

BNFL, Inc.

Initial Safety Assessment Review

Planning Handbook

Submitted: _____
Review Team Leader/Requirements and Standards Official

Approved: _____
Regulatory Official

December 1997
Revision 0

Table of Contents

1. PURPOSE.....	1
2. REVIEW TEAM CHARTER.....	1
3. ROLES AND RESPONSIBILITIES	2
3.1 REGULATORY UNIT OFFICIAL	2
3.2 REVIEW TEAM LEADER	2
3.3 ASSISTANT TEAM LEADER	3
3.4 REVIEW TEAM ADMINISTRATIVE ASSISTANT.....	3
3.5 REVIEW TEAM MEMBERS	4
4. SCHEDULE	5
4.1 MAJOR MILESTONES.....	5
4.2 REVIEWER SELECTION & QUALIFICATIONS	6
5. REVIEWER ORIENTATION.....	9
5.1 GENERAL	9
5.2 ORIENTATION SCHEDULE AND AGENDA.....	10
6. LOGISTICS	10
6.1 ACTIVITIES TO BE COMPLETED BEFORE NOTICE OF INTENT TO SUBMIT	10
6.2 ACTIVITIES TO BE COMPLETED BETWEEN NOTICE OF INTENT TO SUBMIT AND RECEIPT OF STANDARDS APPROVAL SUBMITTAL	11
6.3 ACTIVITIES TO BE COMPLETED BETWEEN RECEIPT OF SUBMITTAL AND COMPLETION OF THE ACCEPTANCE REVIEW.....	12
6.4 ACTIVITIES BETWEEN COMPLETION OF THE ACCEPTANCE REVIEW AND COMPLETION OF THE SAFETY EVALUATION REPORT	13
6.5 CLOSURE ACTIVITIES.....	14
7. INSTRUCTIONS TO REVIEWERS.....	14
7.1 REVIEW GUIDANCE.....	14
7.2 TEAM ORGANIZATION.....	14
7.3 COMMENT/INPUT STYLE GUIDE.....	15
7.3.1 <i>Question</i>	15
7.3.2 <i>Observation</i>	15
7.3.3 <i>Finding</i>	16
7.4 DOCUMENTING PRELIMINARY QUESTIONS CONCERNING TWRS-P CONTRACTOR SUBMITTAL.....	16
7.5 DIFFERING PROFESSIONAL OPINION/DIFFERING PROFESSIONAL VIEW PROCEDURE.....	16
7.6 REVIEW TEAM TRACKING SYSTEM	17
8. DOCUMENTATION	17
8.1 DRAFT SAFETY EVALUATION REPORT OUTLINE	17
8.2 DOCUMENTATION FORMAT	18
8.2.1 <i>Text Style</i>	18

8.2.2 Margins/Page Settings 18
8.2.3 Font and Font Features..... 18
8.2.4 Tabs, Indents..... 18
8.2.5 Headings/Table of Content Markings/Outlines 18
8.2.6 Footnotes and Endnotes 19
8.2.7 Tables and Figures..... 19
9. LESSONS LEARNED..... 19

LIST OF FORMS, FIGURES AND TABLES

Form 1 Reviewer Credential Record..... 7
Form 2 Nondisclosure and Disclosure Statements 8
Form 3 Regulatory Unit Review Team Preliminary Questions for Contractor 25
Figure 1. Flowchart of Functional Areas of Review Responsibility..... 20
Table 1. Responsibility Matrix for BNFL ISA Review. 21
Table 2. Responsibility Matrix for BNFL ISAR Review..... 24

1. Purpose

This Handbook describes the Office of Radiological, Nuclear and Process Safety Regulation (a.k.a., Regulatory Unit's [RU's]) methodology for reviewing the BNFL, Inc. (BNFL) Initial Safety Assessment submittal (hereafter referred to as the submittal). This methodology includes:

- Review Team Charter
- Review Team Roles and Responsibilities
- Review Schedule
- Team Members Qualifications
- Team Orientation
- Team Logistics
- Review Process Description
- Safety Evaluation Report Preparation
- Lessons-Learned Development.

This handbook is intended to be used with the associated review guidance documents developed by the RU (hereafter referred to as guidance). This guidance is:

- *Guidance for the Review of TWRS Privatization Contractor Initial Safety Assessment Submittal Package*, RL/REG-97-11, Revision 1, December 1997

The RU developed the guidance to structure the review in accordance with the requirements of the Contract; therefore, the guidance does not modify the provisions of the Tank Waste Remediation System (TWRS) Privatization Contract. A copy of the BNFL contract (DE-AC06-RL13308) is available in the RU Library. Review Team members (hereafter referred to as the Team) who identify any provisions of the guidance documents that appear to conflict with the Contract should promptly notify the Review Team Leader (RTL).

2. Review Team Charter

The Contract requires the RU to conduct a review of the BNFL Initial Safety Assessment submittal. The elements of the submittal include an Initial Safety Analysis Report (ISAR) and supplemental information described in Section 4.2.2 of DOE/RL-96-0003, *DOE Regulatory Process for Radiological, Nuclear and Process Safety for TWRS Privatization Contractors*. In conducting this review, the Team shall follow the guidance of RL/REG-97-11. At the conclusion of this review, the Team shall prepare a Initial Safety Evaluation Report (ISER) documenting the RU findings. Per the Contract, the RU will adhere to the following requirements from DOE/RL-96-0003, Sections 4.2.3 and 4.2.1, respectively:

“Review the submittal for completeness and adequacy within one week from the day of its receipt. Upon completing the review, issue a notice to the Contractor in writing of the acceptability of the submittal. If the submittal is rejected, list the reasons for the rejection and the necessary corrective actions. After the Team accepts the submittal for review, the Team may request additional information from the Contractor to clarify or supplement material in the submittal.

