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## **1 Introduction**

In 1996, the U.S. Department of Energy (DOE) completed a performance assessment (PA) for the Waste Isolation Pilot Plant (WIPP). The PA was part of the Compliance Certification Application (CCA) submitted to the Environmental Protection Agency (EPA) to demonstrate compliance with the long-term radioactive disposal standards of 40 CFR 191 (subparts B and C) (EPA 1993) and the associated certification criteria of 40 CFR 194 (EPA 1996). Based on the CCA and subsequent information and analyses, the EPA certified the WIPP's compliance in May 1998. As required by the WIPP Land Withdrawal Act (Public Law 102-579 [as amended by Public Law 104-201]) (LWA 1992, 1996), DOE is required to submit documentation of continued compliance to EPA for the recertification of the WIPP every five years following the first receipt of waste. Upon submittal, EPA will perform a completeness review prior to starting the process to determine if the CRA demonstrates continued compliance with the disposal regulations. During their review, EPA will request additional information from DOE, much of which will require SNL support. Additionally, stakeholders may request information from EPA regarding the CRA. Such stakeholder requests may also require SNL assistance (upon direction from DOE).

## **2 Purpose**

The purpose of this analysis plan (AP) is to direct the activities used to perform and document CRA submittal analyses and generate responses to EPA CRA information requests. Additionally, this AP shall be used to develop comment responses for information requests from stakeholders when directed by the DOE Carlsbad Field Office (CBFO). These information requests may require various forms of analysis to demonstrate compliance with the EPA's standards or justify the positions taken in the CRA. These activities may include modeling, calculations and analyses of significant scope, or the development of substantially more detailed text to support the CRA. Analyses and activities not authorized as "CRA response activities" by the SNL Carlsbad Program Manager must follow applicable SNL procedures.

Additionally, the purpose of this AP is to provide the necessary QA controls to CRA response generation activities, in accordance with SNL Nuclear Waste Management Program Procedure (NP) 9-1, while relieving the need for separate APs for each CRA response activity. This AP shall not compromise or reduce the level of QA as it pertains to analyses conducted to address an information request. Work product review, comment, and records documentation requirements will remain unchanged from those specified in NP 9-1.

## **3 Approach**

### **3.1 Authorization of Work and Tracking**

1. All EPA requests for information made directly to SNL staff shall be documented and transmitted to the CBFO Recertification Project Lead and the SNL recertification coordinator (SRC).
2. All activities needed to respond to an EPA request for information must first be approved by the Recertification Response Council (RRC) prior to initiation. Note:

- The WIPP regulator cannot direct, approve, or fund WIPP work scope; the DOE must authorize all WIPP work.
3. Approved requests for information assigned to SNL must be communicated to the SRC for tracking.

Information requests to SNL that initiate analyses under this AP may originate from different sources. For example, requests may be directly from EPA staff to SNL staff via phone or email exchanges or formal letters from EPA to DOE. Regardless of the requests origin, all information requests must be forwarded to the DOE RRC Chairperson for authorization to begin work. The SNL SRC documents the information request and is responsible for ensuring all requests to SNL by EPA, its contractors and stakeholders have been communicated to the RRC for disposition. The SRC is responsible for tracking all incoming requests, their disposition from the RRC, the status of activities that address the requests and final completion within SNL. Attachment 1 outlines a process to document the tracking activity. As stated earlier, no response generation or analysis activities should be initiated until directed by DOE.

Requests for documents and references in the Sandia Records Center do not need prior RRC approval before providing the documents to EPA. This type of request may be made and copies sent to EPA after first informing the SRC. The SRC shall inform the RRC and receive a tracking number. The SRC shall track the request through closure.

### **3.2 Recertification Response Council**

***All requests for additional information and other CRA response activities must be planned through the RRC.***

The RRC is comprised of project participant leads that are responsible for directing work in their organization and is chaired by the DOE Office of Environmental Compliance Recertification Project Lead or designee. The RRC determines the disposition of each information request, identifies technical leads for the response, determines a completion date, assigns a unique identifier for each request, and tracks the status of all requests. The RRC tracks response activities at the Program level, and the SRC tracks response activities internally within SNL.

The RRC convenes at regular intervals and will review all incoming requests from EPA and stakeholders. The requests are broken into discrete elements by logical subject areas, and then delegated to the appropriate participant.

