers and other waivers may be considered, and under appropriate circumstances granted if the statutory criteria are met, when groundwater cleanup is impracticable; the waiver decision should be scientifically supported and clearly documented."[1] The 1993 *Guidance for Evaluating the Technical Impracticability of Ground-Water Restoration*[2] discusses how EPA considers site-specific factors to evaluate "whether ground-water [*sic*] restoration is technically impracticable and what alternative measures or actions must be undertaken to ensure that the final remedy is protective of human health and the environment." The 1993 guidance includes recommendations on "the types of technical data and analyses needed to support EPA's evaluation of a particular site and the criteria used to make a determination." A subsequent guidance entitled *Consistent Implementation of the FY 1993 Guidance on Technical Impracticability of Ground-Water* [sic] *Restoration at Superfund Sites*[3] includes recommendations designed to help:

- Promote national consistency in TI decision making;
- Facilitate transfer of information pertinent to TI decisions between Headquarters and the regions;
- Identify the appropriate persons to conduct reviews of TI-related documents; and
- Clarify the role of Headquarters consultation.

IMPLEMENTATION

The *Technical Impracticability Evaluation Consultation Process Flowchart* (Attachment 1) lays out the recommended process for internal EPA review of the TI Evaluation by the regional offices and Headquarters, specifically the Office of Land and Emergency Management (OLEM). The Superfund Remedial Project Manager (RPM) generally is a site's overall lead. The site hydrogeologist or other designated groundwater expert and the regional TI contact (Table 1) are an integral part of the regional TI Evaluation review team. The review team should be included in relevant technical and policy discussions throughout the TI Evaluation process. EPA regional

[1] *Summary of Key Existing EPA CERCLA Policies for Groundwater Restoration.* OSWER Directive 9283.1, June 2009. http://semspub.epa.gov/src/document/HQ/175202

[2] *Guidance for Evaluating the Technical Impracticability of Ground-Water Restoration.* OSWER Directive 9234.2-25, September 1993. https://semspub.epa.gov/src/document/HQ/175387

[3] *Consistent Implementation of the FY 1993 Guidance on Technical Impracticability of Ground-Water Restoration at Superfund Sites.* OSWER Directive 9200.4-14, January 19, 1995. https://semspub.epa.gov/src/document/HQ/174489

managers should be included in the regional review process. The regional TI contact is the liaison with the OLEM TI contact during the TI Evaluation process.

It may be beneficial for the potentially responsible party (PRP) or lead agency seeking the TI waiver and the TI Evaluation author (generally a contractor supporting the site) to conduct a pre-planning call or meeting with regional staff and, as appropriate, OLEM before developing the document. OLEM recommends that these calls or meetings continue throughout the TI Evaluation process, as needed. The regional team will review the TI Evaluation for technical criteria and policy in accordance with the 1993 TI guidance. The regional office will determine whether the document should be: 1) sent forward to OLEM for consultation, 2) returned to the author with comments to be addressed or 3) terminated if the TI Evaluation cannot be adequately supported. Scenarios 1 and 2 will eventually direct the TI Evaluation to OLEM for consultation; however, Scenario 2 will likely require additional technical assessment, which may include collection of additional site data to satisfy the TI criteria. If the region is considering terminating the TI Evaluation at this point, the region can contact OLEM to provide additional policy and technical input to the decision, when needed.

When OLEM receives a regional TI Evaluation, it will review and determine whether the Evaluation satisfies the TI criteria. If it does, OLEM will provide the region with a written response that the TI consultation is complete. However, if OLEM determines that the document does not satisfy the TI criteria, OLEM will initiate the TI issue resolution process. OLEM will provide written comments to the region. The process may also include one or more calls between OLEM and the region. After the call(s), if OLEM and the region agree that the TI Evaluation can be revised to satisfy TI criteria, the region will return the TI Evaluation to the author for revision. The region will provide a final revised version to OLEM, and OLEM will provide the region with a written response that the TI consultation is complete. However, if there is still disagreement between OLEM and the region about the Evaluation, the region or OLEM will document outstanding issues and elevate them for resolution per *Elevating Site-Specific Superfund Remedy Selection Issues between the Office of Superfund Remediation and Technology Innovation and Regional Superfund Program Offices*.[4] The result of this process will either lead to proceeding with the TI Evaluation with or without revision, or terminating the Evaluation. The site administrative record, in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) §300.810 and the 1993 TI guidance (Section 6.1), should include applicable documents supporting the TI Evaluation decision.

