

## CHPRC ADMINISTRATIVE DOCUMENT PROCESSING AND APPROVAL

<b>DOCUMENT TITLE:</b> Hanford Well Maintenance and Inspection Plan, Previously BHI-01265, Revision 0	<b>OWNING ORGANIZATION/FACILITY:</b> S&GRP
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<b>Document Number:</b> HNF-56398	<b>Revision/Change Number:</b> 1
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**DOCUMENT ACTION** (Check One)  New  Revision  Cancellation

<b>RESPONSIBLE CONTACTS</b>	
Name	Phone Number
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Manager: Cherry, Mark J.	372-2200

**DOCUMENT CONTROL**

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**DOCUMENT REVISION SUMMARY**

NOTE: Provide a brief description or summary of the changes for the document listed.

<b>REVIEWERS</b>	
Name (print)	Others Organization
Oldham, Rick W	ENVIRONMENTAL PROTECTION
Kaas, Jadie	QUALITY SYSTEMS
Ruck, Fred A III	ENVIRONMENTAL PROTECTION
Hildebrand, R. Doug	DOE

<b>APPROVAL SIGNATURES</b>			RELEASE / ISSUE
<b>Author:</b>	Name: (Print) Cathel, Robert L.	Date 4/5/14	<div style="border: 1px solid red; width: 100%; height: 100%; position: relative;"> <span style="position: absolute; top: 0; right: 0; color: red;">Not Released into DMCS geb 4-10-14</span> </div>
<b>Responsible Manager:</b>	Name: (print) Cherry, Mark J.	Date 4-8-14	
<b>Other:</b>	Name: (print)	Date	

Date Received for Clearance Process (MM/DD/YYYY) <del>04/08/2014</del> <sup>geb</sup> 04/10/2014	<b>INFORMATION CLEARANCE FORM</b>																																										
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<b>E. Required Information (MANDATORY)</b> 1. Is document potentially Classified? <input checked="" type="radio"/> No <input type="radio"/> Yes <u>Cherry, Mark J</u> Manager Required (Print and Sign) If Yes _____ ADC Required (Print and Sign) <input type="radio"/> No <input type="radio"/> Yes Classified 2. Official Use Only <input checked="" type="radio"/> No <input type="radio"/> Yes Exemption No. _____ 3. Export Controlled Information <input checked="" type="radio"/> No <input type="radio"/> Yes OOU Exemption No. 3 4. UCNI <input checked="" type="radio"/> No <input type="radio"/> Yes 5. Applied Technology <input checked="" type="radio"/> No <input type="radio"/> Yes OOU Exemption No. 5 6. Other (Specify) _____	<b>7. Does Information Contain the Following:</b> a. New or Novel (Patentable) Subject Matter? <input checked="" type="radio"/> No <input type="radio"/> Yes If "Yes", OOU Exemption No. 3 If "Yes", Disclosure No.: _____ b. Commercial Proprietary Information Received in Confidence, Such as Proprietary and/or Inventions? <input checked="" type="radio"/> No <input type="radio"/> Yes If "Yes", OOU Exemption No. 4 c. Corporate Privileged Information? <input checked="" type="radio"/> No <input type="radio"/> Yes If "Yes", OOU Exemption No. 4 d. Government Privileged Information? <input checked="" type="radio"/> No <input type="radio"/> Yes If "Yes", Exemption No. 5 e. Copyrights? <input checked="" type="radio"/> No <input type="radio"/> Yes If "Yes", Attach Permission. f. Trademarks? <input checked="" type="radio"/> No <input type="radio"/> Yes If "Yes", Identify in Document. 8. Is Information requiring submission to OSTI? <input checked="" type="radio"/> No <input type="radio"/> Yes 9. Release Level? <input checked="" type="radio"/> Public <input type="radio"/> Limited																																										
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Approval by Direct Report to President (Speech/Articles Only) _____ (Print and Sign)																																											
<b>I. Reviewers</b> <table border="0" style="width:100%;"> <tr> <td style="width:15%;"></td> <td style="width:10%; text-align: center;">Yes</td> <td style="width:10%; text-align: center;">Print</td> <td style="width:45%;"></td> <td style="width:20%; text-align: center;">Signature</td> <td style="width:10%; text-align: center;">Public Y/N (If N, complete J)</td> </tr> <tr> <td>General Counsel</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td>Hatcher, Mel N</td> <td>per email 04/08/14 BL</td> <td style="text-align: center;">(Y) / N</td> </tr> <tr> <td>Office of External Affairs</td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> <td></td> <td></td> <td style="text-align: center;">Y / N</td> </tr> <tr> <td>DOE</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td>Hildebrand, R Doug</td> <td>per email 04/10/14 BL</td> <td style="text-align: center;">(Y) / N</td> </tr> <tr> <td>Other</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td>Oldham, Rick W</td> <td>per email 04/08/14 BL</td> <td style="text-align: center;">(Y) / N</td> </tr> <tr> <td>Other</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td>Kaas, Jadie L</td> <td>per email 04/10/14 BL</td> <td style="text-align: center;">(Y) / N</td> </tr> <tr> <td>Other</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td>Ruck, Fred A</td> <td>per email 04/08/14 BL</td> <td style="text-align: center;">(Y) / N</td> </tr> </table>		Yes	Print		Signature	Public Y/N (If N, complete J)	General Counsel	<input checked="" type="checkbox"/>		Hatcher, Mel N	per email 04/08/14 BL	(Y) / N	Office of External Affairs	<input type="checkbox"/>				Y / N	DOE	<input checked="" type="checkbox"/>		Hildebrand, R Doug	per email 04/10/14 BL	(Y) / N	Other	<input checked="" type="checkbox"/>		Oldham, Rick W	per email 04/08/14 BL	(Y) / N	Other	<input checked="" type="checkbox"/>		Kaas, Jadie L	per email 04/10/14 BL	(Y) / N	Other	<input checked="" type="checkbox"/>		Ruck, Fred A	per email 04/08/14 BL	(Y) / N	
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<b>J. Comments</b>  	<b>Information Clearance Approval</b> <div style="border: 1px solid green; padding: 5px; text-align: center; color: green; font-weight: bold;">       APPROVED        By GE Bratton at 10:10 am, Apr 10, 2014     </div> <div style="border: 1px solid blue; padding: 5px; text-align: center; color: blue; font-weight: bold; margin-top: 5px;">       Approved for Public Release;        Further Dissemination Unlimited     </div>																																										

