May 8, 2019

WRPS-1901699 REISSUE

Mr. Bob Wilkinson, President and General Manager Mission Support Alliance, LLC P. O. Box 650 Richland, Washington 99352

Dear Mr. Wilkinson:

INTERFACE CONTROL DOCUMENT NUMBER TOC-ICD-61438, REV. 0, BETWEEN WASHINGTON RIVER PROTECTION SOLUTIONS LLC AND MISSION SUPPORT ALLIANCE, LLC FOR THE TANK FARMS' EVENT NOTIFICATION SYSTEM

This letter is being reissued to include the enclosure.

Please find the enclosed subject Interface Control Document (ICD), Tank Farms' Event Notification System, TOC-ICD-61438, Revision 0. This ICD provides the requirements for interfacing the Tank Farms' Event Notification System between Washington River Protection Solutions and Mission Support Alliance, LLC.

If you have any questions, please contact me at 376-2574, or your staff may contact Mr. J. S. Van Meighem at 373-7333.

Sincerely,

John. R. Eschenberg

President and Project Manager

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ZMS:ACP

Enclosure:

Interface Control Document TOC-ICD-61438, Rev. 0, between Washington River

Protection Solutions LLC and Mission Support Alliance, LLC for the Tank

Farms' Event Notification System (19 Pages)

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Release Stamp DOCUMENT RELEASE AND CHANGE FORM Prepared For the U.S. Department of Energy, Assistant Secretary for Environmental Management By Washington River Protection Solutions, LLC., PO Box 850, Richland, WA 99352 Contractor For U.S. Department of Energy, Office of River Protection, under Contract DE-AC27-08RV14800 DATE: TRADEMARK DISCLAIMER: Reference herein to any specific commercial product, process, or service by trade name, trademark, TRADEMARK DISCLAMMER. Releases herein to any specific commercial product, process, or service by trade name, trademan manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States government or any agency thereof or its contractors or subcontractors. Printed in the United States of America. MANFORD Apr 18, 2019 RELEASE 1. Doc No: TOC-ICD-61438 Rev. 00 2. Titie: Interface Control Document Between Washington River Protection Solutions, LLC. and Mission Support Alliance, LLC for Tank Farms' Event Notification System 3. Project Number: 4. Design Verification Required: □ N/A T1P152 ☐ Yes ⊠ No 5. USQ Number: ⊠ N/A 6. PrHA Number Clearance Review Restriction Type: Rev. ⊠ N/A N/A-9 public 7. Approvals Title Name Signature Date Clearance Review Raymer, Julia R Raymer, Julia R 04/18/2019 Design Authority Greenhaigh, Aaron M Greenhalgh, Aaron M 04/02/2019 Checker Brayton, Darryl Brayton, Darryl 04/02/2019 Document Control Approval Scales, Anthony Scales, Anthony 04/18/2019 Originator Greenhalgh, Aaron M Greenhaigh, Aaron M 04/01/2019 Responsible Engineering Manager Smith, Gregory E Smith, Gregory E 04/03/2019 **USQ** Evaluator Griebel, Scott Griebel, Scott 04/02/2019 8. Description of Change and Justification This is the release to Rev 0 of this document. This Interface Control Document (ICD) specifies the agreement for interfacing the Tank Farms Public Address Systems, formally referred to as the CentrAlert Crisis Driven Alert and Control (CCDAC) (HISI #4073) for the 200E-200W tank farms' event notification. This agreement is between Washington River Protection Solutions (WRPS) and Mission Support Alliance (MSA), using U.S. Department of Energy infrastructure, including servers, personal computers and communications networks. 9. TBDs or Holds ⋈ N/A 10. Related Structures, Systems, and Components a. Related Building/Facilities ☐ N/A b. Related Systems ☐ N/A c. Related Equipment ID Nos. (EIN) □ N/A 241-A 241-EN 200E-EN-EES-001 241-AN 200E-EN-EES-002 241-AP 200E-EN-EES-003 241-AW 200E-EN-EES-004 241-AX 200E-EN-EES-005 241-AY 200E-EN-EES-006 241-AZ 200E-EN-EES-007 241-B 200W-EN-EES-001 241-BX 200W-EN-EES-002 241-BY 200W-EN-EES-003 241-C 200W-EN-EES-004 241-S 200W-EN-EES-005 241-SX 200W-EN-EES-006 241-SY 200W-EN-EES-007 241-T 200W-EN-EES-008 241-TX 200W-EN-EES-009 241-TY A241-EN-EES-001 241-U A241-EN-EES-002 274-AW AN241-EN-EES-001 2750-E AN241-EN-EES-002 MO-850 AP241-EN-EES-001 AP241-EN-EES-002 AP241-EN-EES-003 AW241-EN-EES-001 AW241-EN-EES-002 AX241-EN-EES-001 AY241-EN-EES-001 AZ241-EN-EES-001 AZ241-EN-EES-002 B241-EN-EES-001 B241-EN-EES-002 B241-EN-EES-003 BX241-EN-EES-001