If the submittal is sufficient to proceed with the review process and if the Contractor supports the process with written responses to prepared questions and a discussion meeting, according to the reference schedule, the Initial Safety Evaluation Report approval will be issued by the Director of the Regulatory Unit in 9 weeks.”

Team members should read and study the guidance and apply it to the review. The guidance is not all inclusive. Team members are encouraged to use their experience and professional judgment. If significant discrepancies are identified with the guidance, the Team member should discuss these problems promptly with the RTL.

Upon completion of each Team member’s review, written proposed findings and observations are communicated to the RTL by the team member in his/her area of responsibility. Documentation of the findings and observations should be timely, clear, and concise.

The content of the ISER will be based on the consensus findings and observations of the Team. The RTL will submit the ISER to the Regulatory Official (RO).

3. Roles and Responsibilities

3.1 Regulatory Unit Official

The Regulatory Official (RO [Dr. D. C. Gibbs]):

- Approves the Initial Safety Assessment Planning Handbook (this document).
- Assigns the RTL for the Initial Safety Assessment submittal review.
- Approves the reviewers from the RU core staff, the DOE complex, and other qualified contractors.
- Ensures independence of team members from the TWRS Program Official.
- Approves or disapproves the submittal and associated Initial Safety Evaluation Report (ISER).

3.2 Review Team Leader

The Review Team Leader (RTL [Mr. R. Barr]):

- Acts for the Requirements and Standards Official (RSO) and the Activity Authorization Official (AAO), in their absence, to conduct the Initial Safety Assessment submittal review.

- Identifies potential Team members and recommends Team composition to the RO.
- Organizes and directs the review in accordance with this Handbook, DOE policy for the RU's activities, and RU Management Directives.
- Provides logistical support to the Team in accordance with this handbook.
- Communicates Team questions to the TWRS-P Contractor concerning the submittal.
- Organizes Team member orientation.
- Develops review area assignments.
- Briefs the RO on progress of the review, emphasizing significant issues identified.
- Directs reviewers in the preparation of the ISER, which supports the issuance of the Initial Safety Assessment regulatory action.
- Identifies "lessons learned" with the Team at the conclusion of the review.

3.3 Assistant Team Leader

The Assistant Team Leader (ATL [Mr. C. Vanderniet]):

- Coordinates and monitors individual reviewer and activities subgroup progress.
- Reports Team schedule progress to the RTL.
- Organizes and conducts team meetings to review significant issues, progress, and plans for the review.
- Organizes the preparation of assigned portions of the ISER.
- Prepares and maintains a public records file, with due consideration of proprietary information, with all information received, the basis for all review findings, copies of meeting minutes, and all correspondence.
- Collects Team questions concerning the TWRS-P Contractor submittal and provides them to the RTL.

3.4 Review Team Administrative Assistant

The Review Team Administrative Assistant (Ms. J. Spargur/Mr. C. Ungerecht):

- Tracks interim questions and resolutions from reviewers, as well as TWRS-P Contractor responses.
- Provides a summary listing of these issues to the Team.
- Tracks NRC comments and reviewer disposition.
- Provides clerical, logistic, and administrative support to the Team, as assigned.

3.5 Review Team Members

The Team Members:

- Prepare for the review by attending orientation, or alternatively, by self-study of the reference material provided by the RTL.
- Use the applicable guidance, the BNFL submittal, and applicable references to perform their review.
- Provide the RTL, or the ATL, status reports as requested.
- Provide written material to the RTL or the ATL in accordance with the review schedule and in the required format (see 7.0 and 8.0).
- Provide input concerning potential weaknesses in the submittal to the ATL, or the RTL, in the Team meetings. These questions should be in the format described in Section 8.
- Resolve questions identified by the Team through discussion with TWRS-P Contractor personnel, review of submittals and responses to questions, and consideration of the applicable requirements.
- Document the rationale for the Team member's resolution of questions. This rationale must address the acceptability of the TWRS-P Contractor's response to the questions.
- Assist in the preparation of the ISER, as assigned by the RTL.
- Participate in the "lessons learned" session at the conclusion of the review.

4. Schedule

4.1 Major Milestones

The major milestones for the review of the BNFL Initial Safety Assessment submittal are listed below. The dates listed must be adhered to in order to meet the 9-week schedule required by the *Regulatory Process for Radiological, Nuclear, and Process Safety for TWRS Privatization Contractors*, DOE/RL-96-0003, Revision 0, dated February 1996. Day zero is the day BNFL presents their Initial Safety Assessment submittal to the Regulatory Unit. The formal review of the BNFL submittal is scheduled to commence on January 12, 1998. Negative times indicate actions to be performed prior to start of the review. Each new calendar week begins on Monday, unless otherwise noted. A more detailed schedule is provided in Section 6.

Reference Date	Calendar Week	Activity
-30 days	12/8/97 - 1/7/97	RU receives BNFL letter of intent to submit Initial Safety Assessment submittal. Regulatory Official formally assigns R. Barr as Review Team Leader (RTL).
-5 days	1/7/98	Review Team Orientation - Start
Day 0	1/12/98	BNFL presents Initial Safety Assessment submittal to the Team
Week 1	1/12/98 - 1/16/98	The Team acceptance review is performed.
Week 2	1/19/98 - 1/23/98	On 1/19/98, send letter to BNFL accepting or rejecting submittal for detailed review. Team begins detailed review of the BNFL Initial Safety Assessment submittal.
Week 3	1/26/98 - 1/30/98	Team provides initial list of questions (to BNFL with a copy to NRC on 2/2/98). NRC provides comments/questions on submittal to RU by 1/30/98. (RU and NRC meet 1/29/98) Notice to public of RU/Contractor meeting (Week 5) to discuss submittal questions and responses.
Week 4	2/2/98 - 2/6/98 2/6/98	The Team evaluates NRC questions. BNFL evaluates the Team's questions. Team provides second round of questions to BNFL, if necessary.
Week 5	2/9/98 - 2/13/98	BNFL continues evaluation of the Team's questions. BNFL hosts meeting to respond formally to the Team questions

