

United States Government

Department of Energy
Office of River Protection

memorandum

DATE: JUN 13 2008

REPLY TO
ATTN OF: ESQ:MAR 08-ESQ-092

SUBJECT: U.S. DEPARTMENT OF ENERGY (DOE), OFFICE OF RIVER PROTECTION (ORP) -
WASTE TREATMENT AND IMMOBILIZATION PLANT (WTP) FEDERAL SUB-
PROJECT DIRECTOR (FSD) INTERNAL ASSESSMENT A-08-ESQ-INTERNAL-001

TO: John R. Eschenberg, Acting Assistant Manager
Waste Treatment and Immobilization Plant Project

This memorandum transmits the Internal Assessment report titled "U.S. Department of Energy, Office of River Protection Assessment of Waste Treatment and Immobilization Plant Federal Sub-Project Director." This assessment was performed by the ORP, Office of Environmental Safety and Quality (ESQ) Quality Assurance Team from March 28, 2008, through April 8, 2008. The purpose of the assessment was to evaluate the adequacy and effectiveness of the FSD procedures and procedural implementation.

The Assessment Team determined that the WTP FSD procedures and procedural implementation was adequate, implemented, and effective. However, the assessment team discovered three program deficiencies identifying the need for additional training and lower-tier implementing procedures. Once the training and procedures are developed and implemented, the FSD program will be in full compliance with requirements.

The Assessment Team identified the following three findings and one observation:

- **A-08-ESQ-INTERNAL-001-F01:** WTP FSDs do not have implementing (lower-tier) procedures developed to strengthen the execution of their technical, quality, and safety responsibilities in accordance with ORP M 414.1 "Quality Assurance Program Description," and DOE M 413.3-1.
- **A-08-ESQ-INTERNAL-001-F02:** WTP does not have FSD Training Plans or Continuing Education Plans developed and implemented for FSD technical/functional area qualifications in accordance with ORP M 414.1 "Quality Assurance Program Description," ORP M 450.4, and DOE M 426.1-1A.
- **A-08-ESQ-INTERNAL-001-F03:** The FSDs do not perform self-assessments, independent or management assessments in accordance with WTP Project Execution Plan (PEP) 2007 and DOE M 450.4.

John R. Eschenberg
08-ESQ-092

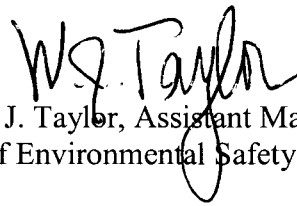
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JUN 13 2008

- **A-08-ESQ-INTERNAL-001-001:** WTP PEP 2007 and ORP Functions, Responsibilities, and Authorities Manual, Revision 7, are not consistent in identifying the position/title of the person the FSDs directly report to.

If you have any questions, please contact me, or your staff may contact Mary A. Ryan, Quality Assurance Team, (509) 373-0272.

Sincerely,



William J. Taylor, Assistant Manager
Office of Environmental Safety and Quality

Attachment

U.S. DEPARTMENT OF ENERGY
Office of River Protection
Environmental Safety and Quality

ASSESSMENT: Office of River Protection, Federal Sub-Project Director
Internal Assessment

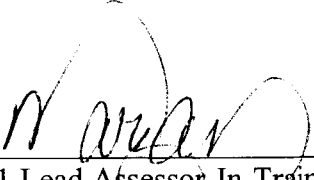
REPORT: A-08-ESQ-INTERNAL-001

FACILITY: Hanford Tank Waste Treatment and Immobilization

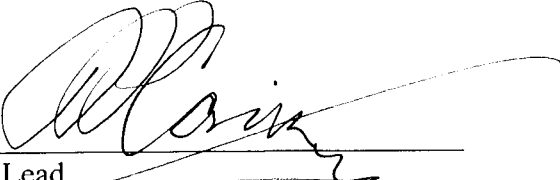
LOCATION: Richland, Washington

DATES: March 28 through April 10, 2008

ASSESSORS: Jeffery D. May, NQA-1 Team Lead Assessor
Mary A. Ryan, NQA-1 Lead-in-Training

