One System: Managing the Office of River Protection Mission and Delivering Direct-Feed Low Activity Waste

Hanford Advisory Board – Tank Waste Committee

Presented by: Briant Charboneau, Director Waste Treatment and Immobilization
Plant Startup, Commissioning & Integration One System Division

March 11, 2015
Overview

- One System – leading the way to Direct-Feed Low Activity Waste (DFLAW)
  - Purpose
  - Evolution
  - Organization
- DFLAW Program
- One System Management Tools
One System Strategic Objectives

- Establish prioritized sets of fully integrated activities and timing to integrate Tank Farms and Waste Treatment and Immobilization Plant (WTP)
- Track, coordinate, measure, and report on these activities
- Identify and recommend actions to more effectively and efficiently conduct the transition to startup, commissioning, and operations to include alignment of DOE directives and contracts
- Establish a long-term tank waste disposition integrated flowsheet and technical management involving National Laboratories
- Provide for the integration of Tank Farms and WTP system planning and modeling, with a focus on the waste feed qualification requirements
- Lead the development of interfaces and controls
- Coordinate the establishment of operational skills required for future operators
What is One System?

- An integrated team consisting of Office of River Protection (ORP), Washington River Protection Solutions (WRPS), and Bechtel National, Inc. (BNI) personnel to provide integration between Tank Farms and WTP to meet overall ORP mission needs

- Primary focus to deliver the mission with near-term emphasis on DFLAW operations by 2022
  - Begin treating most mobile (liquid) tank waste at earliest practicable time
  - Provide flexibility and redundancy in tank waste treatment
  - Create opportunities to optimize radioactive operations for WTP and validate Low Activity Waste (LAW) glass performance
  - Reduce commissioning and startup risk for remainder of WTP’s production facilities

One System has established cross-cutting management tools and is integrating 2 DOE field offices, 5 Hanford Site contractors, and 6 National Labs
Direct-Feed Low Activity Waste

- Treating supernate (liquid) portion of the tank waste
- New facility to pretreat waste stream prior to vitrification
  - Filtration to remove solids
  - Ion Exchange to remove cesium
- Enable glass production of 30 metric tons/day of glass
- On site disposal of LAW glass
Evolution of One System

- **2010:** No One System
  - Independent contractors
  - Alignment only through contract language and interface control document

- **2011:** One System chartered
  - Initial alignment aimed at WTP and WRPS
  - Addressed institutional hurdles
  - Strategy for requirements and program consistency
  - Reconfigured Interface Control Document Program
  - Supported development of DOE Hanford Framework

- **2012:** One System
  - Focused on completion of individual contract scopes

- **2013:** One System Rechartered
  - Focused on establishing processes and policies

- **2014:** One System
  - ORP redefined vision
  - One System challenged to adopt an integration focus
  - Immediate focus on closing open legacy issues e.g., ICD, definitions, contract alignment etc..

- **2015:** One System Charter Implemented
  - Programmatic approach to mission analysis for full integrated management tools
  - Integrated flow chart with risk and opportunity management plan
  - Focused on transition to Startup and Operations
  - Integrated schedule to measure and monitor performance

- **2016:** One System Charter Implemented
  - Focused on integrated delivery of DFLA

- **2017:** One System Charter Implemented
  - Focused on Workforce motivation toward Startup and Operations
One System Charter Implemented

INTEGRATED FLOWSHEET
REFERENCE PLAN
INTEGRATED SCHEDULE
STRATEGIC PLAN
RISK & OPPORTUNITY PLAN
TECH ROADMAP
PERFORMANCE METRICS

ORP
RL
BNI
WRPS
CHPRC
MSA
ATL
NATIONAL LABS

CROSS-CUTTING PROGRAMMATIC MANAGEMENT TOOLS
U.S. Department of Energy Office of River Protection
One System

Kevin Smith
Manager of Office of River Protection

JD Dowell
Deputy Manager of Office of River Protection

Ben Harp
Assistant Manager
WTP Startup, Commissioning and Integration (WSC)

Tom Brown
Deputy Assistant Manager
WTP Startup, Commissioning and Integration

Briant Charboneau
Director, WSC One System Division

Albert Kruger – Chemist
Vacant – Project Budget Integration and Planning
Janet Diediker – Deputy Federal Project Director (FPD) Low Activity
Waste Pretreatment System Project
Isabelle Wheeler – Deputy FPD Waste Feed Delivery