Reference Date	Calendar Week	Activity
		(2/13/97).
Week 6	2/16/98 - 2/20/98	Team begins drafting the Initial Safety Evaluation Report.
Week 7	2/23/98 - 2/27/98	The Team continues drafting Initial Safety Evaluation Report (ISER). Draft sent to NRC 2/26/98.
Week 8	3/2/98 - 3/6/98	The Team finalizes draft ISER.
Week 9	3/9/98 - 3/13/98	The Team finalizes ISER and letter of transmittal for signature by RO. RU sends letter of transmittal and ISER to BNFL with copies to the public and a courtesy copy to NRC (no later than 3/16/98).
	No later than 4/3/98	Lessons Learned session for all Team members as soon as possible after the review is complete.

4.2 Reviewer Selection & Qualifications

Each Team member will complete the one-page "Reviewer Credential Record" (Form 1), addressing their education, work experience, licenses, certifications, special skills, awards, and areas of expertise. All reviewers must also submit an "RU Nondisclosure/Disclosure Agreement" (Form 2). Federal Employees are not required to complete the Nondisclosure portion of Form 2. (Note: If forms 1 and 2 are already on file from a previous review, the reviewer does not need to complete new forms.)

In consultation with the Requirements and Standards Official (RSO), Activities Authorization Official (AAO), and Regulatory Official (RO), the RTL will assign each reviewer to predetermined review areas based upon the Reviewer Team Credential Records, and any available supervisor recommendations. The preliminary review assignments are provided in this document. (Once the submittal has been received, and the capabilities of the respective Team members in relation to the submittal are more clearly defined, some changes in the assignments may occur.)

Form 1 Reviewer Credential Record

Office of Radiological, Nuclear, and Process Safety Regulation of TWRS-P Contractors	REVIEWER CREDENTIAL RECORD
Name:	Date:
<i>Organization/Address</i>	Telephone:
Areas of Expertise:	
Education (Degree/Major/School/Date):	
Licenses, Certifications, Special Skills, & Awards (License/Organization/Number/Date):	
Work Experience (Summarize):	
Reviewer's Signature	Date:
Regulatory Official Certification:	Date:

Form 1 (7/21/97)

Form 2 Nondisclosure and Disclosure Statements

Office of Radiological, Nuclear, and Process Safety Regulation of TWRS-P Contractors	NONDISCLOSURE AND DISCLOSURE STATEMENTS
Name:	Date:
Organization/Address:	Telephone:
Nondisclosure Statement	
In anticipation of my participation with the Office of Radiological, Nuclear, and Process Safety Regulation for TWRS-P Contractors (RU), I certify that I will not disclose any proprietary or competition sensitive information of the Contractors or DOE, to anyone who is not also authorized access to the information by law or regulation, except pursuant to the order of a court of competent jurisdiction.	
Signature:	Date:
Disclosure Statement	
Identify any direct financial interests (including stocks, bonds, or other financial interests) in, or past employment by the following companies (company - interest or employment dates):	
Lockheed Martin Corporation, Advanced Environmental Systems	
<ul style="list-style-type: none"> • Fluor Daniel, Inc. • NUMATEC (a Cogema, Inc./SGN Co.) • B&W Protec, Inc. (McDermott Company) • Los Alamos Technical Associates, Inc. • AEA Technology Eng. Services, Inc. 	<ul style="list-style-type: none"> • M4 Molten Metal Technology • Duke Engineering & Services • NUKEM • EnVitCo, Inc. • OHM Remediation Services, Corp.
BNFL, Inc.	
<ul style="list-style-type: none"> • BNFL Engineering Ltd. • Science Application International Corp. • Savannah River Technical Center. 	<ul style="list-style-type: none"> • BNFL, Inc. • Bechtel National, Inc. • GTS Duratek
Signature:	Date:

Form 2 (7/21/97)

5. Reviewer Orientation

5.1 General

All reviewers are required to read and/or become familiar with the following documents prior to January 12, 1998. Documents that are essential to a complete understanding to the review process are listed in bold and must be fully understood by all reviewers. The other listed documents provide further amplification of the regulatory process and will enhance the knowledge of the reviewers.

- ***Guidance for the Review of TWRS Privatization Contractor Initial Safety Assessment Plan Submittal Package, RL/REG-97-11, Revision 1, December 1997***
- ***DOE Regulatory Process for Radiological, Nuclear, and Process Safety for TWRS Privatization Contractors, DOE/RL-96-0003, Revision 0, February 1996.***
- *Top-Level Radiological, Nuclear, and Process Safety Standards and Principles for TWRS Privatization Contractors, DOE/RL-96-0006, Revision 0, February 1996.*
- *Concept of the DOE Regulatory Process for Radiological, Nuclear, and Process Safety for TWRS Privatization Contractors, DOE/RL-96-0005, Revision 0, February 1996.*
- *Memorandum of Agreement for the Execution of Radiological, Nuclear, and Process Safety Regulation of TWRS Privatization Contractors, DOE/RL-96-26, Revision 0, July 3, 1996.*
- *Memorandum of Understanding between the Nuclear Regulatory Commission and the Department of Energy, January 29, 1997.*
- *Policy for Radiological, Nuclear, and Process Safety Regulations for TWRS Privatization Contractors, DOE/RL-96-25, Revision 0, July 3, 1996.*
- *Process for Establishing a Set of Radiological, Nuclear, and Process Safety Standards and Requirements for TWRS Privatization, DOE/RL-96-0004, Revision 0, February 1996.*

Reviewer orientation will consist of a team review of the regulatory concepts and principles, as described in the required reading documents. The orientation session is scheduled for January 7 and 8, 1998. During the orientation, the Team will make final preparations for the review of the BNFL submittal, which will commence Friday, January 12, 1998. Those Team members who are unable to attend the orientation must study this handbook and the review guidance documents, and contact the RTL or ATL with questions prior to their arrival.

