

Department of Energy  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352  
SEP 30 1996

96-MSD-179

Mr. John T. Conway, Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, N.W. Suite 700  
Washington, D.C. 20004

Dear Mr. Conway:

DEFENSE NUCLEAR FACILITIES SAFETY BOARD (DNFSB) RECOMMENDATION 92-4,  
COMPLETION OF TANK WASTE REMEDIATION SYSTEM (TWRS) COMMITMENT 3.5.a

Enclosed are the U.S. Department of Energy, Richland Operations Office (RL) deliverables for DNFSB Recommendation 92-4 Implementation Plan, Revision 1, Commitment 3.5.a.

Commitment 3.5.a required the contractor to complete a quantitative and qualitative assessment of the required staff to accomplish the TWRS mission. This included completion of position qualification standards for designated technical managers and staff. The assessment and the position qualification standards were submitted in April 1995 as a "snapshot in time" with a commitment to provide a revision by the end of Fiscal Year (FY) 1995.

As downsizing of the contractor's workscope continued throughout FY 1996 and as the FY 1996 budget remained unresolved during the period of continuing resolution, a revision was not processed. To accommodate your staff's request for a revised "snapshot," and their request for additional information on the contractor's qualification program process, enclosed is a Westinghouse Hanford Company letter from R. F. Bacon, to J. E. Kinzer, RL, "DNFSB Recommendation 92-4 Commitment 3.5.a," 9654120, dated September 13, 1996. Attachment 1 to the letter, "FY 1997 Staff Analysis for TWRS," updates the initial submittal and is based on the Draft FY 1997 Multi-Year Work Plan. Attachment 2 to the letter, "Technical Staff Qualification Program Description" (WHC-IP-0842, Volume III, Section 10.3, Revision 2, dated May 24, 1996) provides the contractor's training program process.

Although this commitment is considered complete with submittal of these documents, the Contractor approach to staffing analyses and training programs will likely change with implementation of the Project Hanford Management Contract. The deliverables provided, however, will serve as a baseline for future discussion with the Contractor on their approach to assuring they have personnel with the technical and managerial competence to ensure effective project execution. Fluor Daniel Hanford will complete a staffing analysis of the entire contract, including TWRS, during the first quarter of FY 1997 and advise DOE of additional changes it believes to be needed.

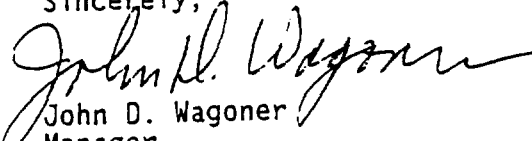
Mr. John T. Conway  
96-MSD-179

- 2 -

SEP 30 1996

If you have any questions regarding this matter, please contact me, or your staff may contact Carol Sohn of the Management Systems Division on (509) 376-8523.

Sincerely,

  
John D. Wagoner  
Manager

MSD:HJW

Enclosures

cc w/encls:  
A. Alm, EM-1  
R. Guimond, EM-2  
R. Izatt, EM-2  
J. Tseng, EM-4  
T. Harms, EM-38  
M. Hunemuller, EM-38  
M. Whitaker, S-3.1  
S. Trine, RL DNFSB Liaison



September 13, 1996

Mr. J. E. Kinzer, Assistant Manager  
Office of Tank Waste Remediation System  
U.S. Department of Energy  
Richland Operations Office  
Richland, Washington 99352

Dear Mr. Kinzer:

DEFENSE NUCLEAR FACILITY SAFETY BOARD RECOMMENDATION 92-4, COMMITMENT 3.5.a

Reference: Letter, John D. Wagoner, RL, to John T. Conway, DNFSB, "Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 92-4 Implementation Plan 3rd FY 96 Quarterly Status Report," dated July 31, 1996.

The reference letter calls for the contractor to submit during the fourth quarter, the Fiscal Year (FY) 1996 Staffing Analysis and Training Program Description to complete Commitment 3.5.a.

Attached are the Tank Waste Remediation System (TWRS) Staffing Analysis and the Training Program Description for Technical Staff. The Staffing Analysis was based on the August 15, 1996, draft Multi-Year Work Plan (MYWP) for FY 1997. This analysis demonstrates that Westinghouse Hanford Company (WHC) has a process that qualitatively and quantitatively defines the TWRS staffing requirements. While the Staffing Analysis reflects the planning to date, the final MYWP will further refine the numbers. Since TWRS is a very dynamic program, an annual analysis will reflect the staffing requirements based on the evolution of the program.