Summary-level information such as transmittal letters, cover letters, or responses of a strategic nature are the responsibility of the RRC. The RRC provides final review of any summary-level information provided by SNL; therefore such documents fall under the DOE's QA and document control programs. The RRC obtains all DOE approvals prior to transmittal to the EPA.

### **3.3 Types of Response Activities**

Response activities will generally fall into one of three categories: 1) analyses; 2) summary-level response text, and; 3) document requests. The following subsections describe the method and level of QA documentation applied to each category.

### **3.3.1 Analyses**

1. All modeling activities including sensitivity analyses, parameter variations, running of primary or secondary (intermediate) codes in response to an EPA request shall be performed under this AP.
2. Analysis QA uses NP 9-1; Parameter QA uses NP 9-2; Software uses NP 19-1; and Records use NP 17-1.
3. All analysis reports shall be reviewed following NP 6-1, using document review and comment (DRC) forms. These forms, as well as the Activity Cover Sheet provided in Attachment 2 shall be completed and placed in the record center in Records Package 533999 according to NP 17-4.
4. The Routing Sheet (Page 2 of Attachment 2) must also be completed and accompany the activity cover sheet with the entire work product prior to submittal to records.
5. The compliance baseline position from the CCA must be compared to the position taken in all response activities performed under this AP to ensure the current regulatory position is consistent with the baseline. Any differences must be explained in the response. Guidelines for this activity are provided in Attachment 3.

Process flow for analyses conducted under this AP is described in Attachment 4.

### **3.3.2 Summary-Level Response Text**

This type of information generally summarizes detailed analyses such as those mentioned above in Section 3.3.1. Alternatively, this summary-level information may provide additional information or context to analyses presented in the CRA or other previously conducted and submitted work. This type of response does not require NP 6-1 DRC forms, however, the coversheet in Attachment 2 is used to document technical, quality, compliance baseline consistency, and management reviews for completeness and quality assurance. The text will be formally reviewed under DOE's QA program. The Routing Sheet (Page 2 of Attachment 2) must also be completed and accompany the activity cover sheet prior to submittal to records. This type of response shall be placed in the records center in Records Package 533999.

Process flow for summary-level responses under this AP is described in Attachment 5.

### **3.3.3 Document Requests**

It is expected that requests for final documents such as analysis reports, SAND documents, regression test reports, etc., will be made by the EPA. As stated in Section 3.1, providing the EPA with such documents does not require any review, coversheet, or other QA activities. However, each request should be immediately communicated to the SRC who will communicate this request to the RRC and obtain a request tracking identifier. Draft, incomplete, or preliminary reports are not included in this activity. Requests for draft or incomplete material must be directed to the RRC and the SNL Carlsbad Program Manager. The SRC shall track the request through closure.

Process flow for providing documents to the EPA in response to direct requests is provided in Attachment 6.

## **4 Response Approval**

All completed responses to requests from the RRC shall be approved by the Carlsbad Program Manager prior to transmittal to the RRC.

1. All results, text, and records that are to be used in the information response must be communicated only to the RRC, never directly to the EPA. Reference material requests (see Section 3.3.3) may be sent directly to EPA and its contractors (the request is assigned a proper request identifier by the RRC).
2. The SNL Carlsbad Program Manager can authorize (per NP 19-1, section 2.4) the use of software, parameter or model changes that have not fully completed QA activities in cases where expedited or initial results are needed. The project must recognize that use of the results is not advised prior to finalization of all QA activities. The use of this provision must be communicated to the RRC in a formal memo from the SNL Carlsbad Program Manager.
3. All analyses under this AP shall be submitted to records in Records Package 533999.

## **5 Project Resources**

Not Applicable.

## **6 Software List**

All activities that require software use must document the activity such that the work could be reproduced. All software used under this AP must be documented in the response document. Software name, version, all run control information (input files, libraries, scripts, macros etc.) including pre- and post- processor information must be included in the response package. All VMS library information must be included such that results may be retrieved and all runs replicated. Parameter use, including changes to hardwired parameters, must be traceable.

## **7 Tasks**

All requests for information from EPA and stakeholders are communicated to DOE through the RRC. The RRC reviews and approves each request prior to transmittal to SNL for initiation of work. Activities conducted in response to the RRC Chairperson's requests shall be assigned to the appropriate SNL staff member by the Carlsbad Program Manager or designee along with completion milestones and dates. These tasks, staff assignments, milestones and dates shall be tracked by the SRC.