5.2 Orientation Schedule and Agenda

The following is the Reviewer Orientation Schedule and Agenda.

Reviewer Preparation and Orientation

January 7, 1998

- 1:00 Welcome & Team Introductions (Mr. L. Miller)
- 1:15 Opening Remarks (Dr. D. C. Gibbs)
- 1:30 TWRS Privatization Historical Perspective (Dr. C. Bell)
- 2:30 DOE's Policy, MOA, and Regulatory Concepts (Dr. C. Bell)
- 3:30 Regulatory Process (Mr. P. Carier)
- 4:30 Adjourn

January 8, 1998

- 10:00 ISA Review Guidance (Mr. R. Barr)
- 11:00 NRC's Role (Dr. M. Tokar)
- 11:15 Review Team Organization (Mr. L. Miller/Mr. R. Barr)
- 11:45 Review Team Schedule and Logistics (Mr. P. Carier/Mr. C. Vanderniet)
- 12:15 Questions, Answers, Team Interactions, and Subgroup Planning
(Mr. L. Miller/Mr. R. Barr)
- 1:15 Adjourn

6. Logistics

This section addresses actions to prepare for and to conduct the review. Each subsection relates to a specified time frame of the review: "Before Notice of Intent to Submit," "Between Notice and Receipt of Submittal," "Between Receipt of Submittal and Completion of the Acceptance Review," "Between Completion of the Acceptance Review and Completion of the Evaluation Report," and "Closure." Checklists are provided to assist the RTL in tracking Review Team actions.

6.1 Activities to be Completed Before Notice of Intent to Submit

Task	Assigned to	Date Required	Date Completed
Develop a list of potential reviewers.	Barr	11/10/97	11/10/97
Select Reviewers.	Barr	12/15/97	
Complete all reviewer documentation required by other sections of this notebook (credentials, nondisclosure, disclosure, etc.) for each reviewer.	Spargur	1/8/98	

Task	Assigned to	Date Required	Date Completed
Complete Specific Review Guidance.	Barr	10/97	10/97
Issue Review Guidance to the Contractors.	Gibbs	11/97	10/3/97
Determine reviewers' participation schedule. (Formal agreement regarding dates to be sent to reviewers and executed prior to 12/22/97.)	Barr	12/22/97	
Identify and obtain reviewer office space.	Spargur	12/24/97	
Locate "tools" for review (computers, copiers, shredder, paper, flip chart(s) with plenty of paper, white boards, tape, markers, erasers, staplers, pencils, comment forms, etc.)	Spargur	12/24/97	
Identify alternatives for copying the submittal rapidly. (Engineering drawings of various sizes may be included in the submittal.)	Kraemer	1/5/97	
Provide reviewers with list of material available in the RU Technical Library.	Kraemer	1/8/98	
Provide reviewers with lodging information.	Spargur	12/22/97	
Resolve any reviewer contract issues.	Baumann	12/22/97	
Identify badging needs and make appropriate arrangements.	Spargur	12/22/97	
Identify and prepare reviewer preparation and orientation needs.	Barr	12/15/97	

6.2 Activities to be Completed Between Notice of Intent to Submit and Receipt of Standards Approval Submittal

Task	Assigned to	Date Required	Date Completed
Notify reviewers of date of reviewer orientation session, review activities, etc., including schedule. Inform reviewers to bring or ship any reference materials they may need during the review.	Hawkins	12/22/97	
Make video conference arrangements for orientation session. Assure HQ and NRC participation.	Spargur	12/22/97	
Confirm Review Team meeting location.	Spargur	1/8/98	

Task	Assigned to	Date Required	Date Completed
Confirm phone installation.	Spargur	12/31/97	
Make video conference arrangements for presentation by BNFL of ISA submittal. Assure HQ and NRC participation.	Spargur	1/9/98	
Reviewer Orientation.	Barr	1/8/98	
Ensure completion of Forms 1 and 2 from this Handbook for all reviewers.	Spargur	1/13/98	
Release letter from Regulatory Official designating R. Barr as Review Team Leader (RTL), i.e., - the review manager who directs the initial safety evaluation.	Gibbs	12/22/97	

6.3 Activities to be Completed Between Receipt of Submittal and Completion of the Acceptance Review

Task	Assigned to	Date Required	Date Completed
Perform Acceptability Review. *HQ staff at Hanford for this activity	Barr	Jan 12-16, 1998*	
Send letter to BNFL acknowledging receipt and providing results of Acceptability Review.	Barr	1/19/98	
If package is rejected, reschedule review and detail insufficiency of the package in a letter to the contractor within one week rejection decision.	Gibbs	-----	

6.4 Activities Between Completion of the Acceptance Review and Completion of the Safety Evaluation Report

Task	Assigned to	Date Required	Date Completed
Provide the list of questions to BNFL with a copy to NRC. *HQ staff at Hanford for this activity	Barr	Jan 26-30, 1998* Letter 2/2/98	
Evaluate NRC questions.	Barr	Feb 2-6, 1998	
Additional questions from RU/NRC meeting of 1/29/98 sent to BNFL	Barr	2/9/98	
Attend noticed meeting, hosted by BNFL. NRC invited to meeting. Purpose of meeting is to allow BNFL to respond to RU questions on submittal.	RU/Barr	2/13/98	
Provide draft ISER to NRC for comment	Barr	2/26/98	
Review Team finalizes ISER and letter of transmittal for signature by Regulatory Official.	Barr	3/11/98	
RU sends Letter of Transmittal and ISER to BNFL with copies to the public and a courtesy copy to NRC.	Gibbs	3/16/98	

