IMPLEMENTATION OF THE INEEL SAFETY ANALYST TRAINING STANDARD[a]

E. Eugene Hochhalter
Idaho National Engineering and Environmental Laboratory
P.O. Box 1625
Idaho Falls, Idaho
(208) 526-1038
ehochhal@inel.gov

ABSTRACT

The Idaho Nuclear Technology and Engineering Center (INTEC) safety analysis units at the Idaho National Engineering and Environmental laboratory (INEEL) are in the process of implementing the recently issued INEEL Safety Analyst Training Standard (STD-1107). Safety analyst training and qualifications are integral to the development and maintenance of core safety analysis capabilities. The INEEL Safety Analyst Training Standard (STD-1107) was developed directly from the EFCOG Training Subgroup draft safety analyst training plan template, but has been adapted to the needs and requirements of the INEEL safety analysis community. The implementation of this Safety Analyst Training Standard is part of the Integrated Safety Management System (ISMS) Phase II Implementation currently underway at the INEEL. The objective of this paper is to discuss (1) the INEEL Safety Analyst Training Standard, (2) the development of the safety analyst individual training plans, (3) the implementation issues encountered during this initial phase of implementation, (4) the solutions developed, and (5) the implementation activities remaining to be completed.

SUMMARY

The implementation of the STD-1107 is in progress across the INEEL and is approximately 50 percent complete. STD-1107 was developed directly from the EFCOG SAWG Training Subgroup Template, with INEEL specific requirements added. Implementation for STD-1107 encountered several major concerns that were resolved with the help of the INEEL Training Organization Competence Commensurate with Responsibilities, which are discussed in this paper. The STD-1107 has to be fully implemented by October 1, 2000 per INEEL Management. Declaring completion of the company implementation milestone for STD-1107 can be accomplished when: (1) all qualified safety analysts have been identified and exempted from the STD-1107 training, (2) the safety analysts that must complete the STD-1107 training have a completed Individual Training Plan (ITP) and Competence Commensurate with Responsibilities forms in their training plan. It is important to document the qualification and the exemption/equivalency process as the training program is implemented. ISMS requires that the individuals be fully qualified to perform their assigned tasks and that qualification must be documented.

a Work supported by the U.S. Department of Energy, Assistant Secretary for Environmental Management (EM), under DOE Idaho Operations Office Contract DE-AC07-99ID13727.

INEEL SAFETY ANALYST TRAINING STANDARD

The INEEL Safety Analyst Training Standard (STD-1107) [1,2] was developed, reviewed, and approved based upon the EFCOG SAWG Training Subgroup Training Plan Template[3]. The major sections of the template are: (1) General Information, (2) Organization and Administration, (3) Training Resources and Facilities, (4) Training Records, (5) Instructor Qualifications, (6) Evaluation Guidelines, (7) Examination Guidelines, (8) Prerequisites for Education and Experience, and (9) Training Courses. The INEEL Training Program (STD-1107) was customized to reflect the needs and requirements for the safety analyst training program at the INEEL. The initial version of STD-1107,[1] utilized the SAWG Training Subgroup Template with modifications to Section 2, "Organization and Administration," and Section 9, "Training Courses." Both sections were customized for the INEEL. The INEEL courses were initially divided into three areas, which were identified as Basic, Intermediate and Advanced Training. All of the Basic, and the supervisor selected portions of the Intermediate Training courses are required for qualification as a safety analyst. To aid in this safety analyst training and qualification process, the ITP forms (Figures 1, 2, and 3) were developed to document the results of the process and to provide the basis for determining site-wide training requirements. The individual safety analyst training requirements from each ITP form could then be place on a site-wide training matrix (Figure 4) to help focus the site-wide training efforts in specific areas. The required training information could then be used to provide the INEEL Training Organization and EFCOG SAWG with INEEL-wide training needs that could be completed at the annual workshop.

During the INEEL ISMS Phase II Implementation effort currently underway, the INEEL Training Organization proposed several significant changes to the Safety Analyst Training Program that would simplify and consolidate the multiple parts of the training curriculum and the ITP (Figure 5). The Training Course Section of the plan and the ITP form were changed from Basic, Intermediate, and Advanced Training to Basic, Job-Specific, and Professional Development Training. Figure 5 shows the new training requirements and adds additional nuclear facility-specific training as required by DOE Order 5480.20A. This allows the ITP to be established for each analyst and each required nuclear facility. The Job-Specific Training covers both safety analysis training and facility-specific training that consists of facility tours, facility-specific authorization basis documentation, USQ screening and evaluations, and facility training from the Technical Staff Training programs as required by DOE Order 5480.20A.

