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**Interface Control Document**  
**between**  
**Washington River Protection Solutions**  
**and**  
**Hanford Mission Integration Solutions**  
**for**  
**Electric Utilities Distribution System**

**REV. 8**

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## ACRONYMS

ANSI	American National Standards Institute
DOE	U.S. Department of Energy
EU	Electrical Utilities
FMP	Facility Modification Package
HMIS	Hanford Mission Integration Solutions
ICD	Interface Control Document
LERF	Liquid Effluent Retention Facility
RL	Richland Operations Office
SDD	Service Delivery Document
T&D	Transmission and Distribution
WRPS	Washington River Protection Solutions LLC
WTP	Waste Treatment and Immobilization Plant

## 1.0 INTERFACE DESCRIPTION

Electrical transmission and distribution (T&D) operations are the management function of the *Hanford Mission Essential Services Contract 89303320DEM000031* consisting of the high-voltage electrical utility delivery system for providing power to the facilities at the Hanford Site.

This Interface Control Document (ICD) provides the requirements for interfacing the Washington River Protection Solutions LLC (WRPS) facilities and the Hanford Mission Integration Solutions (HMIS) Hanford Site Operations Infrastructure Services, Electrical Utilities (EU) distribution system. It includes service requirements, applicable references, acceptance standards, and other relevant information.

This ICD covers delivery of electric power to the following facilities:

- 200 East Tank Farm System Facilities
- 200 East 242-A Evaporator Facilities
- 200 West Tank Farm System Facilities
- 200 West Analytical Laboratory Facilities (222S)
- 200 East Liquid Effluent Retention Facility (LERF)
- Tank Farm System Associated Facilities.

This ICD provides the electrical service agreement between WRPS and EU facilities. This ICD updates the previous revision and was developed in accordance with the *Hanford Site Interface Management Plan, HMIS-OTHER-IFM-00001*. Work associated with this ICD will be executed in accordance with the terms and conditions as agreed to in HMIS-MOA-00001, *Memorandum of Agreement for the Performance and Payment of Services between Hanford Mission Integration Solutions, LLC, HMESC Contract No. 89303320DEM000031 and Washington River Protection Solutions, LLC, WRPS Contract No. DE-AC27-08RV14800, and Service Delivery Document (SDD) J-3 ID #41: Electrical Transmission, Distribution, and Energy Management*.

The Waste Treatment and Immobilization Plant (WTP) electrical interfaces with HMIS EU are not included here, as they are documented by 24590-WTP-ICD-MG-01-011, *ICD 11 — Interface Control Document for Electricity*.

## 2.0 RESPONSIBILITIES/REQUIREMENTS

### 2.1 RESPONSIBILITIES

Each Party to this agreement will perform services in accordance with the terms and conditions of its respective DOE

Prime Contract, applicable internal policies and procedures, and quality assurance programs.

### **2.1.1 Operation, Maintenance, and Configuration Management**

HMIS externally supplies electrical power to Hanford Site Contractors and is responsible for the operation, maintenance, and configuration management of the site T&D system, up to and including the connection at the utility/facility interface. This includes auxiliary devices located downstream of the utility/facility interface point that are used in conjunction with EU electrical power systems equipment.

The Tank Farm System is responsible for the operation, maintenance, and configuration management of facility electrical power systems downstream from the utility/facility interface connection. This includes auxiliary devices located upstream of the utility/facility interface that are used in conjunction with facility electrical power systems' equipment.

The interface point between the EU electrical distribution system and the Hanford Site Contractors' facilities electrical system is routinely the connection at the secondary side of the building service transformer (EU also owns the electrical meters). However, there may be some facilities where the systems' interface is located at a different connection point. The interface points are identified on the HMIS Electrical Utilities' system diagrams.

The on-shift electrical system operational points of contact are as follows:

- Electrical Utilities (373-2321) or ^Electrical System Dispatcher
- Tank Farm Office (373-2689) or ^Tank Farm Shift Operations.

### **2.1.2 Configuration Changes**

HMIS will perform the following:

1. Include WRPS Cognizant System Engineer in distribution of approved design of construction projects and proposed changes that will affect WRPS electrical distribution system.
2. Notify WRPS facility/plant manager or WRPS interface owner of any planned outage or maintenance 15 calendar days prior to initiating work that impacts the WRPS facility/plant electrical power system. This includes the reduction of redundant power feed to a WRPS facility or a facility that supports WRPS. Notification will be given in written form or sent by email.
3. Manage configuration management changes in accordance with HMIS-PRO-ENG-2001, *Facility Modification Package Process*.