## **8 Special Considerations**

All modeling activities under this AP shall be conducted using fully approved and qualified models, codes, and tested computer hardware unless expressly exempted in writing (per NP 19-1, section 2.4) by the SNL Carlsbad Program Manager.

## **9 Applicable Procedures**

The following procedures apply to the activities in the AP.

*Analysis and Documentation:* Documentation will meet the applicable requirements in NP 9-1, Analyses.

*Computer Codes:* All software used in this analysis will be qualified in accordance with NP 19-1, Software Requirements.

*Parameter Development and Database Management:* Selection and documentation of parameter values will follow NP 9-2, Parameters.

*Training:* Training will be performed in accordance with the requirements in NP 2-1, Qualification and Training.

*Reviews:* Reviews will be conducted and documented in accordance with NP 6-1, Document Control Process as appropriate.

*Records:* All records will be controlled in accordance with NP 17-1, Records.

## **10 References**

EPA (U.S. Environmental Protection Agency) 1996, 40 CFR Part 194: Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR part 191 Disposal Regulations; Final Rule. Federal Register, Vol. 61, No. 28 pp. 5224-5245, February 9, 1996. Office of Radiation and Indoor Air, Washington, D.C.

EPA (U.S. Environmental Protection Agency) 1993, 40 CFR Part 191: Environmental Radiation Protection Standards for the Management and Disposal of Spent Nuclear Fuels, High Level and Transuranic Radioactive Wastes: Final Rule. Federal Register, Vol. 58, No.242, pp. 66398-66416, December 20, 1993. Office of Radiation and Indoor Air, Washington, D. C.

U.S. Congress. 1992. Waste Isolation Pilot Plant Land Withdrawal Act. Public Law 102-579, as amended by Public Law 104-201. September 1996. 104<sup>th</sup> Congress, Washington, D.C.

## **SRC Activity Tracking Guidelines**

The RRC will assign identifying tracking numbers and track EPA requests. The SRC will track those requests delegated to SNL using the tracking identifier assigned by the RRC. A spreadsheet or database may be used to track requests from EPA and stakeholders.

For information requests that result from a direct call from the EPA, the SNL staff member contacted relates the nature of the request to the SRC. The SRC will coordinate closely with the RRC member responsible for action logging and tracking. The RRC will assign a unique identifier and authorize, delegate, and schedule work associated with the request. If the request is delegated to SNL, the SRC will then track the item using the RRC-assigned identifier. The SRC will track SNL-assigned tasks internally until transmitted back to the RRC for finalization.

Specifically the SRC should include, when known:

- The DOE's tracking identifier
- The organization or person requesting information
- The date requested
- The request format (letter, email, memo, phone, etc)
- SNL ERMS number for the letter, email, memo, etc. (excludes phone contacts)
- Where possible, the person or organization contacted by the EPA or stakeholder
- Document the applicable section of 40 CFR 194 (usually identified by EPA in their request)
- Date of DOE delegation to SNL
- For multi-participant responses, the assigned organizations and the lead organization assigned to activity
- SNL staff member or lead
- Anticipated completion date
- Completion/Closeout date
- ERMS reference or DOE reference for EPA response transmittal letter

**Sandia National Laboratories  
Waste Isolation Pilot Plant**

**CRA Response Activity** 

**Tracking Number** \_\_\_\_\_

**Revision** \_\_\_\_\_

**Records Package Number 533999**

**Title:** \_\_\_\_\_

**Summary Level Response**      **Yes**       **No**

**Author**  
\_\_\_\_\_

Print	Signature	Date
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**Technical Review**  
\_\_\_\_\_

Print	Signature	Date
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**QA Review**  
\_\_\_\_\_

Print	Signature	Date
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**Management Review**  
\_\_\_\_\_

Print	Signature	Date
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# Routing Sheet

**Tracking Number** \_\_\_\_\_

**Revision** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Records Package Number 533999**

**PA PI:** \_\_\_\_\_  
Initial Date

**Hydrology PI:** \_\_\_\_\_  
Initial Date

**Chemistry PI:** \_\_\_\_\_  
Initial Date

**Inv. PI:** \_\_\_\_\_  
Initial Date

**Reg. Lead:** \_\_\_\_\_  
Initial Date

## Guidelines for Compliance Baseline Comparison

To ensure that each response for additional information is consistent with the current compliance baseline or to identify a difference from the baseline position, the following guidance may be used. This activity may be delegated to the SNL regulatory compliance leads.