## Dodge, Bonnie J

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**From:** Cathel, Robert L  
**Sent:** Tuesday, April 08, 2014 9:12 AM  
**To:** Dodge, Bonnie J  
**Subject:** RE: HNF-56398 Rev 1.docx

Bonnie,

I approve these changes. Thanks.

Bob

---

**From:** Dodge, Bonnie J  
**Sent:** Tuesday, April 08, 2014 9:10 AM  
**To:** Cathel, Robert L  
**Subject:** HNF-56398 Rev 1.docx

Approve changes. You can use this native file as you wish, I will start the clearance process.

B

## Dodge, Bonnie J

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**From:** Oldham, Richard W  
**Sent:** Tuesday, April 08, 2014 9:38 AM  
**To:** Dodge, Bonnie J  
**Subject:** Approve: Approval - HNF-56398 Revision 1

## Dodge, Bonnie J

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**From:** Kaas, Jadie L  
**Sent:** Thursday, April 10, 2014 7:59 AM  
**To:** Dodge, Bonnie J  
**Subject:** Approve: Approval - HNF-56398 Revision 1

## **Dodge, Bonnie J**

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**From:** Ruck, Fred A III  
**Sent:** Tuesday, April 08, 2014 9:46 AM  
**To:** Dodge, Bonnie J  
**Subject:** Approve: Approval - HNF-56398 Revision 1

## Dodge, Bonnie J

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**From:** Hildebrand, R D (Doug)  
**Sent:** Thursday, April 10, 2014 7:19 AM  
**To:** Dodge, Bonnie J; Kaas, Jadie L  
**Subject:** RE: Approval - HNF-56398 Revision 1

I approve this document.

Doug Hildebrand

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**From:** Dodge, Bonnie J  
**Sent:** Thursday, April 10, 2014 6:55 AM  
**To:** Hildebrand, R D (Doug); Kaas, Jadie L  
**Subject:** FW: Approval - HNF-56398 Revision 1  
**Importance:** High

I need this approval please. Doug, if you don't want to approve this document, please send me an email back.

*As always, thank you in advance*

*Bonnie Dodge*  
*Soil & Groundwater Remediation Project*



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*We shall never know all the good that a simple smile can do. Mother Teresa*

*The contents of this message may be personal and do not reflect the views or position of the U.S. Department of Energy or the Federal Government.*

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**From:** Dodge, Bonnie J  
**Sent:** Tuesday, April 08, 2014 9:31 AM  
**To:** Cherry, Mark J; Hatcher, Melvin N; Hildebrand, R D (Doug); Oldham, Richard W; Kaas, Jadie L; Ruck, Fred A III  
**Cc:** Cathel, Robert L  
**Subject:** Approval - HNF-56398 Revision 1

Please approve via voting buttons. Any questions, please contact Bob Cathel directly.

*As always, thank you in advance*

*Bonnie Dodge*

*Soil & Groundwater Remediation Project*



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*The contents of this message may be personal and do not reflect the views or position of the U.S. Department of Energy or the Federal Government.*

## **Dodge, Bonnie J**

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**From:** Hatcher, Melvin N  
**Sent:** Tuesday, April 08, 2014 9:52 AM  
**To:** Dodge, Bonnie J  
**Subject:** Approve: Approval - HNF-56398 Revision 1

# Hanford Well Maintenance and Inspection Plan

Previously BHI-01265, Revision 0

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

 **CH2MHILL**  
Plateau Remediation Company  
**P.O. Box 1600**  
**Richland, Washington 99352**



# Hanford Well Maintenance and Inspection Plan

## Previously BHI-01265, Revision 0

Document Type: PLAN      Program/Project: S&GRP

R. L. Cathel  
CH2M HILL Plateau Remediation Company

Date Published  
April 2014

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

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 **CH2MHILL**  
Plateau Remediation Company  
**P.O. Box 1600**  
**Richland, Washington 99352**