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[4] *Elevating Site-Specific Superfund Remedy Selection Issues between the Office of Superfund Remediation and Technology Innovation and Regional Superfund Program Offices*. Directive 9200.3-68, March 31, 2010. https://semspub.epa.gov/src/document/HQ/886038

Table 1 Regional and OLEM Technical Impracticability Contacts			
Region 1	Bill Brandon	Region 6	Vince Malott
Region 2	Robert Alvey and John Prince	Region 7	Dan Nicoski
Region 3	Kathy Davies	Region 8	Andrew Schmidt and Fran Costanzi
Region 4	Bill Osteen	Region 9	Herb Levine
Region 5	David Wilson	Region 10	Jonathan Williams
OSRTI	Dave Bartenfelder	FFRRO	Ben Simes

OLEM and the regions should use the *Technical Impracticability Evaluation Work-Planning Flowchart* (Attachment 2) and the *Regional Technical Impracticability Evaluation Work-Planning Spreadsheet* (Attachment 3) together to help staff manage and plan workload and timing of a given document review during a fiscal year in order to ensure adequate review opportunities throughout the consultation process. The intent of the *Flowchart* and *Spreadsheet* is also to help plan for sufficient time to develop information and data for inclusion in the administrative record to support a TI waiver in the proposed and final decision documents (i.e., Record of Decision [ROD] and ROD Amendment). If there is a delay between the consultation and finalizing the decision document, the outcome of the TI waiver consultation is valid as long as site conditions, the conceptual site model, and available remedial approaches remain the same. If, however, site conditions or state of practice for remedial alternatives change between the TI consultation and the development of the final decision documentation, OLEM recommends that the region and OLEM revisit the TI consultation to account for those changes. Changes in site conditions can include, but are not limited to: identification of new contaminants of concern (COCs), changes in COC concentration(s), and changes in the vertical and/or horizontal boundaries of the groundwater plume.

The purpose of the recommended *Technical Impracticability Evaluation Internal EPA Review Routing Slip* (Attachment 4) is to identify the regional TI contact who is the liaison with OLEM, and to help ensure that the appropriate regional and OLEM staff and management have been informed and have adequate opportunity to provide input on the TI Evaluation. OLEM review includes OSRTI for non-federal facilities and both OSRTI and FFRRO for federal facilities.

Finally, the *Recommended Summary Checklist for a Superfund Groundwater Technical Impracticability Evaluation* (Attachment 5) identifies many of the important technical components, consistent with the 1993 TI guidance, for consideration in a TI Evaluation. Regions and others may use the *Summary Checklist* in preparing and reviewing TI Evaluations for consistency and adequacy, although not all items in the checklist are applicable to every site. The TI Evaluation should be a stand-alone document that addresses the applicable criteria with sufficient detail to support the Evaluation, while being as concise as possible. The complexity of the site and TI issues should drive the length of the document, although it is recommended that the document not exceed 150 pages, excluding summary maps, data and other information.

If you or your staff have any questions about this memo or the TI waiver process, please contact Dave Bartenfelder, OSRTI Science Policy Branch, at (703) 603-9047. This document is available at https://www.epa.gov/superfund/superfund-groundwater-groundwater-response-selection.

Attachments (5)