6.5 Closure Activities

Task	Assigned to	Date Required	Date Completed
File or destroy materials generated during the review, as appropriate. Refer to Management Directive 2.1, "Information Management" for requirements on "Record Material."	Kraemer	4/15/98	
Send letters to reviewers' supervisors acknowledging individual participation by each reviewer.	Barr, Gibbs	4/15/98	
Conduct lessons-learned session with review team. Team members who cannot participate in person, or by phone, should provide a short memo to the RU with their assessment of lessons learned.	Barr, Vanderniet	4/30/98	

7. Instructions to Reviewers

7.1 Review Guidance

The principal references for use by the Team are listed in Section 5.1 of this document. The Contract is the sole source of all review requirements. Every attempt was made to make the review guidance consistent with the Contract. Nonetheless, if a conflict exists between the Contract and the review guidance, the Contract provisions are to be followed.

The Team may also refer to the documents cited as references in the review guidance documents (RL/REG-97-11) for clarification. These documents are also referenced in the Contract.

7.2 Team Organization

The Team is organized into four primary areas of functional responsibility, as shown in Figure 1. All Team members are expected to review and become familiar with the facility and process descriptions. Each functional area provides input to the resolvability of open issues and to the ISER.

Table 1 is complex, but important, and deserves careful study. It shows the relationship among:

- the purpose of the Initial Safety Evaluation, as defined in DOE/RL-96-0003, Section 3.3.2, (i.e., what our evaluation must demonstrate);
- the input we will receive from the Contractor, as defined in DOE/RL-96-0003, Section 4.2.2, (i.e., the material we will have to work with); and,
- the more detailed review guidance of RL/REG-97-11.

Because of the scope and complexity of the ISAR, review responsibilities are broken out separately in Table 2.

The responsibilities outlined in these tables are intended to focus the activity of the reviewers. However, they are not inclusive. Team members are encouraged to interact freely with each other to accomplish the required evaluation. Team meetings provide one mechanism for this communication.

The Functional Area Leads coordinate the conduct of the review and the documentation of results. Each team member participates in the technical review of the submittal based on their professional experience and areas of expertise. As the team members conduct their review, two primary questions are asked:

1. What are the evaluation criteria and review considerations I am using?
2. What specific evidence do I find that the criteria and considerations are, or are not, met?

Each team member is responsible for documenting their review in a way that clearly demonstrates this was accomplished. Team members are required to use the forms provided for capturing questions. This assures we can fully document the resolution of questions.

7.3 Comment/Input Style Guide

Each reviewer should structure their review in terms of questions, observations, and findings. Each of these terms is explained further below.

7.3.1 Question

A Team preliminary concern (documented on Form 3) must be resolved by the Contractor's clarification of the submittal to meet the approval criteria of the *Regulatory Process* or the *Standards Identification Process*, which are contractual requirements. Any Team member may pose questions based on review of the submittal. The Team will respect the expertise of each team member, and will approve proposed questions, unless a clear basis for not doing so is provided by the Team or RTL in the team meeting, or on the Form 3, or both.

7.3.2 Observation

A Team safety judgment or inference based on the reviewer's experience and expertise that is not related directly to a citation from the Contract or the references cited as part of Contract requirements.

7.3.3 Finding

A review result that is related directly to a citation from the Contract or the references cited as part of Contract requirements. (Findings may be positive or negative.)

7.4 Documenting Preliminary Questions Concerning TWRS-P Contractor Submittal

As the review progresses, reviewers and review subgroups will develop questions concerning the TWRS-P Contractor's submittal. If a reviewer considers a question significant enough to require a TWRS-P Contractor's response to evaluate the acceptability of the submittal, the question shall be promptly documented (using Form 3) and discussed with the Team at the daily team meeting. The question will be reviewed by the functional group leader for validity and format. It will then be forwarded to the ATL for redundancy review and inclusion in the question set. Prior to transmittal to the TWRS-P Contractor the question set will receive a final review by the RTL.

The TWRS-P Contractor may choose to respond to these questions, or may choose to wait for a follow-up letter from the RO requesting a formal response. (The RTL will aggregate all questions to the TWRS-P Contractor at certain intervals during the review period.) Where the TWRS-P Contractor's preliminary response to a question is already known, based on discussions with the TWRS-P Contractor, that response will be referenced in the subsequent formal letter.

The formal letter and formal TWRS-P Contractor responses are the only material, other than the Contract submittal, which may be used by the Team in establishing a basis for the acceptability of the submittal. No reviewer shall rely solely upon verbal assurances by TWRS-P Contractor employees of measures to be taken to ensure acceptability of portions of the TWRS-P Contractor's submittal. Any significant verbal assurances must be confirmed by the TWRS-P Contractor in writing to be used by the Team in the SER.

The RTL will attempt to resolve any technical disputes among the Team members. If this resolution is unsatisfactory to some Team members, the Team members may choose to offer a differing professional opinion or view in accordance with Section 7.5, "Differing Professional Opinion/Differing Profession View (DPO/DPV)." The Team review will continue independently of the resolution of these DPO/DPVs, based on the RTL's resolution of the issue.