BX241-EN-EES-002

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Smith, Gregory E			•	TANK FARM PROJECT	S ENGINEERING	

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TOC-ICD-61438 Revision 0

# Interface Control Document Between Washington River Protection Solutions, LLC. and Mission Support Alliance, LLC. for Tank Farms' Event Notification System

Author

Washington River Protection Solutions, LLC

Date Published April 2019



Prepared for the U.S. Department of Energy Office of River Protection

Contract No. DE-AC27-08RV14800

## INTERFACE CONTROL DOCUMENT NUMBER TOC-ICD-61438, Rev. 0

## Between

## WASHINGTON RIVER PROTECTION SOLUTIONS, LLC.

And

MISSION SUPPORT ALLIANCE, LLC

for

# **Tank Farms Event Notification System**

Mission Support Alliance Approvals:

D.A. Thomas, Menuger MSA, Information Technology Engineering	3-54-19
J.R. Lacher Director MSA, Network and Competing Segricus	3/27/2019 Date
D.L. Sown, Director MSA, Interface Management	3-26-19 Date
T.S. Bokman, Vice President MSA, Information Management	3-26-19 Date

Washington River Protection Solutions Approvals:

M.Y. Aurah, Manager WRPS, Process & Control Systems Engineering

M.A Roberts, Manager WRPS, Process Software

Engineering

K.A. Downing, Manager WRPS, Project Contract Management

K.J. Matteson, Manager WRPS, Chief Information Officer

3/27/2014 Date

#### 1.0 SCOPE

## 1.1 Purpose

This Interface Control Document (ICD) specifies the agreement for interfacing the Tank Farms Public Address Systems, formally referred to as the CentrAlert Crisis Driven Alert and Control (CCDAC) (HISI #4073) for the 200E-200W tank farms' event notification.

CCDAC, which operates on the WRPS-managed CentrAlert platform, has been established to assure that all workers potentially impacted by different tank farm events (e.g., vapor) (i.e. WRPS employees, MSA employees, sub-contractors, visitors) are alerted in a timely manner upon occurrence of tank farm events, and any instructions to follow.

#### 1.2 Interface Relationship

This agreement is between Washington River Protection Solutions (WRPS) and Mission Support Alliance (MSA), using U.S. Department of Energy infrastructure, including servers, personal computers and communications networks. The configuration and licensing of the software installed on these computers is managed by WRPS. The server hardware and operating systems are maintained by MSA.

All work is performed within the bounds of the agreements and is in accordance with MOA-00001, Memorandum of Agreement for the Performance and Payment of Services between MSA contract DE-AC06-09Rl14728 and WRPS contract DE-AC27-08RV14800.

Details for the performance of work within the bounds of this document can be found in the Hanford Site Services and Interface Requirements section J.3, #65 Network Services.

#### 1.3 System Description

CCDAC provides multi-modal event notification via many device types including public address (PA) speaker towers, tone alert radios, land mobile radio, message reader-boards, text messaging, telephone call-out and PC-based monitors to alert personnel (i.e. WRPS employees, MSA employees, sub-contractors, visitors) about tank farm conditions.

Communications to these different device types is by way of wireless/wired HLAN, analog radio and digital radio networks managed by MSA.

Alerts are currently initiated by a Shift Manager (operator) via a CCDAC user interface. This operator has a standard HLAN account and must use 2-factor authentication to log in. Privileges to access the CentrAlert interface are role-based and defined through Group Policy managed by WRPS.