SUBMITTED BY: 
Mary A. Ryan, NQA-1 Lead Assessor-In-Training

SUBMITTED BY: 
Jeffery D. May, NQA-1 Lead Assessor

APPROVED BY: 
Patrick P. Carier, Team Lead
Quality Assurance Team

Executive Summary

The U.S. Department of Energy (DOE), Office of River Protection (ORP), Quality Assurance Assessment Team conducted an assessment of the DOE ORP Waste Treatment and Immobilization Plant (WTP) Federal Sub-Project Director (FSD) Program from March 28 to April 08, 2008. The purpose of the assessment was to evaluate the adequacy and effectiveness of the FSD procedures and procedural implementation. The scope of the assessment was to evaluate whether the FSD procedures and implementation was in accordance with DOE directives, DOE O 414.1C, "Quality Assurance (QA)," DOE ORP M 414.1, "Quality Assurance Program Document," and "ASME - NQA-1, 2000." The specific QA elements used to assess the FSD Program were: a) Organization; b) Personnel Training and Qualification; c) Quality Improvement; d) Work Processes; and e) Independent Assessments. In general, the FSD procedures and procedure implementation meets DOE directives, DOE O 414.1C, ORP M 414.1 and NQA-1, 2000 requirements.

The FSDs utilize the ORP WTP Project Execution Plan (PEP) as a guidance document to perform most of their daily activities. The Assessment Team discovered the PEP is an executive-level document which holistically describes how ORP will execute and manage the WTP Project. Even though the PEP has some directional information, this document was written to support ORP WTP critical decision process and is a higher-level management document. The Team also discovered deficiencies in the FSD training program and the FSD assessment program. The Assessment Team identified the following three findings and observation during this assessment. Additional information regarding these findings and observation is in Paragraph 2.0 of this report:

- **A-08-ESQ-INTERNAL-001-F01:** ORP WTP FSDs do not have Implementing (lower-tier) procedures developed to strengthen the execution of their technical, quality and safety responsibilities in accordance with ORP M 414.1 "Quality Assurance Program Description," and DOE M 413.3-1.
- **A-08-ESQ-INTERNAL-001-F02:** ORP WTP does not have FSD Training Plans or Continuing Education Plans developed and implemented for FSD technical/functional area qualifications in accordance with ORP M 414.1 "Quality Assurance Program Description," ORP M 450.4 and DOE M 426.1-1A.
- **A-08-ESQ-INTERNAL-001-F03:** The FSD's do not perform self-assessments, independent or management assessments in accordance with ORP WTP PEP 2007 and DOE M 450.4.
- **A-08-ESQ-INTERNAL-001-O01:** ORP WTP PEP 2007 and ORP Functions, Responsibilities, and Authorities Manual Revision 7 are not consistent in identifying the position/title of the person the FSD's directly report to.

The Assessment Team determined that, even though three findings were identified, the FSD program is adequate, implemented, and effective. With the development and implementation of additional training and lower-tier procedures, the FSDs will increase their effectiveness in achieving mission objectives.

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List of Acronyms

| | |
|-------|---|
| AM | Assistant Manager |
| BNI | Bechtel National Incorporated |
| CAR | Corrective Action Report |
| DOE | U.S. Department of Energy |
| DSA | Documented Safety Analysis |
| FRAM | Functions, Responsibilities, and Authorities Manual |
| FSD | Federal Sub-Project Director |
| IPT | Integrated Project Teams |
| ISMS | Integrated Safety Management System |
| IST | Integrated Sub-Project Teams |
| JCCB | Joint Change Control Board |
| ORP | Office of River Protection |
| PCS | Project Cost and Schedule |
| PEP | Project Execution Plan |
| PM | Program Manager |
| PMCDP | Project Management Career Development Program |
| QA | Quality Assurance |
| QAPD | Quality Assurance Program Document |
| TQP | Training and Qualifications Programs |
| WTP | Waste Treatment and Immobilization Plant |

**U.S. Department of Energy (DOE),
Office of River Protection (ORP)
Assessment of
Waste Treatment and Immobilization Plant (WTP)
Federal Sub-Project Director (FSD)**

1.0 ASSESSMENT DETAILS

The Quality Assurance (QA) Assessment Team evaluated the adequacy and effectiveness of the DOE ORP WTP FSD procedures and procedure implementation. The Team accomplished this by assessing the FSD procedures and procedural implementation in relation to applicable DOE directives, DOE O 414.1C, "Quality Assurance (QA)," DOE ORP Manual 414.1, "Quality Assurance Program Document," and "ASME - NQA-1, 2000." The specific QA elements used to assess the FSD Program were:

- a. Organization;
- b. Personnel Training and Qualification;
- c. Quality Improvement;
- d. Work Processes; and
- e. Independent Assessments.