WHC, therefore, recommends that Defense Nuclear Facility Safety Board (DNFSB) Recommendation 92-4 Commitment 3.5.a be closed.

Should you have questions, please contact K. N. Jordan at 373-1122.

Very truly yours,

R. F. Bacon, Vice President and Manager  
Tank Waste Remediation System

lm

Attachments (2)

RL - C. L. Sohn  
A. H. Wirkkala

**ATTACHMENT 1**

FY 1997 STAFF ANALYSIS FOR TWRS

Category	COCS Code	Actual 08-01-96	MYWP 1997	Significant More Staff	Significant More Work Planned
<u>Manager:</u>					
First Line	MO10	14	40		
General/Executive	MO20	149	87		
Project/Program	M030	5	11		
Other	M040	<u>0</u>	<u>10</u>		
Total		168 <sup>(1)</sup>	148 <sup>(1)</sup>		
<u>Engineering:</u>					
Chemical	E010	88 <sup>(2)</sup>	122 <sup>(2)</sup>		34 <sup>(2)</sup>
Civil	E020	7	6		
Computer	E030	2	6		
Electrical	E040	38	30	8	
Environmental	E050	35	38		
Industrial	E060	2	4		
Mechanical	E070	99 <sup>(2)</sup>	169 <sup>(2)</sup>		70 <sup>(2)</sup>
Nuclear	E080	19	19		
Petroleum	E090	4	4		
Plant	E100	139 <sup>(3)</sup>	87 <sup>(3)</sup>	52 <sup>(3)</sup>	
Quality Control	E110	29	29		
Safety	E120	9	10		
Other	E130	<u>58<sup>(4)</sup></u>	<u>40<sup>(4)</sup></u>	18 <sup>(4)</sup>	
Total		529 <sup>(5)</sup>	564 <sup>(5)</sup>		
<u>Scientist:</u>					
Chemist	S010	69 <sup>(6)</sup>	46 <sup>(6)</sup>	23 <sup>(6)</sup>	
Environmental	S020	7	11		
Geologist	S030	6	2		
Material	S050	1	6		
Mathematician	S060	4	4		
Physicists	S070	5	3		

Social	S080	0	0		
Other	S090	<u>31</u>	<u>3</u>		
Total		123	69		
<u>Admin/Other Prof.:</u>					
Account/Auditor	P010	65 <sup>(7)</sup>	45 <sup>(7)</sup>	20 <sup>(7)</sup>	
Architect	P020	0	0		
Buyers/Procurement	P030	1	1		
Communications	P040	0	0		
Compliance/Inspec.	P050	3	4		
Comp.Sys.Andy.	P060	5	14		
Cost Est./Planner	P070	49 <sup>(7)</sup>	69 <sup>(7)</sup>		20 <sup>(7)</sup>
Health Physics	P080	25 <sup>(8)</sup>	13 <sup>(8)</sup>	12 <sup>(8)</sup>	
Industrial Hygiene	P090	6	3		
Safegua.& Security	P140	3	1		
Tech. Writer	P160	6	6		
Trainers	P150	29	25		
Other Profess.	P170	<u>50<sup>(9)</sup></u>	<u>25<sup>(9)</sup></u>	<u>25<sup>(9)</sup></u>	
Total		242	206		
<u>Gen.Admin/Secty:</u>					
Admin. Assist.	G010	12	5		
Office Clk (Gen)	G020	35	32		
Office Clk-Special	G030	9	4		
Material Coord.	G035	0	7		
Secretaries	G040	77	44	33 <sup>(10)</sup>	
Typist/Word Proc.	G050	0	1		
Other	G060	<u>0</u>	<u>0</u>		
Total		133	93		
<u>Technicians:</u>					
Computer Oper.	T010	2	1		
Drafter	T020	0	11		
Engr./Technicians	T030	21	10		