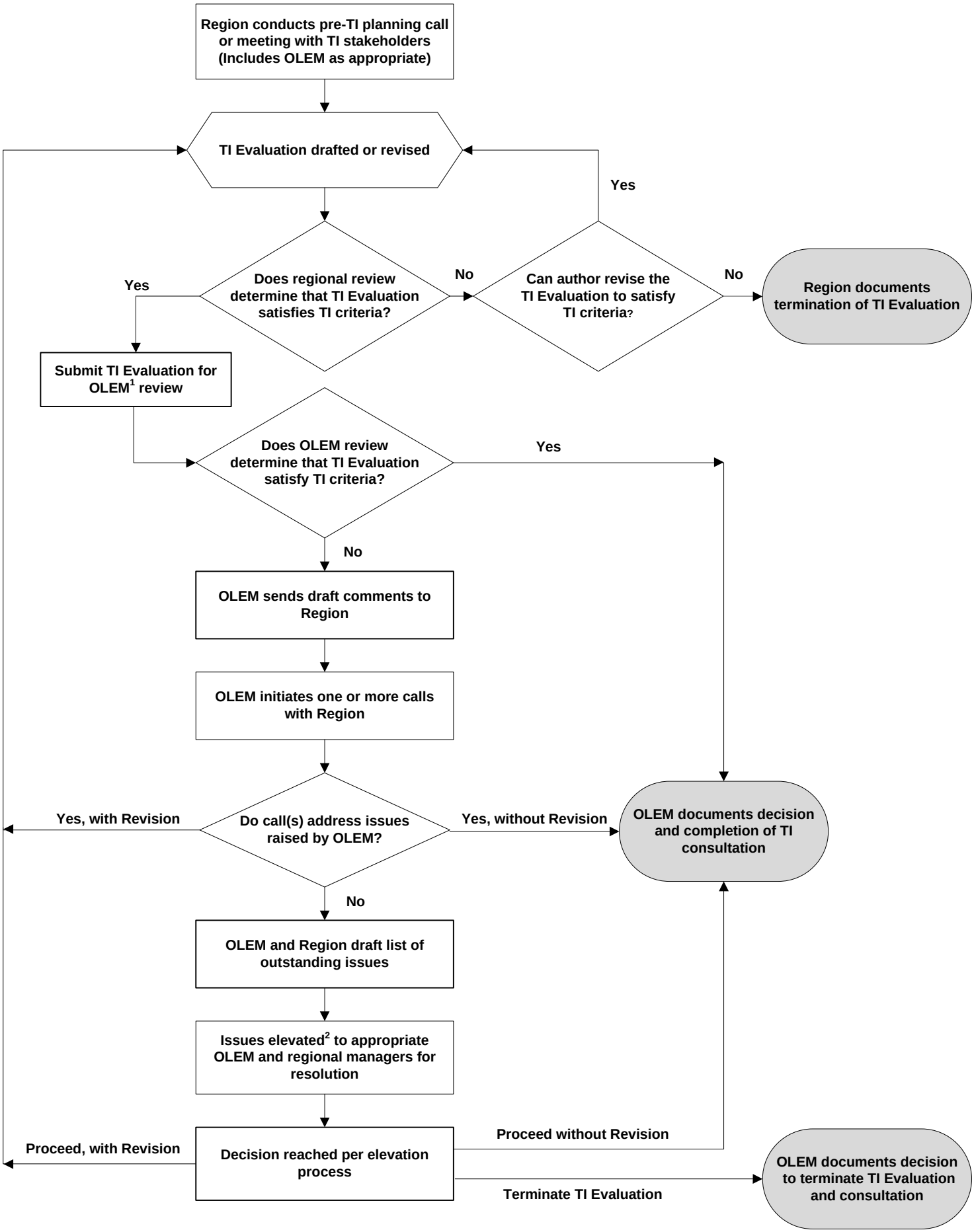
cc: Mathy Stanislaus, OLEM
Barry Breen, OLEM
Nitin Natarajan, OLEM
Reggie Cheatham, OLEM/OEM
David Lloyd, OLEM/OBLR
Barnes Johnson, OLEM/ORCR
Carolyn Hoskinson, OLEM/OUST
Cyndy Mackey, OECA/OSRE
Richard L. Albores, OECA/FFEO
John Michaud, OGC/SWERLO
Dana Stalcup, OLEM/OSRTI/ARD
Monica Gardner, OECA/OSRE/PPED
Mike Scozzafava, OLEM/OSRTI/ARD
Dave Bartenfelder, OLEM/OSRTI/ARD
Ben Simes, OLEM/FFRRO
Jill Lowe, Superfund Lead Region Coordinator, US EPA Region 3
Federal Facility Program Managers
FFRRO Regional Coordinators
Regional Technical Impracticability Contacts
NARPM Co-Chairs
Technical Support Project Forum Co-Chairs