DEVELOPMENT OF THE INDIVIDUAL TRAINING PLAN

The purpose of the ITP is to document the training courses required to qualify as a safety analyst. The safety analysis supervisor or manager would have to evaluate each individual in the organization, looking at that individual's education and experience for both entry level requirements and safety analysis specific experience. The ITP serves as the documentation for the completed evaluation, which is shown on Figure 5. Figure 5 represents an ITP form for an entry level individual with an appropriate engineering degree. The Basic Training is required by everyone being qualified. The Job-Specific Training is customized to the needs of the safety analysis organization, the supported facilities, and the safety analyst trainee. Both management and the safety analyst trainee must agree to the training courses by signing the completed form before training starts. Once the training curriculum is completed, the form is again signed by both individuals to indicate completion of the program.

Initially it was thought that every analyst, in the safety analysis unit, would be required to have an ITP completed to identify the training required for qualification. This created a major concern about the potential of disqualifying the senior safety analysts. This concern and several others will be discussed next.

IMPLEMENTATION CONCERNS

ITP development for each safety analyst identified several significant concerns, and required redirection of the initial approach being taken. The following concerns were identified:

Disqualification of Senior Safety Analysts

If an ITP is filled out for all safety analysts, does this automatically disqualify the entire organization of safety analysts including the supervisors until the training is completed?

The training and qualification process could take up to two years if all the training on the ITP had to be completed without credit for previous safety analysis experience or education. If some credit was allowed, then the training duration would be shorter (approximately 6 months) assuming that a large portion of the training courses could be exempted or equivalenced for the senior safety analysts.

Documentation of Qualified Safety Analyst

How should fully qualified safety analysts be identified and that qualification documented for ISMS? The Phase II Implementation at INTEC was driving the qualification process or at a minimum some level of documentation to identify competency commensurate with responsibilities. Other issues associated with qualification that were identified during implementation were:

1. How does the development of the ITP and the competency commensurate with responsibilities fit together in this overall process?
2. What was the purpose of the STD-1107 ITP?
3. How does competency commensurate with responsibilities integrate into this safety analyst training process?

Facility Specific Training Requirements

In order to complete the safety analyst training program in accordance with DOE Order 5480.20A, facility-specific training is required. This would include training on the facility description, facility procedures, facility systems, conduct of operations, etc. Just how were facility-specific requirements to be identified and completed by the safety analyst? The initial version of the ITP focused on the safety analyst requirements with some indication that facility-specific training was required. The facility-specific training was not clear or defined in regards to the INTEC program.

DEVELOPED SOLUTIONS

The following solutions were developed and implemented at INTEC and will be applied across the INEEL. They resolved the concerns identified previously and provided a positive path forward.

Qualification of Safety Analysts and Documentation

It was decided that qualification of the safety analysts would be divided into two main categories: (1) qualified safety analysts who had at least three years of experience and typically had experience that exceeded fifteen years and (2) the newer entry level safety analysts who had less than 3 years of total experience in safety analysis. Therefore, based upon input from the INTEC Training Organization and other efforts underway at the INEEL, it was decided that all safety analysts that exceeded the three years

of minimum experience and with documented evidence of their safety analysis experience and performance would be fully qualified and exempted from the STD-1107 ITP. This qualification effort would be documented on an INEEL internal Training Organization form (Figure 6). It was decided by the INTEC Safety Analysis supervisors that the STD-1107 ITP would be filled out for each of the qualified safety analysts for documentation purposes. The newer safety analysts with less than three years of experience would be required to have an ITP and the competency commensurate with responsibilities form (Figure 7). They would have to complete the training identified on the ITP before they would be considered qualified to perform/supervise safety analysis work. Until they become qualified, the safety analyst trainee would have to perform safety analysis under the supervision of the safety analysis supervisor or one of the other qualified safety analysts. This approach eliminated the concerns about stopping INTEC safety analysis work in progress. In addition, it was decided to provide each safety analyst with a Training Plan book. This book also solved the issues associated with ISMS and safety analyst training documentation. The book contains the following tabs and tab contents.