7.5 Differing Professional Opinion/Differing Professional View Procedure

RU Management Directive 5.5, "Regulatory Unit Procedure for Handling Differing Professional Views or Opinions," provides a mechanism for the resolution of technical concerns that a Team member considers to have been inadequately resolved by the Team. A differing professional view (DPV) is resolved informally by an ad hoc review panel appointed by the RO. A differing professional opinion (DPO), used when the reviewer is unsatisfied with the results of the DPV process, is resolved formally by a second ad hoc review panel, convened by the RL Director of Environmental Safety and Health. Team members are encouraged to work constructively with the other team members to resolve technical differences of opinion so that all parties are satisfied with the resolution. In the event this is not possible, the DPO/DPV procedure provides the

mechanism to ensure technical concerns are fully reviewed by RL with no retaliation or discrimination against the concerned reviewer.

7.6 Review Team Tracking System

The Review Team Administrative Assistant and ATL have developed a method to compile and track questions, observations, and findings from team members. Each reviewer is required to use this system, providing input in the required format and reviewing the system output for accuracy.

8. Documentation

After most questions concerning the submittal have been resolved, the team will draft the Initial Safety Evaluation Report (ISER). The ISER will be organized to demonstrate that all evaluation elements have been addressed, and to clearly document the rationale for the conclusions reached. The results of each reviewer's efforts must be provided in the format and structure specified by the ISER outline.

Additionally, reviewers will provide a weekly synopsis of their progress towards completing their assigned parts of the review effort. The synopsis will outline the reviewer's evaluation of the areas he/she is responsible for. A critical part of the synopsis is documenting what objective evidence the reviewer has found to date that the BNFL submittal complies, or does not comply, with evaluation criteria and review guidance.

8.1 Draft Safety Evaluation Report Outline

The RTL will prepare a detailed ISER outline and assign team members to prepare portions of the ISER. Each Team member should document the significant concerns he/she has identified, discuss why there was a concern (including the relation to the approval criteria, where appropriate), and describe the basis by which the concerns have been resolved (or remain unresolved). The description should be clear, technically complete, concise, and consistent with the topic. The TWRS-P Contractor's submittal and formal correspondence with the TWRS-P Contractor during the review should be extensively referenced, where applicable.

Functional subgroups should coordinate their individual team member documentation efforts and cooperate to efficiently divide the documentation effort.

All relevant questions that the Team identifies must be documented. As previously discussed in Section 8, preliminary questions (Form 3) are endorsed by the Team, then provided to the TWRS-P Contractor for a response. Every significant reviewer concern should be converted into a preliminary question (Form 3) unless the reviewer is able to satisfy the concern based upon a review of the submittal or other formal TWRS-P Contractor correspondence. Verbal responses from TWRS-P Contractor personnel related to reviewer concerns, by themselves, are not sufficient to resolve concerns. The submittal and associated follow-up correspondence must provide an objective basis for the Team to resolve the concern.

8.2 Documentation Format

Individual Team members will provide their documentation in a manner conducive to easy incorporation with other contributors' documentation. Team members shall use Microsoft Word, Office '95, Version 7.0, for IBM compatible, or if using Macintosh, Microsoft Word, Version 7.0. The second most acceptable software is WordPerfect 6.1, followed by WordPerfect 5.1. Individual contributors shall provide a hard copy of their input along with their electronic data. This hard copy should be double-spaced and singled-sided.

8.2.1 Text Style

The majority of the evaluation report should be in active voice and past tense. The report should flow from the review considerations. All review considerations do not need to be addressed; however, every consideration addressed should be discussed.

Each Team member should prepare his/her documentation consistent with the DOE Style Guide manual. Use of spell checkers, grammar checkers, as well as proof-reading by other team members is highly encouraged to enhance the readability and coherence of the SER.

8.2.2 Margins/Page Settings

Use the software default settings for margins. Do not adjust top, bottom, left, or right margins. Margin adjustments shall be made on the final document.

Do not use headers or footers. Page numbering can be used when drafting the written text. However, they should be removed before submitting text for final incorporation.

8.2.3 Font and Font Features

Use font Times New Roman, 12 in Word. Use font Times New Roman, 12 in WordPerfect. Special font features, such as **bold**, underline, and *italics*, are easily converted from WordPerfect to Word and can be used as needed when developing the written text.

Use **bold** for emphasis, *italics* when spelling out the title of a complete document (e.g., *DOE Regulatory Process for Radiological, Nuclear and Process Safety for TWRS Privatization Contractors*, DOE/RL-96-0003), and "quotation marks" when spelling out the name of chapters or sections. DOE Orders and Standards are also to be spelled out using quotation marks.

8.2.4 Tabs, Indents

Tabs and indents are easily converted from WordPerfect to Word and can be used as needed when developing the written text.

8.2.5 Headings/Table of Content Markings/Outlines

Do **not** use Heading, Table of Content, or Outline markings in either Word or WordPerfect. Headings and heading numbers can be typed, but not marked.

8.2.6 Footnotes and Endnotes

Footnotes are provided for the reader as a quick reference point or explanation and should be used as needed to better clarify the text. Footnote markings are identified numerically.

Endnotes are used for the writer as a means to recall reference information, etc. Endnote markings are identified alphabetically.