Attachment 1

Technical Impracticability Evaluation

Consultation Process Flowchart

Technical Impracticability Evaluation Consultation Process Flowchart



TI = Technical impracticability; OLEM = Office of Land and Emergency Management

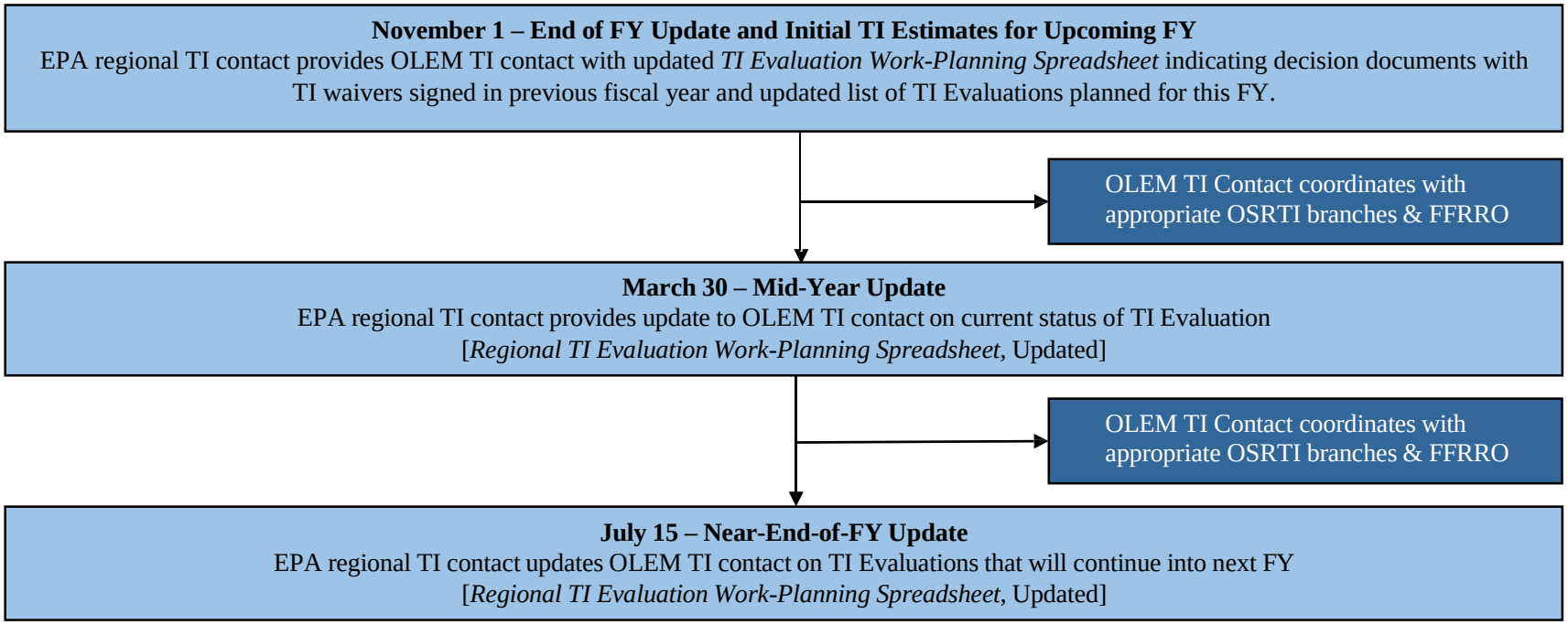
[1]For nonfederal facilities, Office of Supefund Remediation and Technology Innovation (OSRTI); for federal facilities, OSRTI and Federal Facilities Restoration and Reuse Office (FFRRO).
[2]Elevating Site-Specific Superfund Remedy Selection Issues between OSRTI and Regional Superfund Program Offices. OSWER Directive 9200.3-68, March 31, 2010.

Attachment 2

Technical Impracticability Evaluation

Work-Planning Flowchart

Technical Impracticability Evaluation Work-Planning Flowchart*



*Notes about EPA OLEM reviews of TI Evaluations:

1. For annual reporting, use *TI Evaluation Work- Planning Spreadsheet.*
2. Plan for 6 weeks for initial OLEM review.
3. TI Evaluation completed prior to Proposed Plan and ROD or ROD Amendment.
4. If there is a delay between the consultation and finalizing the decision document, the outcome of the TI waiver consultation is valid as long as site conditions, the conceptual site model, and available remedial approaches remain the same. If, however, site conditions or state of practice for remedial alternatives change between the TI consultation and the development of the final decision documentation, OLEM recommends that the region and OLEM revisit the TI consultation to account for those changes. Changes in site conditions can include, but are not limited to: identification of new contaminants of concern (COCs), changes in COC concentration(s), and changes in the vertical and/or horizontal boundaries of the groundwater plume.
5. OLEM = Office of Land and Emergency Management (OSRTI = Office of Superfund Remediation and Technology Innovation; FFRRO = Federal Facilities Restoration and Reuse Office); TI = Technical impracticability