Table 1. INEEL Safety Analyst Training Plan.

Tab Number	Tab Title	Contents
1	STD-1107	A copy of STD-1107
2	EPD	Employee Position Description
3	Verification	Human Resource experience and education verification form
4	Resume	Individual Resume
5	CCR	A copy of the completed and approved competency commensurate with responsibilities form or the Training Exemption from training form for qualified safety analysts.
6	Required Reading	A required reading page listing all the DOE orders and standards and all the company level safety analysis procedures.
7	ITP	Individual Training Plan if not qualified. A copy may be present to identify optional Professional Development courses.
8	Notes	A section for notes and important information related to safety analysis
9	External Training	External training courses and professional development meetings and programs

Facility-Specific Training

Facility-specific training is key to qualifying the safety analyst for a particular facility. This training should include an overview of the facility, safety related equipment, the authorization basis for that facility, USQ screener/evaluator training, and the appropriate Technical Staff training associated with that facility. At INTEC, it was decided to incorporate the Technical Staff training qualification program into the safety analyst courses listed in STD-1107 and on the ITP form. The safety analyst supervisor would be able to select required Technical Staff training and eliminate training not relevant to the safety analyst qualifications, such as lockout/tagout, conduct of maintenance, etc. The Technical Staff training program was developed for the INTEC Nuclear Facilities support personnel. This approach utilizes available training from another qualification program and the Training Organization indicated that each nuclear facility across the INEEL would have a similar Technical Staff Training Program.

REMAINING IMPLEMENTATION ACTIVITIES

The remaining implementation activities for the INTEC Safety Analyst qualification program (STD-1107) are:

1. Establish site wide qualification codes for the safety analyst training program.
2. Identify training courses for completion of the ITPs. This includes looking outside the company for existing courses.
3. Complete the ITPs and Safety Analyst Qualification Manuals.
4. Develop a site wide training matrix for all INTEC and INEEL safety analysts.
5. Establish a re-qualification program and requirements.
6. Integrate this program into the INEEL Training Organization tracking system.

REFERENCES

1. Bechtel BWXT Idaho, LLC, "INEEL Safety Analyst Training Standard," STD-1107, Revision 0, dated November 30, 1999.

2. Bechtel BWXT Idaho, LLC, "INEEL Safety Analyst Training Standard," STD-1107, Revision 1, dated April 2000.

3. EFCOG SAWG Training Subgroup, "Safety Analyst Training Plan Template," dated June 1999.

ATTACHMENT I

INEEL-WIDE SAFETY ANALYST INDIVIDUAL TRAINING PLAN

Name:_____ **Date:**_____

S #:_____ **Specific Training:** II A II B (circle one)

Type of ITP: **Initial qualifications** **Continuing education**

BASIC TRAINING

Course Title	Course No.	Completion Date	Supervisor/ Instructor Initials	Comments
1. Safety Analysis Program and Procedures				
2. DOE Orders and Standards				
3. Integrated Safety Management Systems				
4. Radiological Safety				
5. Technical Editing Overview				
6. Industrial Safety				
7. INEEL DMCS Overview				
8. Criticality Safety Overview				
9. Technical Writing Course				
10. Safety Document Security				
11. Safety Hazards Assessment Utility (SHAMU)				
12. USQ Screener/Evaluator				
11. Introductory Computer a. Word Processing b. Windows 95 c. Netscape d. Safety Analysis Electronic Files e. Spread Sheets (Excel)				
12. INEEL Required Reading				

Figure 1. Individual Training Plan

Name:_____ **Date:**_____

S #:_____

INTERMEDIATE TRAINING

Course Title	Req'd?	Course No.	Completion Date	Supervisor/ Instructor Initials	Comments
1. Accident Identification and Analysis					
2. Selection of Safety-Class and Safety Significant SSCs					
3. Radiation Protection					
4. Scheduling and Cost Estimating for Safety Analysis Tasks					
5. Hazards Identification and Evaluation a. Preliminary Hazards Analysis b. What-If Hazards Analysis c. FMEA d. HAZOP Analysis					
9. Chemical Hazards					
10. Fault Tree Analysis					
13. Probabilistic Risk Assessment					
12. Event Tree Analysis					