The Assessment Team thoroughly analyzed ORP WTP procedures, applicable DOE directives and the FSD's Training records. The team also interviewed the FSDs to discuss their training, experience, and responsibilities in order to ensure a comprehensive evaluation.

1.1 FSD Program

The FSDs use a project plan titled "WTP Project Execution Plan (PEP)," to perform daily activities. The Assessment Team discovered that this document is an executive-level document describing how ORP will execute and manage the WTP Project. Even though the PEP has some directional information, this document was written at a high-level intended for management review teams. The PEP was prepared in accordance with DOE O 413.3A, "Program and Project Management for the Acquisition of Capital Assets," and its corresponding manual (DOE M 413.3-1). The FSD's roles and responsibilities are broadly defined in Section 5.2.3 of the PEP along with other ORP WTP programs. Additionally, this document identifies ORP's QA program and ORP M 414.1 "Quality Assurance Program Description," as written in compliance with DOE O 414.1C, "Quality Assurance." In large part, the PEP defines the WTP Project scope, performance baseline and serves as a holistic summary of the WTP's project execution.

In addition to the PEP, the Assessment Team discovered that the FSD's utilize lower-tier procedures for Project Cost and Schedule (PCS) responsibilities. ORP WTP management developed these lower-tier PCS procedures for the FSD use. The Team determined that these PCS implementing procedures are an excellent source of comprehensive guiding documentation that the FSDs use when performing PCS responsibilities. These PCS procedures are identified below:

- a. ORP M 521.1 "Review of Bechtel National Inc. (BNI) Semimonthly Invoices:" This document provides ORP staff with instructions for reviewing BNI public vouchers and supporting documentation for the WTP Contract.
- b. ORP PD 532.1 "Monthly Analysis and Reporting of BNI Cost and Schedule Performance Data:" This procedure establishes the requirements and work process for developing monthly analysis of the Contractor-generated cost and schedule data under the WTP Contract.
- c. ORP M 531.1 WTP "Project Joint Change Control Board (JCCB) Operations:" This manual provides guidance and establishes the minimum requirements for managing and controlling changes through a Government/Contractor JCCB to DOE ORP WTP integrated baseline.
- d. ORP M 530.1 "WTP Project Baseline Change Control:" This manual provides guidance and establishes the minimum requirements for managing and controlling changes to the DOE ORP WTP integrated baseline.

Although the FSDs have lower-tier procedures for PCS, the Assessment Team discovered they do not have lower-tier procedures assisting them while performing engineering, quality, and safety management responsibilities. The following paragraphs describe the Assessment Team's evaluation and results.

1.1.0 Work Processes and Quality Improvement

The FSD's are responsible for technical oversight of a multi-billion dollar project that has diverse engineering issue, quality, and safety management responsibilities. The FSDs do not have implementing (lower-tier) procedures developed that would strengthen their performance of technical, quality, and safety management responsibilities.

There are no lower-tier procedures for the following FSD technical, quality, and safety management responsibilities: a) integration of Integrated Safety Management System (ISMS) within FSD work functions; b) corrective action trending and tracking; c) technical/quality trending and tracking; d) performance of assessments; e) interfaces with peers, and other agencies; and f) technical and safety reviews (Note: a through f is not an all inclusive list of FSD's technical, quality, and safety responsibilities). These FSD responsibilities are an essential part of ORP's oversight mission. The paragraph below identifies results and supports the Team's discoveries regarding the deficiency in implementing sufficient technical/quality/safety management work procedure(s).

1.1.1 Results

The ORP Quality Assurance Program Description (QAPD) and DOE directives require the development, documentation, and implementation of a quality management system integrated throughout an organization. As stated in Paragraph 1.1 above, the FSD have lower-tier implementing procedures for their PCS work responsibilities. Having these PCS implementing procedures assists the FSDs in establishing clear lines of authority and organizational responsibilities as well as delineates PCS work as outlined within the five core functions of ISMS.