Attachment 3

Regional Technical Impracticability Evaluation

Work-Planning Spreadsheet

Regional Technical Impracticability Evaluation Work-Planning Spreadsheet[1]

Region _____

Site Name/OU	Lead (EPA, State, Federal, Private)	Names of RPM(s) & Regional Site Hydrogeologist (if applicable)	Estimated *TI Evaluation* Submittal Date (FY/Q)	Estimated *Proposed Plan* Date (FY/Q)	Estimated *Decision Document* Date & Type (ROD or AROD) (FY/Q)	Actual *Decision Document* Date & Type (ROD or AROD) or Date Terminated or Withdrawn

[1] Regional TI contact will provide to OLEM TI contact. Includes TI Evaluations under consideration.

Attachment 4

Technical Impracticability Evaluation

Internal EPA Review Routing Slip

Technical Impracticability Evaluation Internal EPA Review Routing Slip[1]

(For Tracking Purposes Only)

Region _____

Site Name/OU _____

Version _____

Reviewer	Reviewer Signature, Date
Remedial Project Manager	
Regional Site Hydrogeologist or Other Designated Groundwater Expert	
Regional TI Contact[2]	
Regional Manager(s)	
Other Regional Reviewer (if appropriate)	
Regional TI Contact for transmittal to OLEM	
OLEM TI Contact	
OLEM Manager(s)	

[1] The purpose of this routing slip is to submit final draft TI Evaluations to OLEM. OLEM could also potentially route these documents back to the region (and subsequently the PRP) to address technical and policy issues. The process could be an iterative one that might take several cycles to complete.

[2] For those regions where multiple TI contacts have been designated, more than one signature may be needed.

Attachment 5

Recommended Summary Checklist for a Superfund Groundwater Technical Impracticability Evaluation

EPA United States Environmental Protection Agency

OLEM Directive 9200.3-117
December 2016

Recommended Summary Checklist for a Superfund Groundwater Technical Impracticability Evaluation

Purpose and Scope

The purpose of this "Recommended Summary Checklist for a Superfund Groundwater Technical Impracticability Evaluation*"* ("Summary Checklist") is to facilitate the preparation and review of an evaluation of a technical impracticability (TI) waiver for groundwater at a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Priorities List site. The Summary Checklist does not modify the 1993 *Guidance for Evaluating the Technical Impracticability of Ground-Water Restoration* ("1993 TI guidance").[1] The checklist is intended to help ensure that the TI evaluation process encompasses key technical components of the 1993 TI guidance. Generally, a TI Evaluation should address these elements to help reviewers decide whether a TI waiver is appropriate based on the site-specific circumstances at a CERCLA groundwater cleanup site. Regions and others preparing and reviewing TI Evaluations for consistency and adequacy may use the Summary Checklist, although not all items in the checklist are applicable to every site. In addition to using this document, regions should consider the recommendations in the 1993 TI guidance to help develop adequate information for inclusion in both the TI Evaluation and the administrative record to ensure support of a TI waiver.

Depending on site-specific circumstances, the inclusion of the Summary Checklist information in the TI Evaluation may not necessarily ensure that the TI Evaluation reflects consideration of all of the appropriate criteria for making a TI waiver decision**.**

Length of the Technical Impracticability Evaluation

It is recommended that the TI Evaluation be a stand-alone document that addresses the applicable criteria with sufficient detail to support the Evaluation, while being as concise as possible. The complexity of the site and TI issues should drive the length of the document, although it is unlikely that it would need to be more than 150 pages, excluding summary maps, data and other information. A longer document would be too difficult and cumbersome for reviewers and the public.

[1] *Guidance for Evaluating the Technical Impracticability of Ground-Water Restoration.* OSWER Directive 9234.2-25, September 1993. https://semspub.epa.gov/work/HQ/175387.pdf

Use of the Summary Checklist

Each of the Summary Checklist's lettered and numbered sections corresponds to 1993 TI guidance sections, which are indicated in brackets. As noted above, additional supporting information can be included as appendices.

Each section contains a list of topics that correspond to recommendations in the 1993 TI guidance. In general, the TI Evaluation should address each of these topics in the body of the TI evaluation. The Summary Checklist is designed for those preparing and reviewing a TI evaluation to use as a way of affirming that each topic is considered.