The compliance baseline for the recertification consists of the information in the CRA and is supplemented by information in EPA docket A93-02 (pre-certification materials) and post-certification materials in docket A98-49. The CRA includes information for the recertification that is either the same as, in addition to the docket information or information that supercedes that contained in the dockets. Specifically, the DOE's original compliance demonstration position (the current compliance baseline until EPA recertifies WIPP) is contained in the CCA and in DOE responses to EPA's requests for additional information. EPA's original compliance baseline is contained in their Compliance Application Response Documents (CARs), Technical Support Documents (TSDs), Response to Comments Document and the certification decision rulemaking. When responding to EPA comments on the recertification, DOE must ensure that the new response is consistent with the DOE's compliance baseline position or ensure that new positions are identified and justified in the response. This consistency check is done by researching the baseline information.

It is expected that EPA will use a similar process to review the CRA as they did when they performed their CCA completeness review. The EPA sent formal requests for information; most were grouped by sections in 40 CFR 194. The EPA stated the requirements from the applicable section of Part 194, followed by a statement of what information DOE needed to provide to address the issue. Assuming the same format is used during the recertification, information requests will again be grouped by the applicable sections of Part 194. A response author or their delegates must therefore review the past compliance position, determine if it has changed, and assure the response to the EPA's request is consistent with the recertification baseline or identifies the differences and justifies the new position.

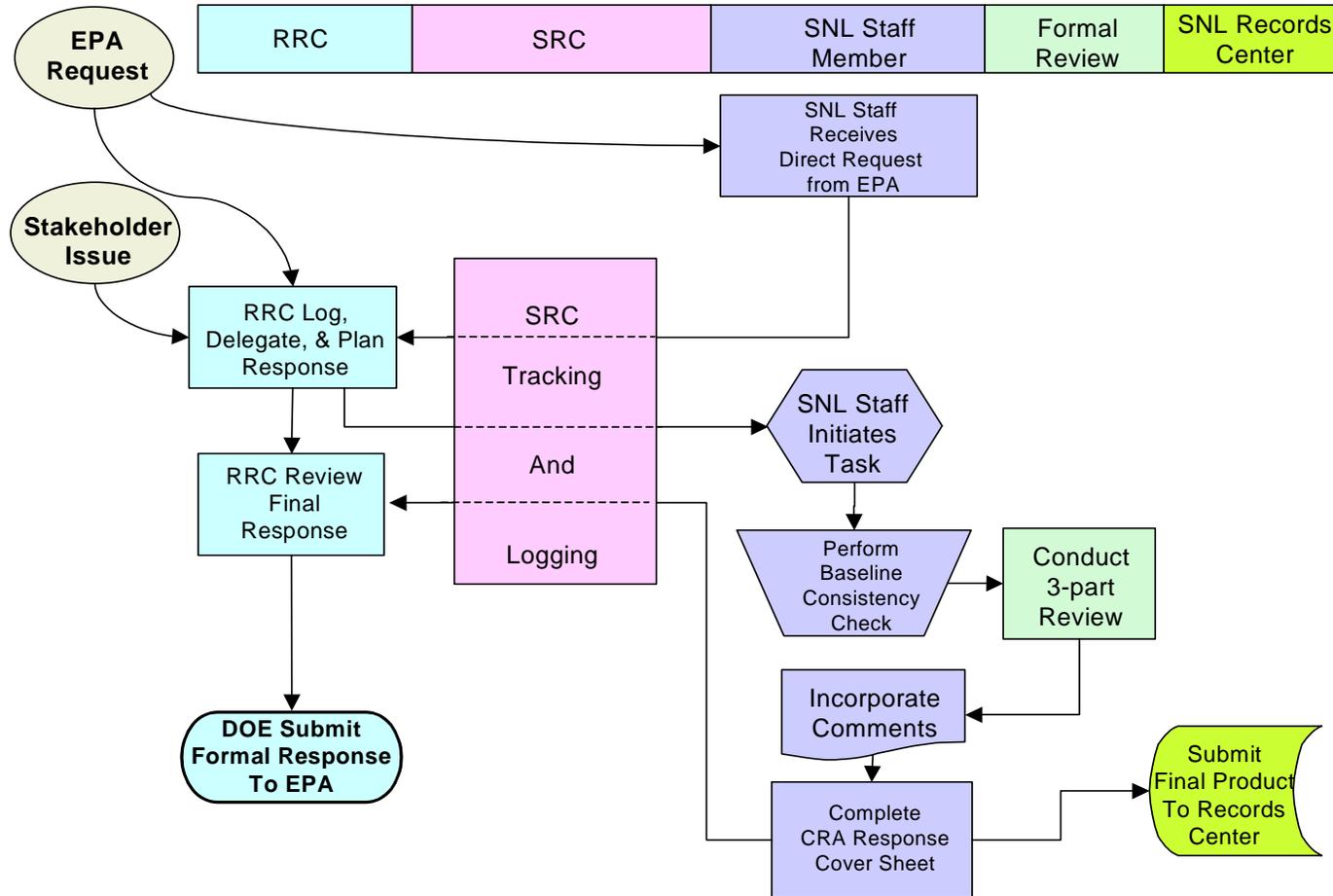
The following documents should be reviewed to determine the DOE's baseline position<sup>1</sup>:

- CRA
- CCA
- DOE's Response to Comments (Docket # A-93-02, II-I-02, II-I-03, II-I-07, II-I-08, II-I-10, II-I-24, II-I-28, II-I-31, II-I-36, II-G-25)
- Approved DOE Change Requests
- Pending DOE Change Requests
- 194.4(b)(4) reports
- TSD
- CARD

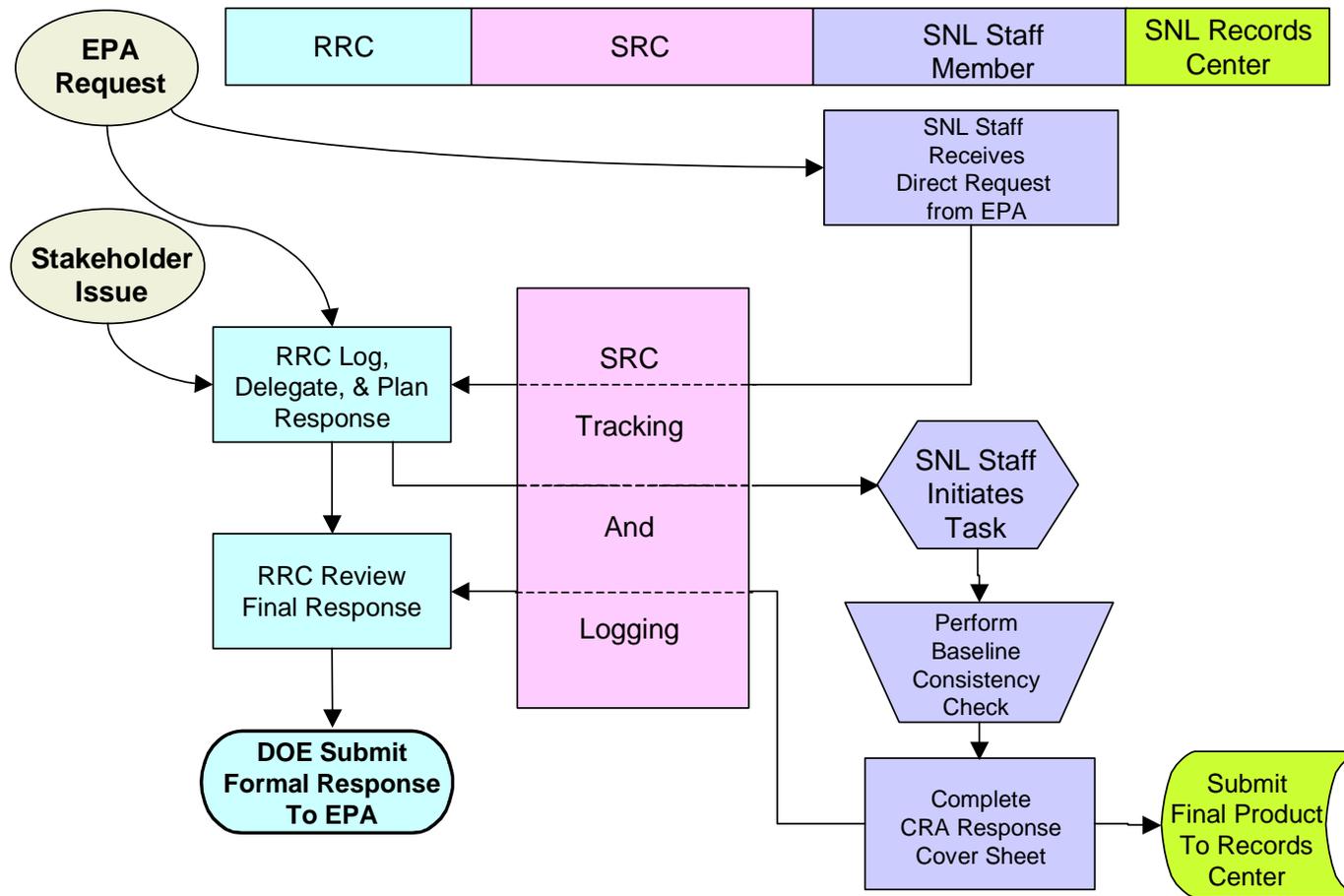
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<sup>1</sup> These docket entries, CARs, TSDs and EPA's Response to Comments Document may be viewed on the "Galson CD"