Figure 1. (continued)

Name:_____ **Date:**_____

S #:_____

INTERMEDIATE TRAINING (Continued)

Course Title	Req'd?	Course No.	Completion Date	Supervisor/Instructor Initials	Comments
13. Environmental (RCRA, CERCLA, etc.)					
14. Computer Code Overview a. MICROSHLD b. QAD-FN c. RSAC d. ORIGEN e. Chemical Codes f. RELAP5 g. SINDA h. SAMPLE i. ABACUS j. PDQ k. MCNP					
15. Support Studies a. Criticality Safety Evaluations b. Radiological Dose Consequences c. Natural Phenomena Hazards Analysis d. Structural Calculations e. Thermal Calculations f. Engineering Analysis (MCP-2374) g. Scientific/Technical Documentation (MCP-2809)					

Figure 1. (continued)

Name:_____ **Date:**_____

S #:_____

ADVANCED TRAINING

Course Title	Req'd?	Course No.	Completion Date	Supervisor/ Instructor Initials	Comments
1. Project Management					
2. Chemical Dose Consequence Analysis					
3. Radiological Dose Consequence Analysis					
4. Advanced Safety Analysis Courses a. Corrosion b. HAZOP c. Radiological Protection d. Chemical Hazards e. Probabilistic Risk Assessment f. Process Instrumentation g. Natural Phenomena h. Criticality Safety Short Course i. Environmental (RCRA, CERCLA, etc.) j. TSR Development k. Safety-Class and Safety Significant SSCs l. Thermal-Hydraulics m. Reactor Physics n. Reactor Kinetics					

ITP Agreement

Employee:_____ Date:_____

Supervisor:_____ Date:_____

Training Completed

Employee:_____ Date:_____

Supervisor:_____ Date:_____

Figure 1. (continued)

ATTACHMENT II A

REACTOR SAFETY ANALYST INDIVIDUAL TRAINING PLAN

Name:_____ **Date:**_____

S #:_____

BASIC TRAINING

Course Title	Course No.	Completion Date	Supervisor/ Instructor Initials	Comments
1. Facility Safety Analysis Document Control				
2. Safety Document Overview (general and/or facility-specific)				
3. Facility Tours. a. b.				
4. Governing Rules, Orders, and Statutes				

INTERMEDIATE TRAINING

Course Title	Req'd	Course No.	Completion Date	Supervisor/ Instructor Initials	Comments
1. Safety Analysis Document Review and Approval					
2. Derivation of Technical Safety Requirements					
3. SAR and TSR Revisions					
4. USQ Screener and Evaluator - Facility-Specific Training					
5. Safety Document Preparation (assignment by Supervisor) a. DOE Order 5480.30 b. NRC Reg. Guide 1.70 c. NUREG 0800 d. NUREG 1537 pts 1/ 2 e. Derivation of TSRs					
6. USQ Evaluations (assigned by supervisor)					

Figure 2. Individual Training Plan

Name:_____ **Date:**_____

S #:_____

ADVANCED TRAINING

Course Title	Req'd?	Course No.	Completion Date	Supervisor/ Instructor Initials	Comments
To Be Developed					

ITP Agreement

Employee:_____ Date:_____

Supervisor:_____ Date:_____

Training Completed

Employee:_____ Date:_____

Supervisor:_____ Date:_____

Figure 2. (continued)

ATTACHMENT II B

NON-REACTOR NUCLEAR/NON-NUCLEAR FACILITY SAFETY ANALYST INDIVIDUAL TRAINING PLAN

Name:_____ **Date:**_____

S #:_____

BASIC TRAINING

Course Title	Course No.	Completion Date	Supervisor/ Instructor Initials	Comments
1. Facility Safety Analysis Document Control Systems (i.e., INTEC, RWMC, etc.)				
2. Safety Document Overview (general and/or facility-specific)				
3. Facility Tours a. b.				