Environ. Science	T040	0	0		
Health Phy.Tech.	T050	133	130		
Indust.Safe/Health	T060	11	10		
Instru./Control	T070	40	25		
Laboratory Techs.	T080	97 <sup>(11)</sup>	50 <sup>(11)</sup>	47 <sup>(11)</sup>	
Planning Techs.	T110	0	0		
QA Techs.	T113	6	4		
Other	T115	<u>0</u>	<u>0</u>		
Total		310	241		
<u>Crafts:</u>					
Carpenters		2	2		
Electricians		34	33		
HVAC		0	0		
Machinists		0	15		
Mason		0	0		
Millwrights		11	5		
Painters		7	5		
Pipefitters		23	22		
Struct/Met. Workers		1	2		
Veh/Equip.Mech		0	0		
Welders		1	2		
Others		<u>5</u>	<u>11</u>		
Total		84 <sup>(12)</sup>	97 <sup>(12)</sup>		
<u>Operators:</u>					
Lt. Vehicle Driver		2	3		
Matl.Moving Equip.		0	1		
Nuclear Plant		0	0		
Nucl.Waste Oper.		201	201		
Util.Syst.Oper.		27 <sup>(13)</sup>	15 <sup>(13)</sup>	12 <sup>(13)</sup>	
Other		<u>0</u>	<u>0</u>		
Total		230	220		

<u>Lab. &amp; Gen. Worker:</u>					
Material Handler		0	0		
Janitor/Cleaner		0	0		
Other		<u>0</u>	<u>0</u>		
Grand Total		1819 <sup>(14)</sup>	1639 <sup>(14)</sup>		



Notes:

- (1) The total for the overall category is very close. In the MYWP many of the management are placed in the First Line Management category because they are responsible for field work. However, WHC has categorized them in the General Executive because they may supervise a diverse group of employees (exempt, nonexempt and bargaining unit).
- (2) The planned work exceeds the actual engineering personnel. In basic tasks, and depending on complexity of the task, work may be assigned to other employees with different engineering backgrounds. Where specific chemical or mechanical skills/knowledge is required, available work is generally subcontracted within the company or to outside firms.
- (3) There are 139 Plant Engineers in TWRS. Twenty-nine (29) work in the Analytical Laboratories. Twelve (12) Plant Engineers are fully funded by groups other than TWRS and are not reflected in the TWRS MYWP. Plant Engineers are also frequently used to perform less technical field tasks which would nominally call for an engineer with a specific discipline such as discussed in Note (3).
- (4) The "Other Engineer" category covers employees with a wide variety of technical backgrounds that are utilized in many areas such as planning, scheduling, basic engineering in other disciplines (i.e., chemical, environmental, mechanical) etc.
- (5) The total for the overall category is close. There is more scheduled work than there are engineering personnel.
- (6) Forty-two percent (42%) of the Analytical Services is funded by sources other than TWRS. Funding from these groups includes SNF, Transition Projects, Solid Waste and others. All Analytical Services employees appear in the WHC-TWRS COCS Code listing but are not all funded by TWRS programs. Twenty-nine (29) Chemists are funded by other programs.
- (7) The Accountant/Auditor COCS Code includes individuals who have been cross-trained to do Cost Analysis and Scheduling work. Employees in the Cost/Planner have been cross-trained to do Cost Analysis and Scheduling activities. The net delta for the two COCS categories is zero (0).
- (8) Analytical Services has five (5) Health Physics personnel supporting work in programs outside of TWRS which are not included in the TWRS MYWP.

- (9) Analytical Services has six (6) "Other Professionals" personnel supporting work in programs outside of TWRS which are not included in the TWRS MYWP.
- (10) Analytical Services has nine (9) Clerical/Secretarial employees supporting work in programs outside of TWRS which are not included in the TWRS MYWP.
- (11) There are forty-one (41) Laboratory Technicians supporting work in programs outside of TWRS which are not included in the TWRS MYWP.
- (12) In the Craft area, short falls are filled either utilizing on-site resources or by subcontracting.
- (13) TWRS provides Power Operators to other facilities that are not included in the TWRS funding or the TWRS MYWP.
- (14) In the TWRS organization, there are 1819 employees. Three hundred thirty six (336) perform work which is funded by organizations other than TWRS. The remaining 1483 employees perform work and are funded by the TWRS program.