4. Notify and include on the HMIS Facility Modification Package (FMP) distribution, the WRPS Cognizant Systems Engineer, as identified on the SDD, of planned configuration changes that could impact/affect WRPS-owned equipment on the other side of the electrical interface.
5. Ensure the EU T&D Switching Diagram designates the electrical interface(s) of the EU T&D system with the facility/plant electrical power system.
6. Where it is necessary to deviate from the electrical interface demarcation point defined in Section 3.0 of this ICD, both HMIS EU and WRPS facility/plant management shall approve deviations on FMP and Engineering Change Request.
7. Provide Facilities Maintenance Manager with and/or review any execution documents (e.g. Tagout Authorization Form/switching orders) no later than 24 hours prior to field performance.

WRPS will perform the following:

1. Prepare and submit a request using the on-line Service Catalog under HMIS web page on the Hanford Intranet when new electrical services and modifications to loads on existing services are needed.
2. Include HMIS EU in distribution to changes in the operational configuration of the electrical isolation devices and/or tiebreaker associated with the interface point.

Where it is necessary to deviate from the electrical interface demarcation point defined in Section 3.0 of this ICD, both HMIS EU and WRPS facility/plant management shall approve deviations on FMP and Engineering Change Request. WRPS shall document deviating points of demarcation on the facility/plant one-line diagram.

3. Coordinate and obtain the following for WRPS facilities: the single-line diagram of the facility/plant electrical power system that designates the electrical isolation device(s), which interface with the EU T&D system.

WRPS will notify and include on the WRPS Engineering Change Notice distribution, the HMIS Design Authority, as identified on the SDD, of planned configuration changes that could impact/affect HMIS-owned equipment on the other side of the electrical interface.

4. Notify HMIS EU of any intended use of a portable generator where the potential exists for a back-feed of electrical power into the T&D system.

5. Notify HMIS EU of any planned outage or maintenance 15 calendar days prior to initiating work that impacts the electrical power system, such as outage requests, switching support, and related activities through the HMIS Service Catalog.
6. Provide EU with and/or review any execution documents (e.g. Tagout Authorization Form/switching orders) no later than 24 hours prior to field performance.
7. Obtain work release from HMIS EU Operations prior to performing work on EU operating equipment, including: Power Poles and Towers, Primary Substations, Communication Circuits, and Overhead/Underground Wire. EU Dispatch shall be notified each working day at (509) 373-2321 prior to the start of work and upon completion of work at the end of the day when work is performed on EU operating equipment.

### **2.1.3 Coordination of New Electrical Facilities**

HMIS will provide engineering, procurement, and construction support services for all new T&D services to support WRPS. The T&D systems are defined in HMIS-PRO-EU-481, *Electrical Utilities Interface Agreement with Facilities/Plants*. HMIS will procure the equipment and provide the labor to build the facility, and HMIS will perform startup testing of the equipment and verify that it is ready to be placed in service. WRPS is responsible for providing authorization, funding, functional design requirements, the date required, and the project interface point of contact.

### **2.1.4 Coordination of Forecast of WRPS Electrical Demands**

WRPS will provide 10 year electrical load forecast information to HMIS EU in May of each year. HMIS is responsible to report a 10 year electrical load forecast to DOE-RL each year. It is presumed that there will be times when WRPS electrical service requirements or load requirements will change. Upon such changes, WRPS will notify HMIS EU and the two will work cooperatively to resolve any issues to meet the new demands.

## **2.2 REQUIREMENTS**

### **2.2.1 Voltage, Service Quality, and Availability**

Electricity delivered at the interface point for each service point shall meet described requirements for voltage, service quality, and availability. Voltages delivered to the WRPS facilities are in four different configurations:

- 120/240 volts single phase
- 208/120 volts three phase
- 480/277 volts three phase

- 480 volts three phase

Voltage delivery tolerances shall be in accordance with requirements in the American National Standards Institute (ANSI) C84.1, *Electric Power Systems and Equipment — Voltage Ratings (60 Hertz)*. EU shall ensure that service quality and availability are high, and in line with industry standards. It is expected that the electrical usage will change with time as the system configuration is modified with the addition or removal of utilization equipment. Major equipment additions may require new EU service facilities.

### **2.2.2 DOE Requirements**

Work will be performed in accordance with the *Energy Policy Act of 2005*, the Service Agreement for Network Integration for the Department of Energy's Richland Operations Office and Bonneville Power Administration, and general HMIS and WRPS contractual agreements.