INTERMEDIATE TRAINING

Course Title	Req'd?	Course No.	Completion Date	Supervisor/ Instructor Initials	Comments
1. DOE Orders					
2. DOE Standards 1027, 3009, and 5502					
3. Derivation of Technical Safety Requirements					
4. Safety Analysis Document Review and Approval					
5. Safety Document Revisions					
6. USQ Screener and Evaluator - Facility-Specific Training					
7. Safety Document Preparation (assignment by Supervisor)					
8. USQ Evaluations (assigned by Supervisor)					

Figure 3. Individual Training

Name:_____ **Date:**_____

S #:_____

ADVANCED TRAINING

Course Title	Req'd?	Course No.	Completion Date	Supervisor/ Instructor Initials	Comments
To be developed					

ITP Agreement

Employee:_____ Date:_____

Supervisor:_____ Date:_____

Training Completed

Employee:_____ Date:_____

Supervisor:_____ Date:_____

Figure 3. (continued)

4/6/00

Basic Training (Sheet 1)

ANALYST	ORG.	DEGREE	DISCIPLINE	YEARS TOTAL EXPR.	YEARS SA EXPR.	EPD	VERIF	INTEC SA DOC. CONTROL	INTEGRATED SAFETY ANAGEMENT SYSTEM	RADIOLOGICAL SAFETY	TECHNICAL EDITING OVERVIEW
Safe T. Analyst A	4270	BA	Life Science	7	2	06/28/99	11/22/99	X	C	X	X
Safe T. Analyst B	4270	MS	Health Phys	15	7	06/24/99	10/13/99	C	C	C	C
Safe T. Analyst C	4270	MS	Chem Engr	20	7	06/28/99	10/13/99	C	C	C	C
Safe T. Analyst D	4270	ME	Nuc Engr	27	23	06/24/99	9/15/99	C	C	C	C
Safe T. Analyst E	4270	BA	Chemistry	20	20	06/30/99	9/13/99	C	C	C	C
Safe T. Analyst F	4270	AA	Gen Science	15	15	06/28/99	9/13/99	C	C	C	C
Safe T. Analyst G	4270	BS	Physics	0.5	0.5	07/19/99	9/13/99	X	C	C	X
Safe T. Analyst H	4270	MS	CIM	28	6	09/15/99	10/25/99	C	C	C	C
Safe T. Analyst I	4270	BS	Chem Engr	23	19	09/15/99	11/22/99	C	C	X	C
Safe T. Analyst J	4270	MS	Nuc Engr	12	12	09/15/99	2/4/99	C	C	X	C
Safe T. Analyst K	4270	PhD	Civil Engr	25	10	09/15/99	10/25/99	C	C	X	C
Safe T. Analyst L	4270	MS	Env Science	16	0.5	09/15/99	5/5/99	C	C	C	X
Safe T. Analyst M	4270	MS	Math	18	7	09/15/99	10/25/99	C	C	C	C
Safe T. Analyst N	4270	BS	Engr Physic	0.5	0.5	09/15/99	10/25/99	X	C	X	X
Safe T. Analyst O	4270	MS	Chem Engr	16	1	09/15/99	10/25/99	C	C	C	C
Safe T. Analyst P	4270	BS	Nuc Engr	23	10	09/15/99	2/24/99	X	C	C	C
Safe T. Analyst Q	4270	BS	Chem Engr	32	2	09/15/99	7/14/99	C	C	X	X
Safe T. Analyst R	4270	MS	Nuc Pysics	23	6	9/15/99	10/25/99	C	C	C	C

Figure 4. Training Matrix – Basis Level Training (Sheet 1)

Name: Safe T. Analyst A **Date:** April 7, 2000

S#: 12345

Type of ITP: x **Initial qualifications** ☐ **Professional development**

BASIC TRAINING

Course Title	Course No.	Completion Date	Supervisor/ Instructor Initials	Comments
1. Integrated Safety Management Systems	TRN 630	2/12/00	EH	
2. Radiological Safety	TRN 74	1/18/99	EH	
3. Industrial Safety	TRN 10			
4. INEEL DMCS Overview	TRN 248	4/22/99	EH	
5. Criticality Safety Overview				
6. Safety Document Security	AN5 AN8 Z415	1/26/99	EH	
7. Site Wide SAR Chapters (SAR-1)		7/15/99	EH	
8. USQ Screener/Evaluator	TRN 283 TRN 284 TRN 285	8/13/99	EH	