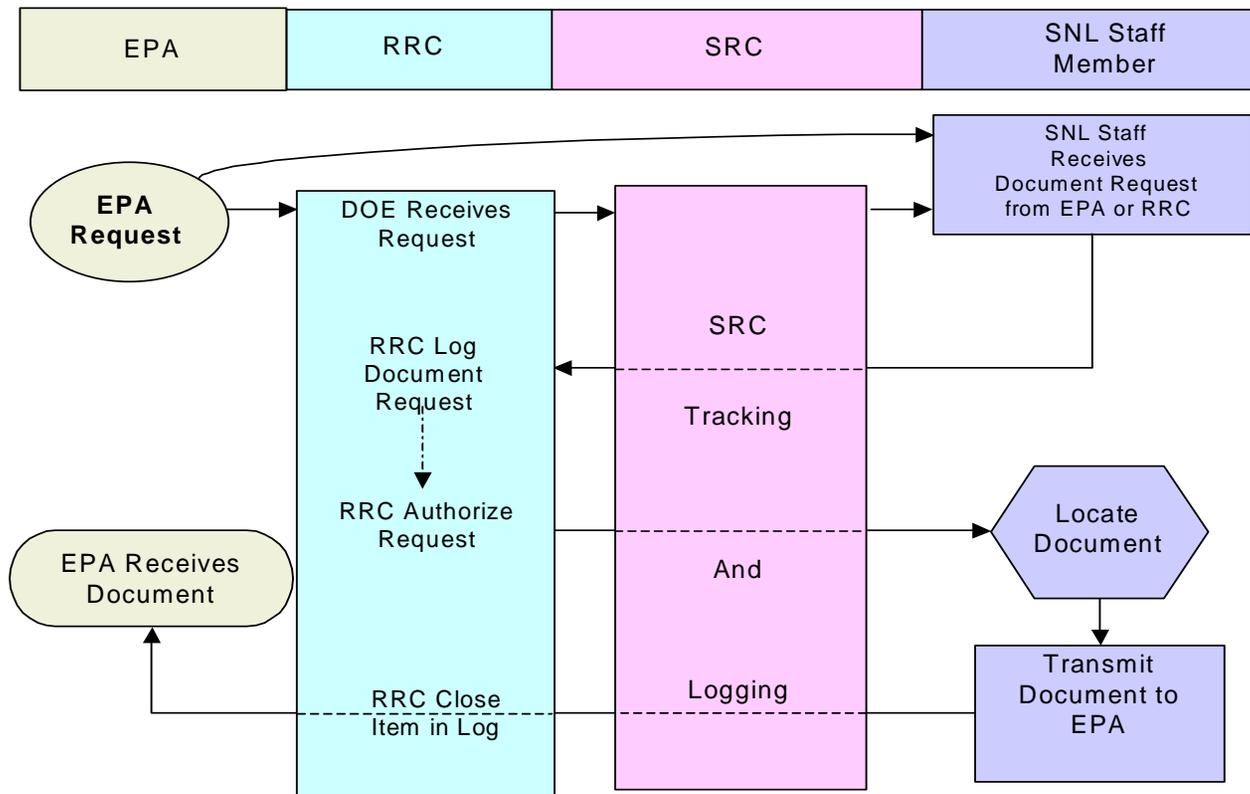
### Process Flow for CRA Response Analyses (Significant and/or Analytic Nature)



## Process Flow for CRA Response Activities (Summary-Level Response)



### Process Flow for CRA Response Activities (Document Requests)



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