8.2.7 Tables and Figures

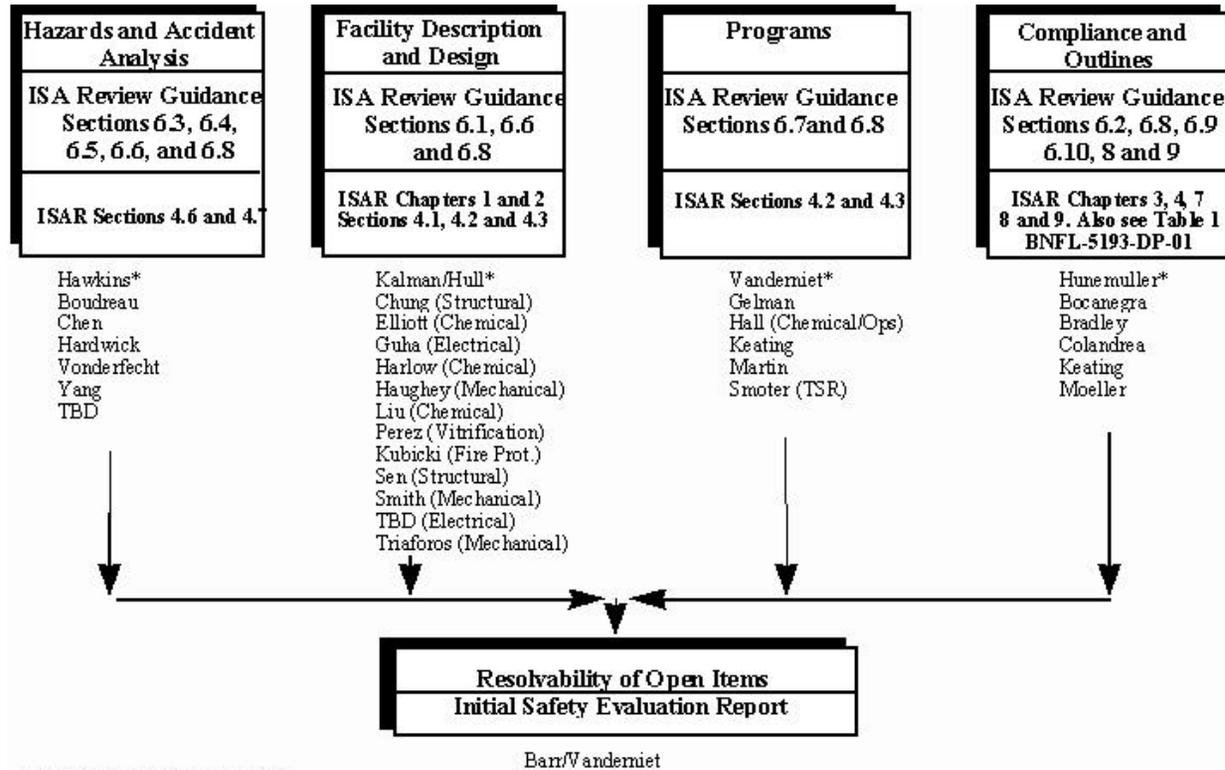
Tables and figures may be used as approved by the Review Team Leader or Assistant Team Leader. However, tables and figures should be provided as separate files and not embedded within the written text.

The Review Team Leader (RTL) will amplify the schedule in this instruction to indicate when draft ISER inputs will be required, and who will be the lead writer for each input. Due to the potentially short time period of this review, Team members must meet the documentation schedule that is developed and mutually agreed upon. All Team members are encouraged to advise the ATL or RTL of any constraints on their ability to complete their ISER inputs in a timely manner, before the final schedule is developed.

9. Lessons Learned

At the conclusion of the review, a lessons learned session will be held, with solicitation of input from all who participated in the review. Significant results of the session will be documented and provided to the RO and the Team members.

Figure 1. Flowchart of Functional Areas of Review Responsibility.



* Indicates Subgroup leaders

** Based on ISA and ISAR Outlines Submitted by the Contractor

Table 1. Responsibility Matrix for BNFL ISA Review.

Review topics	Evaluation Criteria	BNFL Required Input	Reviewers
Facility Description/Design and proposed facility operations	Section 6.1 of ISA review guidance	DOE/RL-96-0003, Section 4.2.2 items: <ul style="list-style-type: none"> 1. Description of the design developed during Part A and proposed facility description 2. Description of the Contractor's site and its location within the Hanford site Chapters 1 and 2, and Sections, 4.1, 4.2 and 4.3 of ISAR	<u>Chem/Process</u> - Harlow, Elliott, Perez, Liu <u>Mechanical</u> : Smith, Hull, Kalman, Haughey, Triaforos <u>Electrical</u> : Guha, TBD <u>Fire protection</u> : Kubicki <u>Vitrification</u> : Perez, Elliott <u>Civil/Structural</u> : Sen, Chung
SRD and ISMP	DOE/RL-96-0003, Section 3.3.2 items: <ul style="list-style-type: none"> 1. The degree to which the Contractor's proposed safety-related activities are being performed or can be performed in compliance with the approved SRD 2. The degree to which the Contractor's proposed safety-related activities are being performed or can be performed in compliance with the approved ISMP Section 6.2 of the ISA review guidance	DOE/RL-96-0003, Section 4.2.2 item: <ul style="list-style-type: none"> 3. An assessment of compliance to the approved SRD and ISMP ISAR transmittal letter, Attachment A Chapters 3, 5, 7, 8, and 9 of the ISAR	Bocanegra, Hunemuller, Bradley, Colandrea, Keating, Moeller
Design Basis Events, Hazard Identification/Control, SSC	DOE/RL-96-0003, Section 3.3.2 items: <ul style="list-style-type: none"> 3. The adequacy with which the hazards, including process hazards, attendant to the Contractor's proposed activities have been assessed and controlled 4. The adequacy of the selection and definition of the design basis events for the proposed facilities 5. The acceptability of the results of analysis of representative design basis events 6. The adequacy of categorization of systems, structures, and components that are important to safety Sections 6.3, 6.4, 6.5, 6.6 of the ISA review guidance	DOE/RL-96-0003, Section 4.2.2 items: <ul style="list-style-type: none"> 4. Description of hazards, including process hazards and hazards controls implemented in the design and operations 5. Description of potential design basis events 6. Analysis of the potential design basis events 7. Preliminary safety acceptance criteria against which the consequences of the potential design basis events are compared for acceptability 8. Description of Structures, systems and components designated as important to safety and rationale for their selection 	Hawkins, Chen, Boudreau, Vonderfecht, Yang, Harlow, Chung, Triaforos, Elliott, Hardwick, TBD