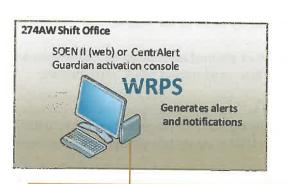
A stand-alone mobile laptop may be utilized to provide a secondary means to create and distribute event notifications.

## Figure 1 – TF ENS System Overview

MSA or WRPS provides Hardware Preventative Maintenance (PM) or Corrective Maintenance (CM) as indicated

March 2019

**WRPS** provides Softw Maintenance in conju



Basic Architecture, **TOC Event and Notification System** (TOC-ENS)

NOW! Change Trailer PC Display alerts

CentrAlert NOW! driver

WRPS

MSA Server Farm Communications I

CentrAlert Serv



HLAN Network (TCP/IP)



VHF licensed Serial Data radio (redundant) (by MSA) Radio Tower



5.2 Ghz Wireless Access Point (redundant) (by MSA) Radio Tower



2.1 Ghz Wireless Access Point (redundant) (by MSA) Radio Tower



- Text to speech m Address Speakers
- Alert Display Boa
- **SOEN alerts**
- Direct text alerts
- eMails



VHF licensed radio (re Radio T

WRPS



(VHF Serial Data radio only)

VHF Roadside Alert Display Board By Roadside in 200E and 200W (MRB, Message Reader Board)



5.2GHz Change Trailer (NOW! Notifier display)



2.1ghz wireless Public Address Speaker & Beacon at Tank Farms through 200E and 200W (ESS, Event Signal System)



Portable VHF Radios (AAR, Advisor Alert Radio)

#### 2.0 RESPONSIBILITIES/REQUIREMENTS

## 2.1 WRPS Responsibilities

- Maintenance of CCDAC device hardware in compliance with WRPS design documents.
- Testing of VHF radios, and notify MSA of test results.
- Advance notification to MSA of planned maintenance/modification activity with potential to impact CCDAC that could impact MSA infrastructure.
- When anticipating that CCDAC changes may impact the HLAN network, facilitate a prejob walk-down prior to modifying the TF-PAS, between MSA, WRPS Process & Control System Engineering, and the WRPS organization responsible for executing the modification.
- WRPS will have a representative in attendance for the Production Readiness Review Board (PRRB) meetings, and will present CCDAC changes that may impact the HLAN network.

**NOTE**: If necessary, MSA IT Engineering will present on WRPS's behalf with WRPS concurrence.

 Notification to MSA of need for access or support to portions of CCDAC routed through MSA facilities.

#### 2.2 MSA Responsibilities

- MSA will provide notifications and responses to CCDAC failures in accordance with HNF-9247, Information Management Disaster Recovery Plan with specific notification to WRPS Central Shift Office and P&CS Engineering.
- MSA NOC will monitor the MSA managed equipment 24x7x365 and will respond to failures in accordance to existing processes and procedures, including notification of failure to WRPS Central Shift Office.
- Preventing unauthorized access to CCDAC from the HLAN.
- Maintenance of CCDAC servers, personal computers and communication networks, radios (2.1GHz, 5.2GHz and VHF digital and analog) while ensuring compliance with MSA requirements.
- Monitoring of CCDAC health and status related to operating systems, and associated communication networks. The following list provides the services that will be monitored by MSA on both CentrAlert servers (Main and Failover, see Table 1).
  - o CentrAlert Alert Radio
  - o CentrAlert API Server
  - o CentrAlert Dynamic Coordination Service
  - o CentrAlert EARS Device