Figure 5. Individual Training Plan – revised

Name: **Safe T. Analyst A** **Date:** **April 7, 2000**

S#: **12345**

JOB SPECIFIC TRAINING

Course Title	Req'd	Course No.	Completion Date	Supervisor/ Instructor Initials	Comments
1. Accident Identification and Analysis	Yes	NA	5/15/99	EH	Exempted from training based upon experience and background.
2. Selection of Safety-Class and Safety Significant SSCs	Yes		9/10/99	EH	
3. Derivation of TSRs	Yes				
4. Hazard Categorization/ Classification	Yes				
5. Radiation Protection	Yes				
6. Scheduling and Cost Estimating for Safety Analysis Tasks	No				
7. Hazards Identification and Evaluation					
a. Preliminary Hazards Analysis	Yes				
b. What-If Hazards	Yes				
c. FMEA	Yes				
d. HAZOPs Analysis	No				
8. Chemical Hazards	No				
9. Fault Tree Analysis	No				
10. Probabilistic Risk Assessment	No				
11. Event Tree Analysis	No				
12. Environmental (RCRA, CERCLA, etc.)	Yes				

Figure 5. (continued)

Name: **Safe T. Analyst A** **Date:** **April 7, 2000**

S#: **12345**

JOB SPECIFIC TRAINING

(Continued)

Course Title	Req'd	Course No.	Completion Date	Supervisor/ Instructor Initials	Comments
13. Computer Code Overview					
a. MICROSHLD	Yes				
b. QAD-FN	No				
c. RSAC	No				
d. ORIGEN	No				
e. Chemical Codes	Yes				
f. RELAP5	No				
g. SINDA	No				
h. SAMPLE	No				
i. ABACUS	No				
j. PDQ	No				
k. MCNP	No				
14. Support Studies					
a. Criticality Safety Evaluations	Yes				
b. Radiological Dose Consequences	Yes				
c. Natural Phenomena Hazards Analysis	Yes				
d. Structural Calculations	No				
e. Thermal Calculations	No				
f. Engineering Analysis (MCP-2374)	Yes				
g. Scientific/Technical Documentation (MCP-2809)	Yes				
15. Facility Safety Analysis Document Control					
a. INTEC	Yes				
b. TRA	Yes				
c.					
d.					
16. Facility Safety Documents					
a. NWCF					
b. Tank Farm					
c. FAST					
d.					

Figure 5. (continued)

Name: **Safe T. Analyst A** **Date:** **April 7, 2000**

S#: **12345**

JOB SPECIFIC TRAINING
(Continued)

Course Title	Req'd	Course No.	Completion Date	Supervisor/ Instructor Initials	Comments
17. Facility Tours					
a. NWCF					
b. Tank Farm					
c. FAST					
d.					
e.					
18. USQ Screener/Evaluator Facility Specific Training					
a. NWCF					
b. Tank Farm					
c. FAST					
d.					
e.					
19. DOE Orders and Standards					
a. DOE Order 5480.3	No				
b. NRC R.G.1.70	No				
c. NUREG 0800	No				
d NUREG 1587 Parts 1 & 2	No				
e. DOE Order 5480.21	Yes				
f. DOE Order 5480.22	Yes				
g. DOE Order 5480.23	Yes				
h. DOE STD 5502	Yes				
i. DOE STD 3009	Yes				
j. DOE STD 1027	Yes				
k. DOE Order 420.1	Yes				
l. DOE ID as 420.A1	Yes				
20. USQ Evaluations (assigned by supervision) minimum 4 completed					
a. NWCF	Yes				
b. Tank Farm	Yes				
c. FAST	Yes				
d.					
21. Safety Document Preparation					
a. NWCF	Yes				
b. Tank Farm	Yes				
c. FAST	Yes				
d.					
22. Facility Specific Technical Support Staff Training					
a. NWCF	Yes				
b. Tank Farm	Yes				
c. FAST	Yes				
d.					