The Team determined that implementing procedures guiding the FSDs in daily engineering, safety, and quality functions will help improve performance and provide assurance that requirements are being satisfied. A few work process requirements are listed below. However, reference Finding A-08-ESQ-INTERNAL-001-F01 in Paragraph 2.0 of this report for additional requirement information.

WORK PROCESSES: ORP M 414.1 QAPD, Chapter 5 Work Process, states “Work performed by the ORP focuses on completing the ORP mission through effective contract management. Work is performed in accordance with established technical standards using approved instructions and procedures...” ORP M 414.1 QAPD, Paragraph 5.3 “Implementation,” “If the underlying DOE Order or ORP directive does not provide sufficient direction, ORP Assistant Managers (AM) and Directors develop and implement organization-specific procedures or desk instructions. The organization-specific procedures or desk instructions should include sufficient detail to clarify the DOE or ORP Directives.”

1.2.0 Training and Qualification

ORP WTP does not have an FSD Training Plan or Continuing Education Plan established and implemented for technical and safety oversight that comply with ORP M 414.1 QAPD, DOE O 414.1C and ORP M 450.4 requirements. Currently, the FSDs have completed or they are completing the applicable Project Management Career Development Program (PMCDP) certification requirements. The Assessment Team discovered that the PMCDP is not the only training requirement that the FSDs are required to complete. The paragraph below identifies results and supports the Team’s discoveries regarding deficiencies in FSD training and qualifications.

1.2.1 Results

The Assessment Team reviewed the FSD’s training records in the Richland Office Training Center and the ORP office. Some of the FSD’s training files contained checklists for tank farm training along with certificates for the year 1998/1999. All of the FSD’s had certificates regarding DOE-wide training such as ethics, Hanford General Employee Training, and assessment training. The only training information at ORP was some PMCDP Certification Requirements, completed checklists, and DOE letters that the FSDs presented to the Team. The training requirements for PMCDP certified FSDs is located in ORP M 450.4 “ISMS Description” and DOE M 426.1-1A “Federal Technical Capability Manual.” “Employees responsible for technical oversight of safety

management programs identified in the respective Documented Safety Analyses (DSA) must complete the General Technical Base Qualification Standard and the Functional Area Qualification Standard related to the safety management program they are assigned to oversee.” Also, reference Finding A-08-ESQ-INTERNAL-001-F02 in Paragraph 2.0 of this report.

1.3.0 Independent Assessments

The FSDs are no longer performing self-Assessments, Independent Assessments, or Management Assessments. Currently, FSDs manage the assessments performed by personnel within their Integrated Sub-Project Teams (IST) and Integrated Project Teams (IPT). The IST and IPT support the FSDs on budget, spending, contracting, and engineering on a matrix basis. The paragraph below identifies results and support the Team’s discovery regarding deficiencies in the FSD assessment program.

1.3.1 Results

The Assessment Team interviewed the FSDs on several occasions and all FSDs stated they do not perform assessments. They rely on their ISTs and IPTs to perform assessments and they manage the types of assessments being performed. The Assessment Team reviewed the assessment performance information and FSD activities identified in ORP WTP PEP and ORP M 450.4 “ISMS.” Both of these documents state that the FSD will assess the contractor activities versus manage assessments being performed. This deficiency is described further in Finding A-08-ESQ-INTERNAL-001-F03 in Paragraph 2.0 of this report.

1.4.0 ORP WTP Organizational Structure

The Assessment Team evaluated ORP WTP’s Organizational Structure to determine if roles and lines of authority were established and functional. DOE O 414.1C requires each field office to establish management hierarchy, responsibilities, and levels of authority. Additionally, ORP Manual 411.1 titled “Functions, Responsibilities, and Authorities Manual” (FRAM) was written in accordance with DOE M 411.1, ORP M 414.1, and DOE O 414.1C. This document defines ORP’s organizational roles, responsibilities, and lines of authority. The FSDs informed the Assessment Team that they also use a Line Management document titled “U.S. Department of Energy, Office of River Protection – Waste Treatment and Immobilization Plant Project Execution Plan.” This document was written in accordance with DOE O 413.3A. The PEP is an overarching document further delineating responsibilities and levels of authority from DOE Headquarters to ORP Line Management. Below are the Team’s results of assessing the ORP WTP organizational structure.