- CentrAlert ESS
- o CentrAlert IM Dispatcher
- o CentrAlert IM Manager
- CentrAlert IVR Server
- o CentrAlert Message Reader Board
- o CentrAlert Now! Notified
- CentrAlert Rules Engine
- o CentrAlert Scheduling Service
- o CentrAlert Self hosted API Service
- o CentrAlert Synch Service
- o CentrAlert VideoNOW
- o Cepstral License Server
- Notification to WRPS of CCDAC monitoring issues and failures to do with MSA infrastructure, when identified.
- Resolution of monitored CCDAC health and status issues, when identified in accordance
  to a service contract for operations and maintenance of the CCDAC. This may involve
  coordination with WRPS technical support and/or CentrAlert Technical Support
  personnel through the warranty support mechanism if latent errors are discovered.
- Advance notification and review opportunity to WRPS of planned maintenance/ modification activity with potential to impact CCDAC through the Production Readiness Review Board (PRRB).
- Provide WRPS a minimum of four business days to validate that system patches or modification will not interrupt CCDAC operations, prior to being implemented.
- Advance notification of WRPS Central Shift Office prior to any future work on the system that can potentially impact operations.
- Notification to WRPS of CCDAC or HLAN and wireless failures that could affect communications between HLAN and CCDAC when identified.
- Notification to WRPS of need for access or support to CCDAC portions routed through WRPS facilities.
- Operation and maintenance of HLAN network equipment supporting WRPS control and monitoring system wireless networks which support CCDAC in accordance with section J.3, #65 Network Service.
- Support pre-job walk-downs requested by WRPS in support of WRPS TF-ENS modifications.

## 3.0 Infrastructure

MSA has installed two physical non-HLAN imaged Windows Server 2016 (CCDAC Main/Failover) servers in a high-availability configuration. The CCDAC (Main) is located in the G4 datacenter, and the CCDAC (Failover) is located in 339a. Each server contains a SQL server database that is designed for high-availability and failover capability.

The CCDAC servers will connect to two non-HLAN imaged Windows Server 2016 servers (Channel Controllers A/B) located in 506BA, and three non-HLAN imaged Windows 10 machines (Guardians #1,#2,#3), located in MO-850, 274AW, and 2750E. The SCL-N's, which are USB-to-Network converters, forwards alerts from the Channel Controllers to the 506BA tower through the Redline system.

Change trailers will have large-format (> 50") monitors that will have the CCDAC CentrAlert NOW! pop-up program installed. The monitors were recently replaced to meet the Windows 10 project requirements.

Refer to Mod Traveler MT-50143 for documents associated with the ENS/PA system.

Tables 1-5 provide information on the associated infrastructure, speakers, PA Pole Redline devices, Kiosks, base radios (VHF), and message reader boards.

**NOTE**: Please note that the information provided by the tables and figures is at a snapshot in time and is provided for reference only. The ICD will not track changes to these tables and figures. For additional information, please contact MSA for current configuration, topology, and settings as well as documentation.

Table 1 - Infrastructure

HLAN Name	Common Name	VLAN	Physical Location
CentralAlert01.rl.gov	CDAC (Main)	HLAN-DC	G4
CentralAlert02.rl.gov	CDAC (Failover)	HLAN-DC	339A
CentralAlert03.rl.gov	Channel Controller A	HLAN-CAMPUS	506BA
CentralAlert04.rl.gov	Channel Controller B	HLAN-CAMPUS	506BA
J4N75F2.rl.gov	Remote Guardian #1	HLAN-CAMPUS	2750E
H8N75F2.rl.gov	Remote Guardian #2	HLAN-CAMPUS	274AW
D2N75F2.rl.gov	Remote Guardian #3	HLAN-CAMPUS	MO-850