Don Alexander – Scientist
Pam Logan – Detail
Jian-Shun Shuen – Waste Feed Delivery
Dabrisha Smith – Waste Sample Qualification
Wendell Wrzesinski – Chemical Engineer
Kaylin Burnett – Waste Analysis and Planning
Gary Pyles – Waste Disposal
Kate Amrhein – Scientist
Tom Nirider – Flowsheet Integration

Rob Gilbert
Program Manager
WSC Commissioning, Maintenance and Operations Division

Joe Renevitz – Startup Engineer
Cecil Swarens – Startup Engineer
Vacant - Readiness Manager
Washington River Protection Solution One System Organization

One System
Bill Condon, Manager

- Flowsheet Integration
  - RPP Integrated Flowsheet
  - Project Flowsheets
- Mission Analysis
  - System Planning & Modeling
  - Strategic Planning
  - Pre-Conceptual Projects
- WTP Start-up Integration
  - Commissioning & Operations Planning & Integration
  - Interface Management
  - Logistics & Infrastructure Integration
- Other Key Staff
  - Effluent Treatment System
- Nuclear Safety & Engineering Program Int.
  - Nuclear Safety & Engineering Program Int.
  - Engineering Program Integration
- Functional Support
  - ESH&Q Integration
  - Project Int. & Controls

Key
- Direct Staff
- Matrixed Staff
Bechtel National, Inc. One System Organization

One System
Manager
Mike Hughes

Mission Implementation Manager
Glen Jones

Project Integration & Strategic Planning Manager
Tom Wintczak

One System Operations Manager
Garth Duncan

Matrixed Organizational Support

LAW/DFLAW Support

LAW/DFLAW Program Integration/Transition

Flowsheet Integration

Project Controls

Key
- Direct Staff
- Matrixed Staff
One System Organization Interfaces

**EPC** – Engineering, Projects and Construction

**ESH&Q** – Environment, Safety, Health & Quality
Managing the Direct-Feed Low Activity Waste Program

**DFLAW Program Sponsor**
Strategy and Decisions

**DFLAW Program Office**
Briant Charboneau
DFLAW Program Office Manager
Priorities and Recommendations

**DFLAW Program Execution: Management, Integration and Reporting**

**One System Governance Board**
DOE–ORP Manager – Chair
WRPS–TOC Project Manager
BNI–WTP Project Director

**One System Executive Council**
DOE-ORP Asst. Manager WTP
DOE-ORP Asst. Manager Tank Farms
DOE-ORP Asst. Manager WSC
DOE-ORP One System Division Director
WRPS-TOC One System Manager
BNI-WTP One System Manager

**One System Staff and Support**
DOE-ORP Staff supported by
WRPS/BNI/MSA/CHPRC/ATL Integration Project Management
Engineering Science
Strategic Planning

**One System Office**
Briant Charboneau
DFLAW Program Office Manager
Priorities and Recommendations

**One System Staff and Support**
DOE-ORP Staff supported by
WRPS/BNI/MSA/CHPRC/ATL Integration Project Management
Engineering Science
Strategic Planning
One System – Program Tools

Tools Include:
- Integrated Flowsheet
- Program Status Metrics
- DFLAW Integrated Schedule
- Integrated Permitting Plan
- Technology Roadmap
- DFLAW Risk Management Plan
River Protection Project Integrated Flowsheet

Flowsheet established with Risk and Opportunities defined
Direct-Feed Low Activity Waste Program Scope and Status

Rev 0, 12/16/2014
Example: Immobilized Low Activity Waste Transporters Scope Diagram

Performance Assessment / Waste Incidental to Reprocessing
DOE HQ Disposal Authorization

- Waste Treatment Plant
- Tank Operations Contract
- Mission Support Contract
- Plateau Remediation Contract
Example: ILAW Transporter P6 Level 2 Schedule
Development/Process/Output

Integrated Schedule Process
**Direct-Feed Low Activity Waste Permitting Schedule**

**Integrated schedule for permits has been established**
Summary

One System – leading the way to DFLAW

- A driving force for accomplishing the ORP mission
- Establish and maintain the integrated flowsheet
- Establish and maintain the integrated schedule
- Lead the development and maintain the interfaces and controls
- Coordinate, track, measure, and report on the integrated activities
- Identify and recommend actions to more effectively and efficiently execute our work
Thank you

Questions