Review topics	Evaluation Criteria	BNFL Required Input	Reviewers
		Sections 4.6 and 4.7 SSCs important to Public and Worker safety are designated DC I and DC II, respectively	
CORAMI	DOE/RL-96-0003, Section 3.3.2 item: 9. The confidence associated with safety-related aspects of constructability, operability, reliability, availability, maintainability, and inspectability Section 6.7 of the ISA review guidance	DOE/RL-96-0003, Section 4.2.2 item: <ul style="list-style-type: none"> • 9. The contractor's evaluation of constructability, operability, reliability, availability, maintainability, and inspectability. Sections 4.2 and 4.3 of the ISAR	Vanderniet, Gelman, Hall, Keating, Martin
ISAR	DOE/RL-96-0003, Section 3.3.2 item: 7. Adequacy of the projected safety basis for the facility and its operation Section 6.8 of the ISA review guidance	DOE/RL-96-003, Section 4.2.2, item 10 ISAR	See Table 2
Deactivation Plan	DOE/RL-96-0003, Section 3.3.2 item: 11. The adequacy of the draft deactivation plan Section 6.9 of the ISA review guidance	DOE/RL-96-0003, Section 4.2.2 item: 11. Draft Deactivation Plan BNFL-5193-DP-01, "Preliminary Deactivation Plan"	Vanderniet, Hall, Keating, Martin
Outline Review	DOE/RL-96-0003, Section 3.3.2 item: 8. The adequacy of the outlines of various plans, programs and requests that will be generated and implemented in Part B Sections 6.10, 8 and 9 of the ISA review guidance	DOE/RL-96-0003, Section 4.2.2 item: 12. Outlines of the: a) Construction Authorization Request* b) Operating Authorization Request* c) Emergency Response Plan <i>ISAR Chapter 9.0</i> d) Unreviewed Safety Question Plan <i>ISAR Section 3.1</i> e) Conduct of Operations Plan <i>ISAR Section 3.11</i> f) Technical Safety Requirements <i>ISAR Section 4.8</i> g) Training and Qualification Plan <i>ISAR Section 3.4</i> h) Maintenance Implementation Plan <i>ISAR Section 3.2</i> i) Occurrence Reporting j) Procedures	Vanderniet, Hall, Keating, Martin, Smoter, Gelman

Review topics	Evaluation Criteria	BNFL Required Input	Reviewers
		<i>ISAR Section 3.7</i> k) Environmental Radiological Protection Program <i>ISAR Chapter 5.0 and Appendix 5B</i> l) Radiation Protection Program m) <i>ISAR Chapter 5.0, Appendix 5A</i> Operational Analysis and Assessment Reports <i>ISAR Section 3.6</i> n) Deactivation Safety Assessment* o) Deactivation Authorization Request* *Not required by BNFL contract	
Resolvability of Open Issues	DOE/RL-96-0003, Section 3.3.2 items: <ul style="list-style-type: none"> • 10. The resolvability of open issues. 	None	Barr, Vanderniet

Table 2. Responsibility Matrix for BNFL ISAR Review.

ISAR Section	Reviewers
Section 1 - General Information 1. Facility and Process Descriptions 2. Institutional Information 3. Site Description Section 2 - Management Organization 1. Organization and Administration 2. Safety Committees 3. References	<u>Chem/Process</u> - Harlow, Elliott, Perez, Liu, Hawkins <u>Mechanical</u> : Smith, Hull, Kalman, Haughey, Triaforos <u>Electrical</u> : Guha, TBD <u>Fire protection</u> : Kubicki <u>Vitrification</u> : Perez, Elliott <u>Civil/Structural</u> : Sen, Chung
Section 3 - Conduct of Operations 1. Configuration Management 2. Maintenance 3. Quality Assurance 4. Training and Qualification 5. Human Factors 6. Audits and Assessments 7. Incident Investigations 8. Records Management 9. Procedures 10. Testing Program and Preoperational Safety Review 11. Operational Practices	<u>Conduct of Operations</u> - Vanderniet, Gelman, Keating, Martin
Section 4 - Integrated Safety Analysis 1. Site Description 2. Facility Description 3. Process Description 4. Process Safety Information 5. Training and Qualification of ISA Team 6. Integrated Safety Analysis Methods 7. Results of ISA 8. Controls for Prevention and Mitigation of Accidents 9. Administrative Control of the ISA	Keating, Hardwick, Yang, Kalman, Chen, Vonderfecht, Hawkins, Boudreau, TBD
Section 5 - Radiation Safety	Bocanegra, Moeller, Bradley
Section 6 - Criticality Safety	Vonderfecht
Section 7 - Chemical Safety	Harlow, Elliott, Perez
Section 8 - Fire Safety	Kubicki
Section 9 - Emergency Management	Bocanegra, Moeller, Bradley

Form 3 Regulatory Unit Review Team Preliminary Questions for Contractor

Office of Radiological, Nuclear, and Process Safety Regulation of TWRS Privatization Contractors	Regulatory Unit Review Team Question and Resolution Form
-------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------

Question #	<input type="text"/>	Date Opened	<input type="text"/>	Acceptance Status	<input type="text"/>
Reviewer	<input type="text"/>	Date to Contractor	<input type="text"/>	Possible Commitment (Check for Yes)	<input type="checkbox"/>
Evaluation Criterion	<input type="text"/>	Date Closed	<input type="text"/>	Proprietary Information (Check for Yes)	<input type="checkbox"/>

Cited Reference

Cited Submittal Text

Discussion

Question

Commitment Text (if applicable—check box at top of form)