Table 2 - PA Pole - Speaker/Redline Devices

VLAN	Name	Location	Sector Controller	Subscriber
HLAN-ICS	RDLA241-EN-YRT-101	A241-EN-YRT-101	RDL506BA-21E-01	21e-01
HLAN-ICS	RDLA241-EN-YRT-102	A241-EN-YRT-102	RDL506BA-21E-01	21e-01
HLAN-ICS	RDLAN241-EN-YRT-101	AN241-EN-YRT-101	RDL506BA-21E-02	21e-02
HLAN-ICS	RDLAN241-EN-YRT-102	AN241-EN-YRT-102	RDL506BA-21E-02	21e-02
HLAN-ICS	RDLAP241-EN-YRT-101	AP241-EN-YRT-101	RDL506BA-21E-01	21e-01
HLAN-ICS	RDLAP241-EN-YRT-102	AP241-EN-YRT-102	RDL506BA-21E-01	21e-01
HLAN-ICS	RDLAP241-EN-YRT-103	AP241-EN-YRT-103	RDL506BA-21E-01	21e-01
HLAN-ICS	RDLAW241-EN-YRT-101	AW241-EN-YRT-101	RDL506BA-21E-01	21e-01
HLAN-ICS	RDLAW241-EN-YRT-102	AW241-EN-YRT-102	RDL506BA-21E-01	21e-01
HLAN-ICS	RDLAX241-EN-YRT-101	AX241-EN-YRT-101	RDL506BA-21E-01	21e-01
HLAN-ICS	RDLAY241-EN-YRT-101	AY241-EN-YRT-101	RDL506BA-21E-01	21e-01
HLAN-ICS	RDLAZ241-EN-YRT-101	AZ241-EN-YRT-101	RDL506BA-21E-02	21e-02
HLAN-ICS	RDLAZ241-EN-YRT-102	AZ241-EN-YRT-102	RDL506BA-21E-02	21e-02
HLAN-ICS	RDLC241-EN-YRT-101	C241-EN-YRT-101	RDL506BA-21E-02	21e-02
HLAN-ICS	RDLC241-EN-YRT-102	C241-EN-YRT-102	RDL506BA-21E-02	21e-02
HLAN-ICS	RDLC241-EN-YRT-103	C241-EN-YRT-103	RDL506BA-21E-02	21e-02
HLAN-ICS	RDLWRPS-ME	WRPS-RDL-Mobile East	RDL506BA-21E-02	21e-02
HLAN-ICS	RDLWRPS-MW	WRPS-RDL-Mobile west	RDL506BA-21w-01	21w-01
HLAN-ICS	RDLSPARE	Spare	RDL506BA-21E-01	21e-01

VLAN	Name	Location	Sector Controller	Subscriber
HLAN-ICS	RDLB241-EN-EES-001	B241-EN-EES-001	RDL506BA-21E-01	21e-01
HLAN-ICS	RDLB241-EN-EES-002	B241-EN-EES-002	RDL506BA-21E-02	21e-02
HLAN-ICS	RDLB241-EN-EES-003	B241-EN-EES-003	RDL506BA-21E-01	21e-01
HLAN-ICS	RDLBX241-EN-EES-001	BX241-EN-EES-001	RDL506BA-21E-02	21e-02
HLAN-ICS	RDLBX241-EN-EES-002	BX241-EN-EES-002	RDL506BA-21E-01	21e-01
HLAN-ICS	RDLBX241-EN-EES-003	BX241-EN-EES-003	RDL506BA-21E-02	21e-02
HLAN-ICS	RDLBY241-EN-EES-001	BY241-EN-EES-001	RDL506BA-21E-02	21e-02
HLAN-ICS	RDLBY241-EN-EES-002	BY241-EN-EES-002	RDL506BA-21E-01	21e-02
HLAN-ICS	RDLT241-EN-EES-001	T241-EN-EES-001	RDL506BA-21W-01	21W-01
HLAN-ICS	RDLT241-EN-EES-002	T241-EN-EES-002	RDL506BA-21W-02	21W-02
HLAN-ICS	RDLT241-EN-EES-003	T241-EN-EES-003	RDL506BA-21W-02	21W-02
HLAN-ICS	RDLTX241-EN-EES-001	TX241-EN-EES-001	RDL506BA-21W-01	21W-01
HLAN-ICS	RDLTX241-EN-EES-002	TX241-EN-EES-002	RDL506BA-21W-02	21W-02
HLAN-ICS	RDLTX241-EN-EES-003	TX241-EN-EES-003	RDL506BA-21W-01	21W-01
HLAN-ICS	RDLTY241-EN-EES-001	TY241-EN-EES-001	RDL506BA-21W-01	21W-01
HLAN-ICS	RDLTY241-EN-EES-002	TY241-EN-EES-002	RDL506BA-21W-02	21W-02
HLAN-ICS	RDLS241-EN-EES-001	S241-EN-EES-001	RDL506BA-21W-01	21W-01
HLAN-ICS	RDLS241-EN-EES-002	S241-EN-EES-002	RDL506BA-21W-02	21W-02
HLAN-ICS	RDLSX241-EN-EES-001	SX241-EN-EES-001	RDL506BA-21W-01	21W-01
HLAN-ICS	RDLSX241-EN-EES-002	SX241-EN-EES-002	RDL506BA-21W-02	21W-02
HLAN-ICS	RDLSX241-EN-EES-003	SX241-EN-EES-003	RDL506BA-21W-01	21W-02
HLAN-ICS	RDLSY241-EN-EES-001	SY241-EN-EES-001	RDL506BA-21W-01	21W-01
HLAN-ICS	RDLSY241-EN-EES-002	SY241-EN-EES-002	RDL506BA-21W-02	21W-02
HLAN-ICS	RDLU241-EN-EES-001	U241-EN-EES-001	RDL506BA-21W-02	21W-02 21W-02
HLAN-ICS	RDLU241-EN-EES-002	U241-EN-EES-002	RDL506BA-21W-01	21W-02
HLAN-ICS	RDLU241-EN-EES-003	U241-EN-EES-003	RDL506BA-21W-02	21W-01