RECOMMENDED SUMMARY CHECKLIST FOR A SUPERFUND GROUNDWATER TECHNICAL IMPRACTICABILITY EVALUATION

Site Name/OU _____ **Version _____**

Name of Preparer/Reviewer _____ **Date _____**

Regions should consider the recommended checklist below when evaluating whether they have sufficient information to support a TI evaluation for the administrative record. [EPA 1993, 4.4]:

A. Specific ARARs or Media Cleanup Standards [EPA 1993, 4.4.1]

- ☐ Identifies the specific ARARs for which the TI waiver is sought (TI eval. pp._____)
- ☐ Identifies the technical feasibility of restoring some of the groundwater contaminants (TI eval. pp._____)
- ☐ Identifies potential benefits of attaining ARARs for some of the specific COCs (TI eval. pp._____)

B. Spatial Extent of TI Decisions [EPA 1993, 4.4.2]

- ☐ Specifies the spatial distribution (vertical and horizontal) of subsurface contaminants in the unsaturated and saturated zones where the TI is sought (TI eval. pp._____)
- ☐ Identifies the spatial extent of the TI zone as small as possible (TI eval. pp._____)
- ☐ Identifies the vertical limit of the TI zone in either absolute (e.g., mean sea level) or relative (e.g., aquifer system) terms (TI eval. pp._____)

C. Development and Purpose of the Site Conceptual Model [EPA 1993, 4.4.3, Figure 4]

1. Background Information [EPA 1993, 4.4.3]

- ☐ Groundwater classification (TI eval. pp._____)
- ☐ Location of potential environmental receptors (TI eval. pp._____)
- ☐ Nearby wellhead protection areas or sole-source aquifers (TI eval. pp._____)
- ☐ Location of water supply wells (TI eval. pp._____)

2. Geologic and Hydrologic Information [EPA 1993, 4.4.3]

- ☐ Detailed description of regional and site geology (TI eval. pp._____)
- ☐ Physical properties of subsurface materials (TI eval. pp._____)
- ☐ Stratigraphy, including thickness, lateral extent, continuity of units, and presence of depositional features, such as channel deposits, that may provide preferential pathways for, or barriers to, contaminant transport (TI eval. pp._____)
- ☐ Hydraulic gradients (horizontal and vertical) (TI eval. pp._____)

☐ Geologic structures or other subsurface features that may form preferential pathways for NAPL migration or zones of accumulation (TI eval. pp._____)

☐ Hydraulic properties of subsurface materials (TI eval. pp._____)

☐ Temporal variability in hydrologic conditions (TI eval. pp._____)

☐ Groundwater recharge and discharge information (TI eval. pp._____)

☐ Groundwater/surface water interactions (TI eval. pp._____)

☐ Characterization of secondary porosity features (e.g., fractures, karst features) to the extent practicable (TI eval. pp_____)

☐ Depth to groundwater (TI eval. pp._____)

3. Contaminant Source and Release Information [EPA 1993, 4.4.3]

☐ Location, nature, and history of previous contaminant releases or sources (TI eval. pp._____)

☐ Locations and characterizations of continuing releases or sources (TI eval. pp._____)

☐ Locations of subsurface sources (e.g., NAPLs) (TI eval. pp._____)

4. Contaminant Distribution, Transport, and Fate Parameters [EPA 1993, 4.4.3]

☐ Temporal trends in contaminant concentrations in each phase (TI eval. pp._____)

☐ Estimates of subsurface contaminant mass (TI eval. pp._____)

☐ Phase distribution of each contaminant in the unsaturated and saturated zones (e.g., gaseous, aqueous, sorbed, free-phase NAPL, or residual NAPL) (TI eval. pp._____)

☐ Spatial distribution of subsurface contaminants in each phase in the unsaturated and saturated zones (TI eval. pp._____)

☐ Sorption information, including contaminant retardation factors (TI eval. pp._____)

☐ Contaminant transformation processes and rate estimates (TI eval. pp._____)

☐ Contaminant migration rates (TI eval. pp._____)

☐ Assessment of facilitated transport mechanisms (e.g., colloidal transport) (TI eval. pp._____)

☐ Properties of NAPLs that affect transport (e.g., composition, effective solubility, density, viscosity) (TI eval. pp._____)

☐ Geochemical characteristics of subsurface media that affect contaminant transport and fate (TI eval. pp._____)

☐ Other characteristics that affect distribution, transport, and fate (e.g., vapor transport properties) (TI eval. pp._____)