Tank Waste Remediation Services (TWRS) Management has conducted a staff analysis for FY 1997 based on the work outlined in the Multi-Year Work Plan (MYWP) for FY 1997 compared to our existing staffing.

The TWRS organization has 1819 employees in the division and has scheduled work for 1639.

There are 352 employees that are part of the TWRS organization in the Analytical Services organization. One hundred and twelve (112) are funded by TWRS. The balance of two hundred and forty (240) are funded by other organizations such as Spent Fuels, Solid Waste, Liquid Effluent plants, etc.

Additionally, there are approximately eighty (80) current TWRS employees that will be participating in the early retirement program and will be separated on September 30, 1996. When considering these factors, there are 1499 TWRS employees in the organization to perform scheduled work that our planning process indicates a need for 1639. This delta of 140 is generally covered through subcontracting either with external resources or by buying services from within the larger company.

In summary, our analysis indicates that our current staffing skills are relatively close to the planned work.

**ATTACHMENT 2**

---

WESTINGHOUSE HANFORD COMPANY	Manual	WHC-IP-0842
TWRS ADMINISTRATION	Volume	III, Training
	Section	10.3, REV 2
	Page	1 of 7
	Effective Date	May 24, 1996

---

TITLE: Approved by

TECHNICAL STAFF QUALIFICATION PROGRAM DESCRIPTION [Signature on File]  
T. L. Jennings, Manager  
Operations Training

---

AUTHOR: B. A. Johnson

AUTHOR ORGANIZATION: Training and Procedures

---

## 1.0 PURPOSE

The purpose of this procedure is to describe the training content, structure, and qualification progression for Tank Waste Remediation System technical staff personnel. This qualification program will ensure that technical staff personnel possess the knowledge and skills necessary to perform their assigned duties in a safe, efficient, and cost-effective manner.

## 2.0 SCOPE

This procedure applies to all direct and matrixed technical staff personnel and their management employed either full or part time in support of Tank Waste Remediation System facilities. This program reflects the requirements of DOE Order 5480.20A.

Technical staff positions are defined as those that have the authority to approve documents in accordance with WHC-CM-3-5, Section 12.7. The technical staff qualification program is divided by job category. Listed in this procedure are: Cognizant Engineers, Facility Environmental Professional, Waste Shipping Engineer, Design Authority, Safety Professional, and Quality Assurance Engineer.

This qualification program description addresses minimum education, experience, and training requirements for technical staff positions.

## 3.0 DEFINITIONS

See WHC-IP-0842, Volume III, Section 11.1

## 4.0 RESPONSIBILITIES

### 4.1 Facility Manager/Qualifying Managers

1. Properly train their personnel to perform assigned tasks in a manner that: minimizes risk to themselves, co-workers, and the public; minimizes negative impacts to the environment; minimizes risk of damage to plant and equipment; and demonstrates competent and cost-effective performance.

TWRS ADMINISTRATION	Manual	WHC-IP-0842
TECHNICAL STAFF QUALIFICATION	Volume	III, Training
PROGRAM DESCRIPTION	Section	10.3, REV 2
	Page	2 of 7
	Effective Date	May 24, 1996

#### 4.2 Tank Waste Remediation System Training Manager

1. Implements training programs that respond to the technical needs identified by the facility manager/qualifying manager.

#### 5.0 PROCEDURE

Qualification of technical staff personnel is achieved by completing program requirements. The program requirements for each position have similar elements, though the requirements vary according to the job. A trainee is considered qualified to complete a Qual Card referenced task after successful evaluation of the task and documentation by management or management designee. The trainee may work in qualified task areas while pursuing the comprehensive qualification.

#### 5.1 Tank Waste Remediation System Technical Staff Training Program Elements

The Tank Waste Remediation System Technical Staff Training Program for Cognizant Engineers, Facility Environmental Professional, Waste Shipping Engineer, and Design Authority consists of three elements of qualification: completion of prerequisite training; verification of 5480.20A education and experience requirements; and completion of a position specific qualification card.

##### 1. Training

- a. Initial prerequisite training is that training required before a technical staff person may approve documents according to WHC-CM-3-5, Section 12.7. The goal of initial training is to supplement position specific education and training in order to familiarize technical staff and managers with facility specific information.

Initial training will include all courses listed on the trainees Training Matrix.