Table 3 - Kiosks

Location	Name
(Tank Farm Change	
Trailers)	
MO815	RDLM815-01
MO497	RDLM497-01
MO818	RDLM818-01
MO513	RDLM513-01
MO522	RDLM522-01
MO299	RDLM299-001
MO824	RDLM824-001
MO825	RDLM825-001
MO295	RDLM295-001
MO296	RDLM296-001
MO297	RDLM297-001
MO298	RDLM298-001
MO817	RDLM817-001
MO821	RDLM821-001

Table 4 - Base Radios VHF

Туре	Name	Physical Location
VHF Kenwood TK-2180	TF All Call 1	506BA
VHF Kenwood TK-2180	AAR 1	506BA
VHF CalAmp Guardian	Message Reader Board 1	506BA
VHF Kenwood TK-2180	TF All Call 2	506BA
VHF Kenwood TK-2180	AAR 2	506BA
VHF CalAmp Guardian	Message Reader Board 2	506BA

Table 5 – Message Reader Boards

MRB#	Radio #	Serial #	Output Pwr	Notes:
N/A (spare)	14	859556	1W	spare radio
East MRB1	17	859529	1W	Baltimore Ave N.
East MRB2	19	859520	1W	Baltimore Ave S.
East MRB3	16	859595	1W	8th Street
East MRB4	11	859430	1W	7th Street
East MRB5	12	862991	1W	
East MRB6	8	856487	1W	4th Street
East MRB7	7	859634	1 <b>W</b>	Canton Ave S.
506BA	1	859415	5W	Primary
506BA	2	835523	5W	Secondary
West MRB1	4	835634	1 <b>W</b>	23rd Street E.
West MRB2	5	862955	1 W	23rd Street W.
West MRB3	3	859376	1W	Camden Ave N. (Receive good but low Transmit power .5W)
West MRB4	18	859562	1W	Camden Ave S.
West MRB5	15	859505	1W	16th Street E.
West MRB6	9	859439	1W	16th Street W.
West MRB7	10	859517	1W	Cooper Ave
West MRB8	13	856439	1W	13th Street
West MRB9	6	859421	1 <b>W</b>	10th Street

## 4.0 Physical Security

2750E, 274AW, 200E and 200W are all located in the Central Plateau area, which requires passing a Hanford patrol security checkpoint.

WRPS Facilities Management provides the building administrator function responsible for physical access, keys, and proximity (prox) card access to all three locations.

All three buildings are protected by a combination of:

- Prox card access at the main entry point.
- Lock and key and/or Omni Locks on the individual rooms containing CCDAC CentrAlert equipment within the main building.
- Employee Challenge when occupied (Badge required to be worn).

All message reader board installations are protected by:

Physical key access provided by checkout at the WRPS Central Shift Office.

The CCDAC Channel Controllers exist in 506BA and are keyed access, currently controlled by MSA Infrastructure Services. They do not have a monitor, keyboard, or mouse attached. The CCDAC's that exist in G4 and 339A have Proxy card access.

## 5.0 Access Control

In order to access the CCDAC CentrAlert Guardian computer system, users will have to get permission from WRPS to get through the physical security controls in place for the Guardians. Since the Guardians are attached to the domain, users will authenticate to the workstation with their H-Account.