### **2.2.3 Worker Access**

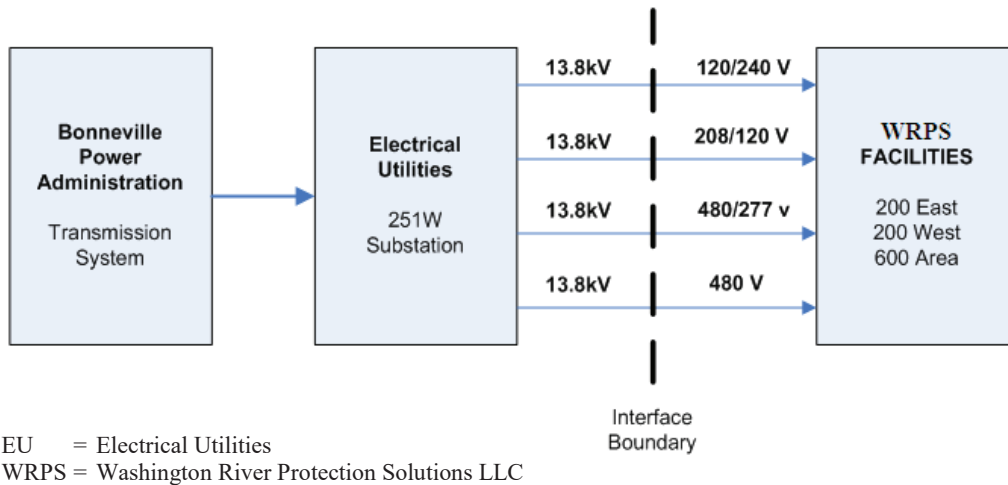
Priority will be given to EU and WRPS workers to access and work on their equipment physically located within the other's facility boundaries.

## **3.0 INTERFACE INFORMATION**

HMIS will provide electrical power to the WRPS facilities in four voltage configurations (see Figure 1 and HMIS-PRO-EU-481). The physical interface between the EU distribution system and the Tank Farm System facilities is defined as follows:

- For aerial services, the interface point is the line termination connection at the weather head.
- For aerial services with no weather head, the interface point is the secondary terminations at the distribution transformer.
- For underground services, the interface is the secondary terminations of the distribution transformer serving the facility/plant.
- If there is no distribution transformer supplying power to the facility/plant, the interface point is the termination/connection of the primary cable in the facility/plant.

**Figure 1. WRPS Facilities and the EU System Interface.**



The WRPS facilities are identified in WRPS’ and HMIS’s contract attachments J.13, “Hanford Site Structures List,” and J.14, “Hanford Waste Site Assignment List,” which are reflected in the Hanford Facilities Caretaker system, *Facility Maps and Reports*, with the Asset Ownership Company identified as WRPS. The EU circuit breaker serving each of these facilities can be determined using drawing H-2-2126, *200 East Area Electrical Utilities Switching Diagram*.

During work activities that require hazardous energy control for both EU and WRPS (e.g. de-energized main disconnect, joint EU/WRPS outage, etc.), all requirements of DOE-0336, *Hanford Site Lockout/Tagout Procedure*, must be satisfied in addition to HMIS lock and tag requirement HMIS-PRO-EU-066.

#### 4.0 CONFIGURATION MANAGEMENT

The signatures on the cover page of this ICD indicate agreement between the Parties that this document reflects the current technical baseline for the system described and that the responsibilities and requirements contained in this document will not be revised without the agreement of both Parties.

Section 2.1.3 of this ICD contains additional requirements governing the configuration control of the interfacing systems.

## 5.0 ISSUE RESOLUTION

WRPS facility power demands may change depending on the facility activities and baseline mission changes. The assessment of the electrical power requirements and associated issues will be identified by RPP-PLAN-64287, Near-Term Planning Basis, which is updated to reflect the baseline WRPS mission as currently defined. Any identified issues will be tracked through resolution by appropriate WRPS and HMIS corrective action tracking systems. For issues that cannot be resolved at the technical level, both companies will use the Issue Resolution Process identified in the MOA.

## 6.0 CONTROLS

HMIS shall be expected by DOE and WRPS to provide products or services in a manner consistent with the requirements of HMIS's prime contract and the fiscal year integrated priority list, including quality assurance; health, safety, and environmental compliance requirements; and any task instructions provided by WRPS.

## 7.0 REFERENCES

01TX-10353, 2001, Service Agreement for Network Integration Transmission Service Executed by the United States of America Department of Energy Acting by and Through the Bonneville Power Administration and Department of Energy, Richland, Vancouver, Washington.

24590-WTP-ICD-MG-01-011, *ICD 11 — Interface Control Document for Electricity, Waste Treatment Plant.*

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H-2-2126, *200 East Area Electrical Utilities Switching Diagram*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

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HMIS-OTHER-MS-00001, *Hanford Site Interface Management Plan*.

HMIS-PRO-EU-066, *Electrical Utilities Lock and Tag Program*, Hanford Mission Integration Solutions, LLC, Richland, Washington.

HMIS-PRO-EU- 481, *Electrical Utilities Interface Agreement with Facilities/Plants*, Hanford Mission Integration Solutions, LLC, Richland, Washington.

HMIS-PRO-ENG-2001, *Facility Modification Package Process*, Hanford Mission Integration Solutions, LLC, Richland, Washington.

RPP-PLAN-64287, *Near-Term Planning Basis*, Washington River Protection Solutions LLC, Richland, Washington.

Service Delivery Document J-3 ID #41: *Electrical Transmission, Distribution, and Energy Management*, Hanford Mission Integration Solutions, LLC, Richland, Washington.