D. Evaluation of Restoration Potential [EPA 1993, 4.4.4]

1. Source Control Measures [EPA 1993. 4.4.4.1]

☐ Demonstrates that contamination sources have been located and will employ removal, migration control or containment, or treatment, to the extent practicable (TI eval. pp._____)

2. Remedial Action Performance Analysis [EPA 1993. 4.4.4.2]

☐ Demonstrates that the groundwater monitoring program within and outside the aqueous contaminant plume is of sufficient quality and detail to fully evaluate remedial action performance (e.g., to analyze plume migration or containment and identify concentration trends within the remediation zone) (TI eval. pp._____)

☐ Demonstrates that the existing remedy has been effectively operated and adequately maintained (TI eval. pp._____)

☐ Describes and evaluates the effectiveness of any remedy modifications (whether variations in operation, physical changes, or augmentations to the system) designed to enhance its performance (TI eval. pp._____)

☐ Evaluates trends in subsurface contaminant concentrations. Consider such factors as whether the aqueous plume has been contained, whether the areal extent of the plume is being reduced, and the rates of contaminant concentration decline and contaminant mass removal. Further considerations include whether aqueous-phase concentrations rebound when the system is discontinued, whether dilution or other natural attenuation processes are responsible for observed trends, and whether contaminated soils on site are contaminating groundwater (TI eval. pp._____)

☐ Analyzes performance of any ongoing or completed remedial actions, including:

- ☐ Operational information (TI eval. pp._____)
- ☐ Enhancements to original remedy (including optimization efforts) (TI eval. pp._____)

3. Restoration Timeframe Analysis [EPA 1993. 4.4.4.3]

☐ Estimates timeframe for groundwater restoration (TI eval. pp._____)

☐ Documents predictive analyses of the timeframes to attain required cleanup levels as part of the overall demonstration using available technologies and approaches laying out the associated modeling inputs and uncertainties (TI eval. pp._____)

4. Other Applicable technologies [EPA 1993. 4.4.4.4]

☐ Conducted and documented a literature search to determine what cleanup approaches are possible based on the contaminants and geology at the site (TI eval. pp._____)

☐ Lists technologies and approaches that were evaluated (TI eval. pp._____)

☐ Analyzed chemical and hydrogeologic data to support any technology capable of achieving cleanup levels (TI eval. pp._____)

☐ Evaluated treatability study data (bench, pilot or full-scale) (TI eval. pp._____)

- ☐ Provide study objectives (TI eval. pp._____)
- ☐ Provide study results (TI eval. pp._____)

☐ Demonstrates that no other remedial technologies (conventional or innovative) could reliably, logically, or feasibly attain the cleanup levels at the site within a reasonable timeframe (TI eval. pp._____)

E. Cost Estimates [EPA 1993, 4.4.5]

- ☐ Provides cost estimates for the potentially viable remedial alternatives included in the Evaluation of Restoration Potential, including construction, operation and maintenance costs (TI eval. pp._____)
- ☐ Provides cost estimates of selected remedy(s) for continued operation of existing remedy including operation and maintenance costs (if a remedy has been implemented) (TI eval. pp._____)
- ☐ Provides cost estimates for the proposed Alternative Remedial Strategy (ARS) (TI eval. pp._____)

F. Alternate Remedial Strategies (ARS) [EPA 1993, 5.0]

- ☐ Selects and summarizes an ARS that is technically practicable, protective of human health and the environment, and satisfies Superfund statutory and regulatory requirements [EPA 1993, 5.1] (TI eval. pp._____)
- ☐ Demonstrates that the ARS addresses exposure prevention [EPA 1993, 5.1.1] (TI eval. pp._____)
- ☐ Demonstrates that the ARS addresses source control and remediation [EPA 1993, 5.1.2] (TI eval. pp._____)
- ☐ Demonstrates that the ARS addresses aqueous plume remediation [EPA 1993, 5.1.3] (TI eval. pp._____)

G. Additional Remedy Selection Considerations [EPA 1993, 5.2.3]

- ☐ Aggressive action for shorter timeframes than other options (TI eval. pp._____)
- ☐ Shorter timeframe to reduce potential human exposures (TI eval. pp._____)
- ☐ Shorter timeframe to reduce impacts to environmental receptors (TI eval. pp._____)

Other

☐ Discusses additional information or analyses considered for the TI evaluation (summarized below, with page numbers, if applicable).