



United States Government

Department of Energy

# memorandum

Carlsbad Field Office  
Carlsbad, New Mexico 88221

DATE: APR 26 2005  
REPLY TO  
ATTN OF: CBFO:OCT:KWW:GS:05-1046:UFC 5822.00  
SUBJECT: Expansion of Certified HSG Equipment at Hanford  
TO: Keith Klein, Manager, DOE-RL



As requested by the Hanford office, the Carlsbad Field Office (CBFO) has evaluated information provided by Hanford to certify an identical Headspace Gas (HSG) unit designated as VAP#4 (site equipment number HSGUS43110438). In addition, Hanford requested approval for the use of four new Agilent 3000 Micro GC instruments, designated by site equipment numbers US10432003, US10432004, US10432005, and US10432006 be approved for hydrogen and methane analysis for transportation purposes. Changes to the currently certified procedures used for these systems have been approved by CBFO: LA-523-410, Revision M-0, *Determination of Volatile Organic Compounds in TRU/mixed Waste Container Headspace*, was approved by CBFO on March 2, 2005 (CBFO:OCT:KWW:GS:05-0758:UFC 5822.00), and LA-523-426, Revision G-0, *Determination of Permanent Gases in TRU Waste Container Headspace*, was approved by CBFO on April 11, 2005 (CBFO:OCT:KWW:LR:05-1019:UFC:5822).

Based on the results of our evaluation, the VAP #4 unit is approved to be added to list of certified equipment at Hanford. In addition, the four new Agilent 3000 Micro GC instruments are approved for the sole purpose of hydrogen and methane analysis at Hanford. The attachment to this letter contains a complete list of the currently certified systems. Please note that since the four Agilent 3000 Micro GC instruments are not required to participate in the Performance Demonstration Plan (PDP) cycles, they will not be listed on the enclosed attachment.

Hanford may continue to ship debris waste (S5000), including the mixed oxide waste stream, for disposal at the WIPP using the currently approved processes, systems and procedures. No homogeneous solids (S3000) may be certified and shipped until the Environmental Protection Agency approves the acceptable knowledge and CBFO issues authority to resume shipments of S3000 waste.

TRU waste characterization, certification, or transportation using significantly revised or new processes, systems, or procedures must be evaluated by the CBFO prior to their implementation.

  
Ines Triay  
Acting Manager

Attachment

050434



Keith Klein

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cc: w/attachment

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CBFO M&RC

CTAC Document Control Coordinator

WIPP Operating Record, MS 486-06

## Hanford Certified Equipment List

WIPP #	Site Equipment Number	Title	Description	Components	Software
<b>Headspace Gas</b>					
2HG1	HSG US00033159	Hewlett Packard (Agilent) GC/MS (7)  (PDP ID – VAP#7, WC68672)	Gas Chromatograph/Mass Spectrometer – VOCs analysis  Procedure LA-523-410	<input type="checkbox"/> GC/MS (method described in procedure LA-523-410)	<input type="checkbox"/> EnvironQuant ChemStation G1701BA
2HG2	HSG US00032566	Hewlett Packard (Agilent) GC/MS (8)  (PDP ID – VAP#8, WC68671)	Gas Chromatograph/Mass Spectrometer – VOCs analysis  Procedure LA-523-410	<input type="checkbox"/> GC/MS (method described in procedure LA-523-410)	<input type="checkbox"/> EnvironQuant ChemStation G1701BA
2HG3	HSG S336A58373	Agilent GC/MS (6)  (PDP ID – VAP#6, WC80557)	Gas Chromatograph/Mass Spectrometer – VOCs analysis  Procedure LA-523-410	<input type="checkbox"/> GC/MS (method described in procedure LA-523-410)	<input type="checkbox"/> EnvironQuant ChemStation G1701DA
2HG4	HSG HSGUS43110438	Agilent GS/MC (4)  (PDP ID – VAP#4)	Gas Chromatograph/Mass Spectrometer – VOCs analysis  Procedure LA-523-410	<input type="checkbox"/> GC/MS (method described in procedure LA-523-410)	<input type="checkbox"/> EnvironQuant ChemStation G1701DA
<b>Non-destructive Assay</b>					
2SG1	PFP Room 170 SGSAS	PFP Room 170 SGSAS	PFP Room 170 Segmented Gamma Scan Assay System  Procedure ZA-948-385	<input type="checkbox"/> 2 HPGe detectors associated vertical drive and turntable  <input type="checkbox"/> 1 30% relative SEGe and BEGe detector	<input type="checkbox"/> Genie PC Software Suite, version 2.2 including Gamma Waste Assay Software (GWAS), v.2.3.a  <input type="checkbox"/> Multiple Group Analysis (MGA) v.9.5 CI  <input type="checkbox"/> PFPTMU  <input type="checkbox"/> Automated Independent Technical Review (AITR)
2SG2	PFP Room 172 SGSAS	PFP Room 172 SGSAS	PFP Room 172 Segmented Gamma Scan Assay System  Procedure ZA-948-392	<input type="checkbox"/> 1 coaxial detector  <input type="checkbox"/> 1 LEGe detector	<input type="checkbox"/> NDA-2000 Software, Version 3.1  <input type="checkbox"/> MGA v. 9.63B
2GE1	Canberra 104- ND-06-102A	GEA-A  (PDP ID – HA01/HAG1)	Gamma Energy Assay System Unit A  Methods: WRP1-OP-0906, WMP-350 Section 2.2	<input type="checkbox"/> GEA system consisting of: o 4 high resolution coaxial germanium detectors to detect the main spectrum of gamma radiation  o 2 high resolution planar germanium detectors to detect the low energy gamma spectra	<input type="checkbox"/> Genie PC Spectroscopy System Software, version 2.2  <input type="checkbox"/> Gamma Waste Assay Software (GWAS), v.2.3.a  <input type="checkbox"/> Multigroup Analysis Software (MGA) v.9.5