## 6.0 Software Configuration Management

The CCDACs Servers, CCDAC Guardians, and CCDAC Channel Controllers are joined to the Hanford domain and will use the HLAN systems and tools as defined in the Site Security Plan (SSP) to maintain proper configurations, patching, monitoring, authentication, authorization and logging of the servers. The tools and agents applied are consistent with the standards for all HLAN servers.

The SCL-N's, will require firmware updates in the future. The installation of these updates cannot be done remotely, and physical access is required for local installation.

WRPS is responsible for managing the CentrAlert application, patch updates in coordination with MSA personnel, and its users.

## 7.0 Connections

The Channel Controllers host two USB and one IP device each to push ESS, VHF, and UHF radio communications through fiber, twisted pair, and wireless (Red Line) connections to the transfer trailers located at each tank farm. In order for the CCDAC Servers and CCDAC Channel Controllers to communicate, a total of 2,000 TCP ports need to be open.

Three CCDAC Guardian workstations located in MO-850, 274AW, and 2750E will each have a microphone attached for alert and notification creation over the CentrAlert system. The Guardians are domain joined and have internet access.

- P2P file sharing is not being used.
- The system is not provided outside of the HLAN boundary. No external remote connections will be made.
- The configuration and connection to external information systems are not documented.
- Split tunneling will not be enabled.

## 8.0 Encryption and Accounts

- PIV Authentication with an HLAN user account will be required to access the CCDAC Guardian personal computers.
- There are no local accounts. All accounts are attached to the domain and require multifactor authentication.
- All web interface connections between the CCDAC Guardian personal computers and CCDAC servers will use TLS.

9.0 Authentication

- Two factor authentication is required to log onto the CCDAC Servers, CCDAC Channel Controllers, and CCDAC Guardian personal computers.
- Access to the CCDAC servers will be limited to authorized personnel via Chimera.
- Group Policy enforces obscured authentication feedback when authenticating to the CCDAC Guardian personal computers.
- All standard HLAN password complexity, change, and lockout requirements are enforced on all components via Group Policy.
- CCDAC Guardian personal computers, CCDAC Channel Controllers, and CCDAC Servers do not support any wireless protocols.
- A service on the CCDAC Server is required to run the CCDAC CentrAlert services. This service runs under 'local service' permissions.

## 10.0 Monitoring

Monitoring and alerting for the dedicated switch and RedLine devices will use the HLAN tools and systems as defined in the SSP. The NOC monitors for these alerts and will react according to written procedures for notifications and initiation of problem resolution.

See Figure 2 for the Factory Acceptance Test (FAT) Diagram (Vendor Provided). See Figure 3 for the system diagram.

CDAC (Main) CDAC (Auxiliary) E\$5.41 ESS.42 Sing Card Channel Controller Sna Card LAN / WAN Snd Card Mic #3 AC-2 VHF Radio - End Card Channel Controller B Mile #2 fird card pig mi LMR

KEY: N = ETHERNET CABLE A = AUDIO CABLE U = USB CABLE

WRPS/Hanford - FAT Diagram

EMAN

InFocus Display

Drawing Title

CentrAlert Mobile Ops Case

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Date

6/30/2017

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Figure 2 – WRPS/Hanford – FAT Diagram

Prepared By
K FINLEY

Trunk
Port

Trunk

Figure 3 – System Diagram

## 11.0 Future Enhancements

The WRPS CCDAC CentrAlert system may also be utilized eventually for site-wide alerts and notifications. To achieve this integration, CentrAlert has built-in device drivers for At Hoc (site's HLAN desktop emergency notification) and Whelen (site sirens) that would allow integration.

## 12.0 Administrative Interfaces

12.1 Permit Requirements, (If applicable)

Not applicable

12.2 Documentation Requirements

MOA between WRPS and MSA - MOA-00001

12.3 Authorization Basis Requirements

Not applicable

- 12.4 Integrated Safety Management Requirements
  - 12.4.1 Define Hazards that may interrupt TF-ENS integrity as it supports ongoing WRPS operations.

- Potential for less than low voltage (50 volts or less, low voltage in the Hanford Site lock and tag program).
- Potential for windblown debris (e.g. Tumbleweeds).
- Potential for biological vectors.
- Potential for overhead obstructions at reader boards and PA systems.
- Potential for network outage, radio outage, server patches, and down time.