**APPROVED**

*By GE Bratton at 10:11 am, Apr 10, 2014*

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Release Approval

Date

**Approved for Public Release;  
Further Dissemination Unlimited**

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**Hanford Well Maintenance and Inspection Plan**  
**HNF-56398, Revision 1**  
**Previously BHI- 01265, Revision 0**

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**Terms**

<b>WAC</b>	<i>Washington Administrative Code</i>
<b>TSD</b>	treatment, storage, and disposal
<b>RCRA</b>	<i>Resource Conservation and Recovery Act of 1976</i>
<b>RCW</b>	<i>Revised Code of Washington</i>

**Hanford Well Maintenance and Inspection Plan**  
**HNF-56398, Revision 1**  
**Previously BHI- 01265, Revision 0**

**1.0 INTRODUCTION**

This document presents the well maintenance and inspection plan for use in supporting groundwater activities at the Hanford Site. Wells located across the Hanford Site are used by Site contractors for a variety of groundwater programs. As such, these wells require various types of inspections and/or maintenance during their lifecycles. The wells that must be maintained are defined in Section 2.0, “Requirements.”

**2.0 REQUIREMENTS**

*Washington Administrative Code (WAC) 173-160*, “Minimum Standards for Construction and Maintenance of Wells,” states “It is the responsibility of the resource protection well operator, resource protection well contractor and the property owner to take whatever measures are necessary to guard against waste and contamination of the groundwater resource.”

The provisions of the dangerous waste section of the *Resource Conservation and Recovery Act of 1976 Permit for the Treatment, Storage, and Disposal of Dangerous Waste at the Hanford Site* Permit are controlled by the “State of Washington Hazardous Waste Management Act of 1976” (RCW 70.105). Part II.F.2.a of (WA7890008967) states that “...the Permittees shall inspect the integrity of active resource protection wells as defined by WAC 173-160-030 subject to this Permit at least once every five (5) years.” Wells subject to the RCRA Permit requirements are defined as wells actively monitoring treatment, storage, and disposal (TSD) unit closures (in Part V of the Permit); TSD operating units (in Part III of the Permit); and TSD units undergoing post-closure/modified closure (Part VI of the Permit).

**3.0 SCHEDULE**

The list of RCRA wells to be considered for maintenance or inspection will be based on a review of information on the current wells. This review may include field sampling notations, previous inspection results, or other data collected during sampling of the wells. In addition, the installation date and/or location of a well will also be considered.

Well inspections, consistent with the requirements in permit condition II.F.2.a, will occur in 2015, and continue every 5 years after that. The schedule will accommodate changes that will occur with the addition of new wells, adjustments in the TSD unit closures, and wells that are no longer needed for monitoring.

**Hanford Well Maintenance and Inspection Plan**  
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**4.0 WELL INSPECTIONS**

Well inspections are conducted as an integral part of field maintenance activities. Inspections include visual examination of the well site, surface components of the well structure (e.g., barrier posts, concrete surface pad and seal, protective well casing, well cap), identification of equipment installed in the well, and where possible measurements of the depths to water and/or bottom of the well. Inspections are documented on field reports.

**5.0 WELL MAINTENANCE**

Based on review of the 5 year inspection results, or other evaluations such as field sampling notations, well sampling issues, etc., well maintenance for groundwater monitoring wells will be performed as needed. Well maintenance will include the following tasks, as necessary, to restore the well to its intended use:

1. Removing groundwater sampling pump system and/or aquifer testing instrumentation/equipment
2. Inspecting and repairing (or replacing, as necessary) the sampling pump system and/or aquifer testing instrumentation/equipment
3. Cleaning the well casing perforations
4. Inspecting and cleaning well screen or repair of well screen (if possible)
5. Removing debris and fill material
6. Performing borehole video camera surveillance
7. Re-installing sampling and/or aquifer testing instrumentation/equipment
8. Redeveloping the well after performing maintenance
9. Inspecting final conditions after well maintenance (e.g. cap is replaced, concrete surface pad integrity, lock is secure, etc.)
10. Documenting well conditions and maintenance activities

**Hanford Well Maintenance and Inspection Plan**  
**HNF-56398, Revision 1**  
**Previously BHI- 01265, Revision 0**

**6.0 REFERENCES**

[WA7890008967](#), 2007, *Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste*, as amended, Washington State Department of Ecology, Richland, Washington *Resource Conservation and Recovery Act of 1976*, [42 U.S.C. 6901, et seq.](#)

[RCW 70.105](#), “State of Washington Hazardous Waste Management Act of 1976, “*Revised Code of Washington*, as amended.

[WAC 173-160](#), “Minimum Standards for Construction and Maintenance of Wells,” *Washington Administrative Code*, as amended.

**7.0 BIBLIOGRAPHY**

DOE-RL, 1994, *Hanford Site Groundwater Management Program*, [DOE/RL-89-12](#), as amended, U.S. Department of Energy, Richland Operations Office, Richland, Washington.