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Document #: SD-WM-ATR-104

Title/Desc:

BREATHING AIR TRAILER ACCEPTANCE TEST REPORT

Pages: 45

500-10

FEB 12 1996

ENGINEERING DATA TRANSMITTAL

2. To: (Receiving Organization) Characterization Plant Engineering		3. From: (Originating Organization) Characterization Equipment Improvement		4. Related EDT No.: N/A	
5. Proj./Prog./Dept./Div.: Core Sampling Aux. Equipment		6. Cog. Engr.: J.L. Smalley		7. Purchase Order No.: 404883	
8. Originator Remarks: ETN-94-0023-G This Acceptance Test Report is transmitted for approval. The report documents compliance with specification WHC-S-0251 Rev.0.				9. Equip./Component No.: N/A	
				10. System/Bldg./Facility: 200 General	
11. Receiver Remarks:				12. Major Assm. Dwg. No.: N/A	
				13. Permit/Permit Application No.: N/A	
				14. Required Response Date: 5/12/95	

15. DATA TRANSMITTED								
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	(F) Approval Designator	(G) Reason for Transmittal	(H) Originator Disposition	(I) Receiver Disposition
1	WHC-SD-WM-ATR-104	N/A	0	Breathing Air Trailer Acceptance Test Report	SQ	1	1	1

16. KEY					
Approval Designator (F)		Reason for Transmittal (G)		Disposition (H) & (I)	
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)		1. Approval	4. Review	1. Approved	4. Reviewed no/comment
		2. Release	5. Post-Review	2. Approved w/comment	5. Reviewed w/comment
		3. Information	6. Dist. (Receipt Acknow. Required)	3. Disapproved w/comment	6. Receipt acknowledged

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)											
(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN	(G) Reason	(H) Disp.
+		Cog. Eng. J.L. Smalley	<i>J.L. Smalley</i>	2/6/96	57-12	Alois Kostelnik	<i>Alois Kostelnik</i>	6/14/95	57-12	1	1
+		Cog. Mgr. R.J. Blanchard	<i>R.J. Blanchard</i>	5/12/95	57-12	D.W. Hamilton	<i>D.W. Hamilton</i>	2/4/96	57-12	1	1
		QA J.J. Verderber	<i>J.J. Verderber</i>	5/7-07							
		Safety O.M. Jaka	<i>O.M. Jaka</i>	5/22/95							
		Env. N/A									
		Core Sampling Cog. A.P. Mousley	<i>A.P. Mousley</i>	5/7-12							
		Core Sampling Cog. Mgr. J.S. Schfield	<i>J.S. Schfield</i>	6/11/95	57-12						

all 26

18. Signature of EDT Originator <i>Alois Kostelnik</i> Signature of EDT Originator		19. Authorized Representative Date for Receiving Organization <i>T.D. Jarecki</i> Authorized Representative Date for Receiving Organization		20. Cognizant Manager Date <i>J.S. Schfield</i> Cognizant Manager Date		21. DOE APPROVAL (if required) Ctrl. No. <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/comments <input type="checkbox"/> Disapproved w/comments	
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BREATHING AIR TRAILER ACCEPTANCE TEST REPORT

ALOIS J. KOSTELNIK

WESTINGHOUSE HANFORD COMPANY, Richland, WA 99352
 U.S. Department of Energy Contract DE-AC06-87RL10930

EDT/ECN: 612069 UC: 2070
 Org Code: 75230 Charge Code: N4H2B
 B&R Code: E203120074 Total Pages: 43

Key Words: ETN-94-0023-G, Core Sampling, Breathing Air, Specification WHC-S-0251, Trailer, American Bristol, Air Compressor, Purchase Order 404883, Core Sampling Ancillary Equipment, Portable Breathing Air Supply

Abstract: This Acceptance Test Report documents compliance with the requirements of specification WHC-S-0251, Rev.0 and ECNs 613530 and 606113. The equipment was tested according to WHC-SD-WM-ATP-104. The equipment tested is a Breathing Air Supply Trailer purchased as a design and fabrication procurement activity. The ATP was written by the Seller and was performed by the Seller with representatives of the Westinghouse Hanford Company witnessing portions of the test at the Seller's location.

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Kara J. Broe
 Release Approval

2/12/96
 Date

DATE:	KEYWORD:	3
STA: 4	RELEASE:	
FEB 12 1996		ID:

Release Stamp

Approved for Public Release

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APPENDIX B (ATP results for Breathing Air Trailer SN 9R90602-9)	Page B1
APPENDIX C (NEC Inspection Results)	Page C1
APPENDIX D (Receipt Inspection Report)	Page D1

SUMMARY

The test was performed at American Bristol Inc. in Harbor City, CA. The Breathing Air Trailers were inspected by WHC for general operability requirements, labeling, suspect fasteners, and finish. A WHC electrical inspector performed an inspection for compliance with the National Electric Code.