Figure 5. (continued)

Name: **Safe T. Analyst A** **Date:** **April 7, 2000**

S#: **12345**

PROFESSIONAL DEVELOPMENT TRAINING

Course Title	Req'd	Course No.	Completion Date	Supervisor/ Instructor Initials	Comments
1. Project Management					
2. Chemical Dose Consequence Analysis	Yes				
3. Radiological Dose Consequence Analysis	Yes				
4. Advanced Safety Analysis Courses a. Corrosion b. HAZOPs c. Radiological Protection d. Chemical Hazards e. Probabilistic Risk Assessment f. Process Instrumentation g. Natural Phenomena h. Criticality Safety Short Course i. Environmental (RCRA, CERCLA, etc.) j. TSR Development k. Safety-Class and Safety Significant SSCs l. Thermal-Hydraulics m. Reactor Physics n. Reactor Kinetics					

ITP Agreement

Employee: Safe T. Analyst A Date: 4/7/00

Supervisor: Safe T. Supervisor Date: 4/7/00

Training Completed

Employee: _____ Date: _____

Supervisor: _____ Date: _____

Figure 5. (continued)

PART I

Individual's Name Safe T. Analyst B Date 4/7/00

S Number 12356 Phone # 6-0000 M/S 5200 Facility INTEC

Position Safety Analyst

Training to be Excepted

Exempted from all training identified in STD-1107.

Justification (Include education, experience and other supporting information.)

Based on education and experience in the safety analysis area, this individual is fully qualified to perform/supervised safety analysis at the following INTEC nuclear facilities. They are 1) NWCF, 2) Tank Farm, 3) Process Equipment Waste Systems, and 4) Airborne Waste Systems. This individual can perform and supervise all safety analysis activates for other-than-nuclear facilities.

Submitted by Safe T. Supervisor Date 4/7/00 Phone # 6-0000

PART II

I have reviewed the above named individual's previous training, experience, and education, and recommend APPROVAL ☐ / DISAPPROVAL ☐ **(check one)** of the request for an exception.

_____ Date _____

Training Manager/Coordinator

Reason for disapproval:

PART III

I have reviewed the above named individual's previous training, experience, and education and APPROVE ☐ / DISAPPROVE ☐ **(check one)** the exception. **I acknowledge that it is my responsibility to ensure this individual is technically qualified to perform assigned duties.**

_____ Date _____

Cognizant Manager

Send completed form to the Training Administrator

Figure 6. Training Qualification form

VERIFICATION OF COMPETENCY COMMENSURATE WITH RESPONSIBILITY

Safe T. Analyst A 12345
Employee Name Employee S #

Engineer/Scientist
Position Title or Job Function

Safe T. Manager 99980
Cognizant Manager (Print) Manager S #

The following verification is based on an assessment of the requirements for this employee's performance against the position title or job function (noted above) and roles and responsibilities as outlined in MCP-3776. This verification ensures appropriate needs are met prior to endorsement of CCR. It is an interim measure to ensure that the employee is only working or performing tasks in areas that are appropriate for their entry level, training, education and experience.

The following tasks/activities **may be performed** by the employee:
- Hazard identification and evaluation
- Hazard categorization/classification
- USQ screenings and evaluations per USQ Training Homepage
- Safety document preparation and review

The identified safety analysis tasks/activities may be performed at the following facilities:
- INTEC: Experimental Facilities, Remote Analytical Laboratory, and other-than-nuclear facilities

The following tasks/activities **may not be performed/supervised** by the employee until appropriate training and/or qualifications are achieved:
- Accident identification and evaluation
- Selection of safety-related SSCs and ESFs
- Selection of TSRs, TS/Ss, OSRs, and ORMs
- TSR, TS/S, TRQ, and ORM interpretations
- Preparation of budgets and schedules for safety analysis tasks
- Direct the preparation of all safety analysis activities
- Preparation of authorization agreements (IAGs) and authorization basis lists (LSTs)

Subsequent verification of CCR may be accomplished by update of this document, by completion of the Employee Training Plan, by completion of formal CCR (or qualification programs), or by an appropriate combination of these activities. If training/qualification is not accomplished within the prescribed due date, if any, qualification will lapse and personnel will not be allowed to perform those duties associated with the training/qualification until completed.

VERIFICATION

By signature below, I hereby verify that the above named employee has achieved a CCR status with the exception of the tasks/activities identified above, if any. This verification is based on my personal review of this employee's education, experience and/or demonstrated satisfactory performance.

_____ _____
MANAGER SIGNATURE DATE

_____
EMPLOYEE ACKNOWLEDGEMENT

Supplementary notes or comments:

Figure 7. Competency Commensurate with Responsibilities (CCR)