

VERIF. DATE: _____

INITIALS: _____

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DOCUMENT CATEGORY: <input type="checkbox"/> Administrative <input checked="" type="checkbox"/> Technical		
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NUCLEAR SAFETY REVIEW DOCUMENTATION: FRNP-22-0455-S	APPROVED BY/DATE (Signature on file): Bruce Ford, Environmental Remediation Manager 5/26/2022	
REQUIRED REVIEW DATE (or expiration date for temporary change): 3/13/2027	EFFECTIVE DATE: 6/22/2022	

REVISION/CHANGE LOG			
Revision/Change Letter	Description of Changes	Pages Affected	Date of Revision/Change
FR0	Initial Bluesheeting	All	10/20/2017
FR1	Non-Intent Revision to Incorporate Bluesheeting Changes and Update to Current Form	All	12/5/2017
FR2	General revision.	All	3/3/2021
FR2A	Update based on the removal of the stationary transfer pump from the NWPGS (see CAPA-003833 and AI-000616). Add clarifying language to improve usability. Updated related form (CP4-ER-0012-F07) and changed revision number from FR1 to FR2	3-7	5/26/2022
FRB	Periodic Review has been completed with no changes identified in procedure technical content. Nonintent changes have been incorporated per CP3-NS-2001. Date for review cycle has been reset.	All	3/13/2024

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1.0 PURPOSE AND SCOPE

1.1 Purpose

The objective of this procedure is to define the required equipment and action steps necessary to off-load Paducah Gaseous Diffusion Plant groundwater collected from sources other than the Northwest Plume Groundwater System (NWPGS) extraction wells.

1.2 Scope

This procedure applies to all activities associated with off-loading groundwater from portable tanks to holding tanks (i.e., equalization tank (F-001), settling tank (F-008)) or through the NWPGS sump (J-016).

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2.0 REFERENCES

2.1 Use References

- CP2-ER-0067, *Health and Safety Plan for the Paducah Plumes Operations and C-613 Sediment Basin Paducah, Kentucky*
- CP3-OP-0207, *Use of Procedures*
- CP3-SM-1101, *Work Package Development*
- CP4-ER-0017, *Northwest/Northeast Plume Daily Operational Data Collection and Maintenance*

2.2 Source References

- CP2-ER-0012, *Waste Management Plan for the Paducah Plume Operations at the Paducah Gaseous Diffusion Plant Paducah, Kentucky*
- Deleted Text
- DOE/LX/07-2469, *Operations and Maintenance Plan for the Northwest Plume Groundwater System Interim Remedial Action Plan at PGDP Paducah, Kentucky*
- JHA-10844, *Maintenance, Operations, and Testing for the Northwest and Northeast Plume and Water Treatment Operations*

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3.0 COMMITMENTS

None

4.0 PRECAUTION AND LIMITATIONS

4.1 Precautions

4.1.1 Deleted Text

4.1.2 Deleted Text

4.1.3 Overfilling the NWPGS facility sump can result in system alarm and system shut-down.

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4.2 Limitations

None

5.0 PREREQUISITES

- 5.1 Obtain the approval of the Pump and Treat Project Manager before executing this procedure.
- 5.2 Prior to performing the action steps identified in this procedure, users shall have reviewed this document based upon its Level of Use according to CP3-OP-0207, *Use of Procedures*.
- 5.3 Prior to performing the action steps identified in this procedure, the performer shall have completed the required applicable training.
- 5.4 Prior to using this procedure as a work control document, follow the requirements as defined in CP3-SM-1101, *Work Package Development* for the activities being performed.
- 5.5 Ensure that all waste water accepted at C-612 has a completed and signed CP3-WM-0022-F01, *Waste Water Discharge Approval Form* that covers the waste water being discharged prior to being introduced to the C-612 process system.

6.0 INSTRUCTIONS

6.1 Preparation Activities

Technician

NOTES:

In some cases, groundwater may be processed by the NWPGS through the NWPGS sump. The determination of whether the water will be processed through the NWPGS sump will be made by the Pump and Treat Project Manager (or designee) on a case-by-case basis. In these cases, steps that deal directly with the mobile tank unloading operation will **NOT** be executed.

The Record of Decision specifies that the NWPGS is intended to treat contaminated groundwater only.

Facility Manager/Designee

NOTES:

If the groundwater to be introduced has an associated CP3-WM-0022-F01, *Waste Water Discharge Approval Form*, **then** a CP4-ER-0012-F07, *Northwest Plume Groundwater System Groundwater Acceptance Form* is **NOT** required.

- 6.1.1 Review form CP4-ER-0012-F07, *C-612 Northwest Plume Groundwater System Groundwater Acceptance Form* or CP3-WM-0022-F01, *Waste Water Discharge Approval Form* to verify the water is acceptable for introduction into the treatment system.

- 6.1.2 Provide authorization to process the water at the NWPGS.

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NOTES:

The mobile tank unloading operation will change the steady-state volume of the equalization tank and could shut down the NWPGS.

J-003 refers to EW-232 and J-004 refers to EW-233. EW-232 and EW-233 are normally online. J-001 (EW-230) and J-002 (EW-231) are currently offline, but remain in standby mode.

Technician

- 6.1.3 Consult with the Pump and Treat Project Manager (or designee) to determine which well pump(s) (J-001, J-002, J-003, or J-004), if any, to shut down or throttle back.
- 6.1.4 Don the required Personal Protective Equipment (PPE).

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6.2 Accepting Water at C-612

Technician

- 6.2.1 Position the mobile tank at the overhead door entrance to the NWPGS.

NOTE:

The hose connection from the mobile tank should be within the containment berm inside the NWPGS, Building C-612.

- 6.2.2 **If** water does **NOT** need to be transferred to a holding tank as determined by the Facility Manager (or designee) **then** proceed to Step **6.2.6**.
- 6.2.3 Connect a flexible hose to the mobile tank and desired holding tank.
- 6.2.4 Off-load the mobile tank to the holding tank using a transfer pump.
- 6.2.5 **When** the mobile tank is empty **or** the holding tank is full, **then** perform the following:
 - A. Shut off the transfer pump.
 - B. Disconnect the flexible hose.
 - C. Drain the hose contents into the facility sump.
- 6.2.6 Drain directly into the facility sump for treatment.

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7.0 ACCEPTANCE CRITERIA

None

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8.0 POST PERFORMANCE WORK ACTIVITIES

8.1 Allow the hose contents to drain into the facility sump.

8.2 Apply hose discharge end and suction side end caps.

8.3 Return flexible hose to the proper storage location.

8.4 Deleted Text

8.5 If well pump(s) were shutdown or throttled back, **then** restart or readjust the appropriate well pump(s).

8.6 Deleted Text

9.0 RECORDS

9.1 Records Generated

The following records may be generated by this procedure:

CP4-ER-0012-F07, *C-612 Northwest Plume Groundwater System Groundwater Acceptance Form*

Forms are to be completed according to CP3-OP-0024, *Forms Control*.

9.2 Records Disposition

The records are to be maintained according to CP3-RD-0010, *Records Management Process*.

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Appendix A – Acronyms/Definitions

ACRONYMS

NWPGS – Northwest Plume Groundwater System

PPE – Personal Protective Equipment

DEFINITIONS

Technician - The person performing the technical aspects of this procedure. The person performing this work could have job functions including, but not limited to, the Operator or Maintenance Mechanic.

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