The equipment was unsuccessful at achieving the specified operational requirements while WHC representatives were present. The major discrepancies which were identified while WHC personnel were present are as follows. The reserve air capacity was limited by an undersized pressure regulator valve which caused a flow restriction. The air dryer was not able to achieve the dewpoint requirements because it had not been operating long enough to dry the desiccant. Air samples could not be taken because the dewpoint was too high and the air would not have met the Grade D breathing air requirements. Other portions of the testing could not be completed while WHC was present due to time limitations.

American Bristol Inc. completed the Acceptance Test without WHC representatives present. An air sample was taken from the system and sent to an independent lab for testing. The air sample meets the requirements for Grade D air. The system will be sampled and tested on site by the Hanford Environmental Health Foundation for Grade D air quality prior to use. The reserve air system was redesigned with a larger pressure regulator which does not restrict the flow.

The Acceptance Test results, including the Air Quality Report from Trace Analytics, for Breathing Air Trailer SN 9R940601-8 are in Appendix A. The Acceptance Test results for Breathing Air Trailer SN 9R90602-9 are in Appendix B. The NEC Inspection Result Memo for both units is in Appendix C. The Receipt Inspection Report is in Appendix D.

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SEP 14 1994

ENGINEERING DATA TRAN

2. To: (Receiving Organization) Core Sampling	3. From: (Originating Organization) Characterization Equipment	4. Related EDT No.: N/A
5. Proj./Prog./Dept./Div.: Core Sampling Aux. Equipment	6. Cog. Engr.: J.L. Smalley	7. Purchase Order No.: 404883
8. Originator Remarks: ETN-94-0023-G This Acceptance Test Procedure is transmitted for approval. The procedure was prepared by the Seller and will be performed at the Sellers location. It will show compliance with specification WHC-S-0251 Rev.0.		9. Equip./Component No.: N/A
11. Receiver Remarks:		10. System/Bldg./Facility: 200 General
		12. Major Assm. Dwg. No.: N/A
		13. Permit/Permit Application No.: N/A
		14. Required Response Date: 9/9/94

15. DATA TRANSMITTED					(F)	(G)	(H)	(I)
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	Approval Designator	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	WHC-SD-WM-ATP-104	N/A	0	Breathing Air Trailer Acceptance Test Procedure	SQ	1	1	1

16. KEY			
Approval Designator (F)	Reason for Transmittal (G)		Disposition (H) & (I)
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)	1. Approval	4. Review	1. Approved
	2. Release	5. Post-Review	2. Approved w/comment
	3. Information	6. Dist. (Receipt Acknow. Required)	3. Disapproved w/comment
			4. Reviewed no/comment
			5. Reviewed w/comment
			6. Receipt acknowledged

(G)	(H)	17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)				(G)	(H)
Reason	Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	Reason	Disp.
/	/	Cog. Eng. J.L. Smalley	<i>J.L. Smalley</i>	9/13/94	RI-17		
/	/	Cog. Mgr. R.J. Blanchard	<i>J.L. Smalley FOR</i>	9/13/94	RI-17		
/	/	QA J.J. Verderber	<i>J.J. Verderber</i>	9/14/94	SI-57		
/	/	Safety O.M. Jave	<i>M.E. Jave</i>	9-14-94			
		Env. N/A					
/	/	Core Sampling Cog. A.P. Mousel	<i>A.P. Mousel</i>	9/14/94			
		Centra/ Files			LR-04		

18. Signature of EDT Originator <i>A.J. Kostelnik</i> Date: 9-6-94	19. Authorized Representative for Receiving Organization <i>A.P. Mousel</i> Date: 9/14/94	20. Cognizant Manager <i>R.J. Blanchard</i> Date: 9/14/94	21. DOE APPROVAL (if required) Ctrl. No. <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/comments <input type="checkbox"/> Disapproved w/comments
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RELEASE AUTHORIZATION

Document Number: WHC-SD-WM-ATP-104, REVISION 0

Document Title: Breathing Air Trailer Acceptance Test Procedure

Release Date: 09/14/94


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**This document was reviewed following the
procedures described in WHC-CM-3-4 and is:**

APPROVED FOR PUBLIC RELEASE

* * * * *

WHC Information Release Administration Specialist:


Kara Broz

(Signature)

09/14/94

(Date)