- b. Continuing training includes meeting the retrain requirements of the courses listed in the applicable Training Matrix and additional courses and/or required readings as dictated by management.

##### 2. Education and Experience

- a. Education and experience qualification is met by hiring criteria. A person may not be hired or transferred into a technical staff position without meeting the minimum education and experience requirement or having a waiver showing equivalency according to WHC-IP-1041. Education and experience requirements are based on those stated in DOE Order 5480.20A, Chapter IV, for technical staff personnel.

- b. The education and experience requirements of a technical staff person are a baccalaureate in engineering or a related science and two years job related experience with a minimum of one year nuclear experience.

### 3. Qualification Card

- a. A technical staff candidate achieves qualification by completing the applicable qualification card. When the qualification card is completed, it shall be filed with Tank Waste Remediation System Training Records, and the candidate's name shall be added to the Tank Waste Remediation System Qualified Personnel list.

## 5.2 Program Requirements

1. Each technical staff organization is responsible for identifying and implementing training requirements for their personnel who will approve documents in accordance with WHC-CM-3-5, Section 12.7. In addition, Tank Waste Remediation System Training will provide job specific qualification cards for each job.
2. The suggested prerequisite training for the program is listed in Attachment A. Courses are identified by number, title, number of hours of instruction given in the course, and the retrain frequency, if applicable. Prerequisite training may be excepted according to WHC-IP-0842, Volume III, Section 2.2.

## 5.3 Matrixed Organization Training Program

Technical staff positions that are matrixed to, and perform functions for, Tank Waste Remediation System are required to implement a training program. Listed below are the Safety Professional and Quality Assurance Engineer Programs.

### 1. Safety Professional Program

- a. Health, Safety, and Facility-Specific Training

See Attachment A for the courses that should be taken or excepted.

- b. Technical Training

The Safety organization is responsible for the technical qualification of Safety Engineers performing approvals according to WHC-CM-3-5, Section 12.7. Their technical training requirements are stated in WHC-IP-0030.

---

TWRS ADMINISTRATION

Manual

WHC-IP-0842

TECHNICAL STAFF QUALIFICATION

Volume

III, Training

PROGRAM DESCRIPTION

Section

10.3, REV 2

Page

4 of 7

Effective Date

May 24, 1996

---

c. Required Reading

The Safety organization is responsible for disseminating required reading submissions from Tank Waste Remediation System. Tank Waste Remediation System will submit materials to the Safety organization asking that the material be placed in the Safety organization required reading program. The Safety organization shall be able to show, through documentation, that all personnel have read the required reading in a timely fashion.

d. Achieving Qualification

Safety Engineers achieve qualification by completing the Safety Personnel Qualification Procedure in WHC-IP-0030, Section SAF-1.2. This program shall include the health, safety, and facility-specific training requirements listed above.

2. Quality Assurance Engineer Program

a. Health, Safety, and Facility-Specific Training

See Attachment A for the courses that should be taken or excepted.

b. Technical Training

The Quality Assurance organization is responsible for the technical qualification of Quality Assurance Engineers performing approvals according to WHC-CM-3-5, Section 12.7. The technical requirements are written in WHC-CM-6-50.

c. Required Reading

The Quality Assurance organization is responsible for disseminating required reading submissions from Tank Waste Remediation System. Tank Waste Remediation System will submit materials to the Quality Assurance organization asking that the materials be placed in the Quality Assurance organization required reading program. The Quality Assurance organization shall be able to show, through documentation, that all personnel have read the required reading in a timely fashion.



TWRS ADMINISTRATION	Manual	WHC-IP-0842
TECHNICAL STAFF QUALIFICATION	Volume	III, Training
PROGRAM DESCRIPTION	Section	10.3, REV 2
	Page	5 of 7
	Effective Date	May 24, 1996

d. Achieving Qualification

Quality Assurance Engineers achieve qualification by completing the health, safety, and facility-specific training stated above and completing technical training requirements identified by the Quality Assurance organization. The program for achieving qualification is described in WHC-CM-6-50.

5.4 Subcontractor Training Program

1. Training for subcontracted personnel should be consistent with the duties being assigned. Personnel shall be able to show evidence of technical qualification and shall be subject to the health, safety, and facility-specific training as listed in Attachment A of this procedure.