WIPP #	Site Equipment Number	Title	Description	Components	Software
2GE2	Canberra 104-ND-06-102B	GEA-B (PDP ID – HA02/HA-G2)	Gamma Energy Assay System Unit B  Methods: WRP1-OP-0906, WMP-350, Section 2.2	<input type="checkbox"/> GEA system consisting of: <ul style="list-style-type: none"> <li>o array of 4 high resolution coaxial germanium detectors to detect the main spectrum of gamma radiation</li> <li>o 2 high resolution planar germanium detectors to detect the low energy gamma spectra</li> </ul>	<input type="checkbox"/> Genie PC Spectroscopy System Software, version 2.2 <input type="checkbox"/> Gamma Waste Assay Software (GWAS), v.2.3.a <input type="checkbox"/> Multigroup Analysis Software (MGA) v.9.5
2CA1	ANTECH AR-1	AR-1	R-Series Calorimeter (Endpoint & Prediction Methods) Procedure ZA-948-393	<input type="checkbox"/> Air-bath calorimeter	MasterCAL Software, Version 9.1.3
2CA2	ANTECH AR-5	AR-5	R-Series Calorimeter (Endpoint, Prediction, & Equilibrium Methods) Procedure ZA-948-393	<input type="checkbox"/> Air-bath calorimeter	MasterCAL Software, Version 9.1.3
2CA3	ANTECH AR-8	AR-8	R-Series Calorimeter (Prediction & Equilibrium Methods) Procedure ZA-948-393	<input type="checkbox"/> Air-bath calorimeter	MasterCAL Software, Version 9.1.3
2CA4	ANTECH P-13	P-13	P-Series Calorimeter (Endpoint, Prediction, & Equilibrium Methods) Procedure ZA-948-393	<input type="checkbox"/> Air-bath calorimeter	MasterCAL Software, Version 9.1.3
2CA5	ANTECH P-14	P-14	P-Series Calorimeter (Endpoint & Equilibrium Methods) Procedure ZA-948-393	<input type="checkbox"/> Air-bath calorimeter	MasterCAL Software, Version 9.1.3
2CA6	ANTECH P-15	P-15	P-Series Calorimeter (Endpoint, Prediction, & Equilibrium Methods) Procedure ZA-948-393	<input type="checkbox"/> Air-bath calorimeter	MasterCAL Software, Version 9.1.3
2CA7	ANTECH Q-1	Q-1	Q-Series Calorimeter (Endpoint, Prediction, & Equilibrium Methods) Procedure ZA-948-393	<input type="checkbox"/> Air-bath calorimeter	MasterCAL Software, Version 9.1.3
2IP1	Pajarito 104-ND-06-101A	IPAN-A (PDP ID – HA03/HAN1)	Imaging Passive-Active Neutron System A  Methods: WRP1-OP-0905, WRP1-OP-0905, WMP-350 Section 2.2	Pajarito Scientific Corp. (now owned by BNFL) IPAN unit consisting of: <ul style="list-style-type: none"> <li><input type="checkbox"/> Shielded vault</li> <li><input type="checkbox"/> Zetatron Neutron Generator</li> <li><input type="checkbox"/> Multiple He<sup>3</sup> detector banks with Pulse Forming Networks</li> </ul>	KEH.exe Version 3.28 KEH.xls Version 1.1 KEH_A_AMX.xls v 4.0A KEH_A_PMX.xls v 4.1A KEH_A_TMU.xls v 1.0A

WIPP #	Site Equipment Number	Title	Description	Components	Software
2IP2	Pajarito 104-ND-06-101B	IPAN-B (PDP ID – HA04/HAN2)	Imaging Passive-Active Neutron System B  Methods: WRP1-OP-0905, WRP1-OP-0905, WMP-350 Section 2.2	Pajarito Scientific Corp. (now owned by BNFL) IPAN unit consisting of: <input type="checkbox"/> Shielded vault <input type="checkbox"/> Zetatron Neutron Generator <input type="checkbox"/> Multiple He <sup>3</sup> detector banks with Pulse Forming Networks	KEH.exe version 3.28 KEH.xls version 1.1 KEH_B_AMX.xls v 4.0B KEH_B_PMX.xls v 4.1B KEH_B_TMU.xls v 1.0B
<b>Non-destructive Examination</b>					
2RR1	104-ND-06-104A NDE-A	NDE-A	VJ Technology real-time radiography unit	VJ Technology RTR unit consisting of: <input type="checkbox"/> shielded vault <input type="checkbox"/> drum manipulator <input type="checkbox"/> 1 x-ray tube with diaphragm shutters <input type="checkbox"/> image intensifier <input type="checkbox"/> video camera and shutters <input type="checkbox"/> Linear Diode Array detector	None
2RR2	104-ND-06-104B NDE-B	NDE-B	VJ Technology real-time radiography unit  WRP1-OP-0908	VJ Technology RTR unit consisting of: <input type="checkbox"/> shielded vault <input type="checkbox"/> drum manipulator <input type="checkbox"/> 1 x-ray tube with diaphragm shutters <input type="checkbox"/> image intensifier <input type="checkbox"/> video camera and shutters <input type="checkbox"/> Linear Diode Array detector	None