## 12.4.2 Hazard Controls and Mitigation

MSA will monitor and work with WRPS personnel to rectify the above situations provided in section 12.4.1. WRPS and MSA will utilize company specific work control processes to address work related hazards associated with the TF-ENS.

- Perform Work –WRPS and MSA will utilize company specific work control processes to address work related hazards associated with the TF-ENS.
- Feedback Test network integrity after completion of work of specific work control processes to ensure network and radio communications are restored.
   Obtain WRPS feedback that no process impact occurred and record in the work closeout process.

#### 13.0 Access Control

For access control to each party's facilities:

- TF-ENS activities requested by WRPS within MSA controlled facilities will be processed through a request to the Network Operations Center (NOC) at 376-2902.
- TF-ENS access to WRPS facilities will be coordinated through the WRPS Central Shift Office at 373-2689 and P&CS Engineering system engineer.
- The point of contact for MSA IT Engineering is the design authority for the INFRA-ACCESS\_LAYER and/or INFRA-SC system. Complete listing of the design authorities can be found at: <a href="http://msc.ms.rl.gov/ims/page.cfm/FSA/MSAEngineeringOrganization">http://msc.ms.rl.gov/ims/page.cfm/FSA/MSAEngineeringOrganization</a>
- The point of contact for WRPS is the Production Operations Central Shift Office (CSO) and the WRPS Process & Control System Engineering and the WRPS Process Systems & Engineering Support Manager.
- Facility access requests should be made as early as possible to ensure appropriate resource scheduling can be met.
- Emergency requests should be identified as such, so that proper priority classification can be assigned.
- Each Party will use the applicable work release process of the facility in which work will be conducted.

## 14.0 Acceptance Criteria

Following any TF-ENS changes WRPS will test network integrity after completion of work to ensure communications are restored to MRB and ESS units by issuing a status update request. Success will permit the use of the TF-ENS for operations support to resume.

## 15.0 Quality Assurance (QA)

The Requesting Contractor will have the right to inspect and test all direct-funded services, at all places and times. Inspections and tests will not unduly delay the work, and the costs for related efforts are reimbursable by the Requesting Contractor.

## 16.0 Assumptions

- Neither party may change the others documentation.
- The party that discovers issues with the TF-ENS will communicate the issue(s) in a timely manner to key personnel in the event CCDAC has a disruption in service or failure.
- MSA will contact and verify with WRPS and CentrAlert® prior to installation and/or making changes to physical hardware for any of its appliances, servers, or firmware.

#### 17.0 Schedule

This ICD is provided to cover unscheduled system access and maintenance activities and provides the framework for notification of such work to each party affected, per MOA-00001.

## 18.0 Documentation of Configuration Management

WRPS and MSA will maintain updates to the documents listed in Table 6- Configuration Defining Documents in accordance with their respective configuration management procedures for engineering document change control. Both parties will coordinate with each other where changes are made which impact the other.

**Table 6 - Configuration Defining Documents** 

Table o Configuration Defining Detailed				
Org. A Responsibility	Document No.	Document Title		
WRPS	T1P152-PTD-001	T1P152, Public Address Systems for Event Notification – Vapor Response Action Project Turnover Document		
WRPS	T1P152-PTD-002	T1P152, Public Address Systems for Event Notification – Vapor Response Action Project Turnover Document		
WRPS	T1P152-PTD-002	T1P152, Public Address Systems for Event Notification – Vapor Response Action Project Turnover Document		

## 19.0 Interface Change Control

Draft or update the ICD in accordance with Interface Management procedure, TFC-BSM-CP\_CPR-C-17, using Attachment C as a format guide.

Release the approved ICD as an engineering document in accordance with TFC-ENG-DESIGN-C-25, Technical Document Control procedure.

## 20.0 ISSUES

N/A

## 21.0 REFERENCES

- 1) MSC CONTRACT NO. DE-AC06-09RL14728
- 2) WRPS CONTRACT NO. DE-AC27-08RV14800
- 3) MOA-00001, MOA between WRPS and MSA
- 4) TFC-BSM-CP\_CPR-C-17, Interface Management procedure
- 5) HNF-52725, Hanford Accreditation Boundary System Security Plan.