6.0 REFERENCES

1. DOE Order 5480.20A, "Personnel Selection, Qualification, Training, and Staffing Requirements for DOE Nuclear Facilities"
2. WHC-CM-1, Company Policies and Charters
3. WHC-CM-1-3, Management Requirements and Procedures
4. WHC-CM-1-8, Work Management Manual
5. WHC-CM-1-10, Safety Manual
6. WHC-CM-2-15, Training Standards, Section 2.1, "Employee Training"
7. WHC-CM-3-5, Document Control and Records Management Manual, Section 12.7, "Approval of Environmental, Safety, & Quality Affecting Documents"
8. WHC-CM-4-29, Nuclear Criticality Safety Manual
9. WHC-CM-4-40, Industrial Hygiene Manual
10. WHC-CM-6-50, TWRS Quality Assurance
11. WHC-CM-7-5, Environmental Compliance
12. WHC-IP-0030, Safety Department Administrative Manual, Section SAF-1.2, "Safety Personnel Qualification Procedure"
13. WHC-IP-0842, TWRS Administration
  - Volume II, Section 4.14.1, "Required Reading"
  - Volume III, Section 2.2, "Training Exceptions and Extensions"
  - Volume III, Section 11.1, "Training Definitions"

---

TWRS ADMINISTRATION	Manual	WHC-IP-0842
TECHNICAL STAFF QUALIFICATION	Volume	III, Training
PROGRAM DESCRIPTION	Section	10.3, REV 2
	Page	6 of 7
	Effective Date	May 24, 1996

---

14. WHC-IP-1041, Appointments of Personnel NOT Meeting Selection Criteria
15. WHC-IP-0263-TF, Building Emergency Plan
16. WHC-SD-WM-HSP-002, Tank Farms Health and Safety Plan
17. WHC-SD-WM-TR-026, Tank Waste Remediation System Plant Dangerous Waste Training Plan

#### 7.0 ATTACHMENTS

Attachment A . Suggested Health, Safety, and Facility-Specific Training

## Attachment A

## Suggested Health, Safety, and Facility-Specific Training

Course # (Initial, Retrain)	Course Title	Hrs	Retrain Frequency (months)
02006A	Hanford Site Orientation	4	12
000001	Hanford General Employee Training (HGET)	4	
020001	Radiological Worker II Training - Initial	20	12
020003	Radiological Worker II Retraining <sup>1</sup>	8	
020702	Radiological Worker I and II Refresher Training <sup>1</sup>	NA	
02006G	Hazardous Communication and Waste Management	4	NA
031220	40 Hour Hazardous Waste Site Operations <sup>2</sup>	40	12
032020	8 Hour Hazardous Waste Refresher	8	
031420	3-Day Waste Site Field Experience <sup>3</sup>	24	NA
035050	Environmental Compliance at Hanford	8	NA
03E060	Building Emergency Plan - Tank Farms	.5	12
350710	Tank Farm Facility Orientation	4	12
350760	Tank Farm Facility Reorientation (through HGET)	.5	
350540	242-A Evaporator Facility Orientation <sup>4</sup>	4	NA
351380	WTH Systems Overview	16	NA
020012	Criticality Safety Training for Managers and Engineers	8	24
020013	Criticality Safety Manager/Engineer Retraining	4	
020107	Behavior Based Safety Training	8	NA
020302	Criticality Safety Job Specific Orientation- Manager/Engineer	0	24
353035	Tank Farm Lock & Tag Initial	8	12
353036	Lock & Tag Retrain	2	
020030	SCBA (Self-Contained Breathing Apparatus) Annual Training <sup>5</sup>	3	12
020032	Scott SKA PAK - MSA PAPR <sup>6</sup>	3	12

<sup>1</sup> To meet the 12-month retrain interval, Course 020003 is taken one year; Course 020702 is taken the next.

<sup>2</sup> Those whose jobs do not require continuous farm access may fulfill this requirement using Course 031110.

<sup>3</sup> If Course 100012 is substituted with Course 100011, then substitute this course with Course 03141m.

<sup>4</sup> The 242-A Evaporator Orientation is delivered during presentation of Course 351380.

<sup>5</sup> This course is part of Course 100012.