1.4.1 Results

While conducting this assessment the Team analyzed DOE directives and interviewed the FSDs to assess the flow down of requirements regarding their organization structure and lines of authority. DOE O 414.1C, DOE O 413.3A, and DOE O 411.1 requires the establishment of an organizational structure with levels of authority. The Team

discovered that ORP WTP satisfied these requirements by further delineating the ORP WTP organization and lines of authority within the ORP WTP PEP. However, The Team discovered the information within the ORP WTP PEP and ORP FRAM is not consistent in identifying the position/title of the person the FSDs report to. This Observation is described in A-08-ESQ-INTERNAL-001-O01 in Paragraph 2.0 of this report.

2.0 FINDINGS AND OBSERVATIONS

- 2.1 FINDING A-08-ESQ-INTERNAL-001-F01 – ORP WTP FSDs do not have implementing (lower-tier) procedures developed to strengthen the execution of their technical, quality, and safety responsibilities.

Requirements:

ORP M 414.1, QAPD Chapter 5 Work Process:

- 5.2 GENERAL: “Work performed by the ORP focuses on completing the ORP mission through effective contract management. Work is performed in accordance with established technical standards using approved instructions and procedures...”
- 5.3 IMPLEMENTATION: “If the underlying DOE Order or ORP directive does not provide sufficient direction, ORP AMs and Directors develop and implement organization-specific procedures or desk instructions. The organization-specific procedures or desk instructions should include sufficient detail to clarify the Order or ORP directive.”

ORP M 414.1, QAPD Chapter 3 Quality Improvement (Corrective Action Report):

- 3.3.4 QUALITY TRENDING: “To perform meaningful trend analysis, historical data are accumulated and available. Historical data from periods of acceptable performance or industry benchmarks establish the reference or performance baseline for determining the acceptability of current trends.”

DOE M 413.3-1, Chapter 13 ISMS:

- ISMS: “The ISMS, along with the basic assumptions regarding quality and the specific requirements for the project, provides a framework under which the Project Execution Plan and lower-tier documents such as, implementation plans and procedures are developed...”

Discussion:

Contrary to these requirements, the ORP WTP Division has been utilizing the ORP WTP PEP as an implementing procedure. There are no lower level implementing procedures to assist the FSDs in performing technical, quality, and safety management mission critical activities such as: a) integration of ISMS within FSD work functions; b) corrective action trending and tracking; c) technical/quality trending and tracking; d) performance of assessments; e) interfaces with peers, and other agencies; and

f) technical and safety reviews (NOTE: *a* through *f* is not an all inclusive list of FSD's technical, quality, and safety responsibilities).

The Assessment Team discovered that the FSDs have lower-tier procedures for their PCS responsibilities. These PCS implementing procedures are an excellent source of comprehensive information the FSDs use when performing PCS responsibilities.

2.2 FINDING A-08-ESQ-INTERNAL-001-F02 – ORP WTP does not have FSD Training Plans or Continuing Education Plans developed and implemented for FSD technical/functional area qualifications.

Requirements:

ORP M 414.1, QAPD, Attachment - 2 (2.3.2) Personnel Qualification: “The responsible ORP manager uses the services of the RL Office of Employee and Organizational Development to maintain the documentation (objective evidence) that attests to the qualification, requalification, or certification of proficiency of all assigned staff for which a formal qualification determination is made.

- 2.3.3 Training of Technical Personnel: In addition, managers with technical employees whose duties and responsibilities require them to provide assistance, guidance, direction, oversight, or evaluation of contractor activities that could impact the safe operation of a defense nuclear facility, are qualified in accordance with the Technical Qualification Program (TQP), which includes the Safety System Oversight Program, the Facility Representative Program, and the Senior Technical Safety Manager Program, defined in DOE M 426.1, “Federal Technical Capability Program,” and the DOE-Hanford Federal Capability Program.”

ORP M 450.4, 6.1.3 Principle 3: Competence Commensurate with Responsibilities: TQP direct you to DOE M 426.1-1A.

DOE M 426.1-1A, Federal Technical Capability Manual:

- Chapter 3: Individuals with assigned project management responsibilities that are identified for inclusion in TQPs will be qualified through a COMBINATION of the Project Manager Career Development Program and the General Technical Base Standard.
- Chapter 4c: Employees responsible for technical oversight of safety management programs identified in the respective DSA MUST Complete the GENERAL technical base qualification standard and the FUNCTIONAL area qualification standard related to the safety management program they are assigned to oversee. In addition, these employees must satisfy the site and facility qualification requirements for oversight of the respective safety management programs.
- Chapter 4i: The duties and responsibilities contained in an individual position description drive participation in the TQP. They determine which functional area standards and individual competencies in the TQP are appropriate for that position.

Individual performance standards should reflect and note an individual's particular requirements under the TQP.

DOE O 360.1 B Federal Employee Training:

- Section 4, Requirements, a. "Training Policies, Procedures, and Reports," (1) Each DOE element must have training policies and/or procedures that establish an integrated cycle of organizational needs analysis and training planning, needs assessment, resource allocation, design and delivery, evaluation, and reporting processes consistent with the requirements and responsibilities of this Order.

Section 4, Requirements, c. "Training Plans and Resources," (1) Each DOE element must have a training plan.

DOE O 414.1C Section 6, References. The following provide guidance and requirements for implementing this Order. (This section references DOE G 414.1-2):

- DOE O 414.1C – Section 4, Requirements, b. Quality Assurance Criteria, b. (2) Management/Criterion 2 – Personnel Training and Qualification. (a) Train and qualify personnel to be capable of performing assigned work. (b) Provide continuing training to personnel to maintain job proficiency.
- DOE G 414.1-2A – Section 4.2.5, Training Plans: Training plans should be prepared for personnel responsible for managing, planning, performing, controlling, and overseeing work. Training plan content should also be based on current facility, site, or organization procedures; technical and professional references; and past organization/ industry experience. Training plans should consider changes in hazard conditions, technology, work methods, and job responsibilities. Training plans should also specify the type of training records to be maintained.

Discussion:

Contrary to these requirements, the ORP WTP Division does not have FSD training qualifications with continuing education elements for the Functional Area or Site Specific Training Qualifications. Currently, the FSD have or are in training for the PMCDP and General Technical Base Qualification. The functional area and site specific training qualifications are required for personnel who manage projects that also require technical, quality and safety management/oversight.

- 2.3 Finding A-08-ESQ- INTERNAL-001-F03 – ORP WTP FSDs are not performing self-assessments, independent, or management assessments in accordance with ORP WTP PEP 2007 and DOE M 450.4.

Requirements:

ORP WTP PEP 2007, Paragraph 5.2.3 Responsibilities 14th bullet: Assessing the adequacy of assigned facility design and construction in terms of operability and ability to meet contract-required performance within allowed cost and schedule.

- NOTE: The PEP states assessing versus managing assessments.

ORP M 450.4, Paragraph 6.1.1 Principle 1: Line Management Responsibility for Safety Managers; “Performs effective oversight of work and self-assessments (Assessment and Oversight, Self-Assessment, and Management Walkthrough).”

Discussion:

Contrary to these requirements, the FSDs are not performing self-assessments, independent, or management assessments. Currently, the FSDs rely on their IPT and ISTs to perform assessments and they manage the types of assessments being performed. The Assessment Team determined that no lower-tier procedure was developed for conducting assessments.

- 2.4 Observation A-08-ESQ-INTERNAL-001-O01 - The ORP WTP PEP 2007 and ORP FRAM Revision 7 is not consistent in identifying the position/title of the person the FSDs directly report to.

Requirements:

- ORP WTP PEP 2007, Paragraph 5.2.3 Responsibilities; FSD reports to WTP Program Manager.
- ORP M 411.4, states FSD reports to WTP Programs and Projects Division.

Discussion:

- While conducting this assessment the Team analyzed DOE directives and interviewed the FSDs to assess the flow down of requirements within their organization structure and lines of authority. The FSDs stated that previously they reported to the WTP Programs and Projects Division Director but now directly report to the WTP Program Manager (PM). The ORP WTP PEP was updated during the 2007 revision to reflect the FSDs directly reporting to the WTP PM.

3.0 CONCLUSION

The Assessment Team determined that the ORP WTP FSDs procedures and procedural performance is in accordance with requirements and is adequate, implemented, and effective. However, the Team discovered three program deficiencies identifying the need for additional training and lower-tier implementing procedures. Once the training and procedures are developed and implemented, the FSD program will be in full compliance with requirements. The Assessment Team concludes that by implementing improvements identified in the Findings, the FSDs will increase their effectiveness and continue to have success in their execution of ORP WTP’s mission objectives.