SUPPORTING DOCUMENT

2. Title

Breathing Air Trailer Acceptance Test Procedure

WHC-SD-WM-ATP-104

0

5. Key Words

ETN-94-0023-G, Core Sampling, Breathing Air, Specification WHC-S-0251, Trailer, American Bristol, Air Compressor, Purchase Order 404883, Core Sampling Auxiliary Equipment, Portable Breathing Air Supply

6. Author

Name: Alois J Kostelnik

Signature

Organization/Charge Code 7EA40/N457D

APPROVED FOR

7. Abstract

3/14/94

PUBLIC RELEASE

This Acceptance Test Procedure (ATP) will document compliance with the requirements of WHC-S-0251 Rev.0 and ECNs 613530 and 606113. The equipment being tested is a Breathing Air Supply Trailer purchased as a Design and Fabrication procurement activity. The ATP was written by the Seller and will be performed by the Seller with representatives of the Westinghouse Hanford Company witnessing the test at the Seller's location.

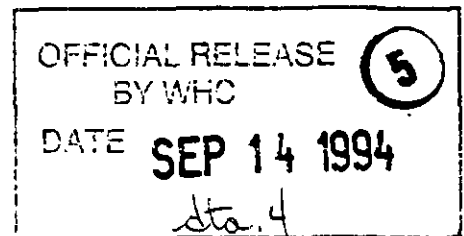
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10.

RELEASE STAMP



9. Impact Level SQ

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ACCEPTANCE TEST PROCEDURE
MOBILE BREATHING AIR TRAILER
MODEL 5014-0001

WRITTEN BY *Bob Jacobson* DATE *8/23/94*
BOB JACOBSON
PRODUCT ENGINEER

APPROVED BY *Charles Lamoreaux* DATE *8/23/94*
CHARLES LAMOREAUX
PRESIDENT

1.0 SCOPE

This test procedure is to verify that the American Bristol Industries, Inc., Model 5014-0001 low pressure Mobile Breathing Air Trailer, meets or exceeds the requirements of the Westinghouse Hanford specification. (WHC-S-0251)

2.0 SEQUENCE

ABI will complete the following tests in the order deemed best by ABI personnel.

3.0 VISUAL INSPECTION

Visually inspect the unit to verify that it complies with the requirements of the purchase specification. Record the pertinent data on the data sheets provided.

3.1 Visually inspect the unit for:

- 3.1.1 Damage.
- 3.1.2 Cleanliness; no weld spatter; no foreign materials.
- 3.1.3 Uniformity of finish: no bubbles, chips, scratches.
- 3.1.4 All wiring and plumbing secured in place.
- 3.1.5 All wiring undamaged, connections tight.
- 3.1.6 All wires tagged.
- 3.1.7 All major components tagged with manufacturers' nameplates.
- 3.1.8 ABI nameplate stamped & installed.
- 3.1.9 VIN number stamped on unit.
- 3.1.10 All ground wires properly connected.
- 3.1.11 Verify that lunette eye ID is 2.75 inches minimum.

4.0 OPERATIONAL INSPECTIONS

4.1 Break-in Inspections

- 4.1.1 Verify incoming power at the magnetic starter.
- 4.1.2 Verify proper compressor rotation before starting break-in procedures.

- 4.1.3 Operate each unit in accordance with the break-in schedule table on the data sheets. Record the start up current and the running current.
- 4.1.4 During break-in, carefully observe the unit for any evidence of excessive vibration, excessive heat, strange noises, odors, etc., loose components, interferences between components and leakages. Correct as required.
- 4.2 Leak Test
 - 4.2.1 Upon completion of the break-in test, shut the system down with the rated pressure trapped in the system. Bubble test all fittings, joints, valve stems, burst discs, etc. for any evidence of leakage. Correct as required. (Working pressure 80-125 psig)
 - 4.2.2 Attach hose and manifold to system and pressurize to working pressure. Bubble test all joints for any evidence of leakage. Correct as required.
- 4.3 Relief Valve Test
 - 4.3.1 With the unit running, activate all relief valves to verify each valve will flow.
 - 4.3.2 Verify each relief valve reseats and does not leak.
- 4.4 Condensate Drain Test
 - 4.4.1 With the unit running, verify that there are no leaks in the automatic condensate drain system by immersing the drain tube in water and observe any leakage. Correct as required.
 - 4.4.2 Record the time between dump cycles and the duration of the dump.
 - 4.4.3 Allow the system to shut off automatically. Verify that the dump valves open and that the compressor continues to run in its cool down mode. Record the time of the cool down run.
 - 4.4.4 Close the interstage and filter manual drain valves. Bring the system up to pressure and shut off. Observe for leakage by immersing the drain tube in water.
- 4.5 Compressor Operational Test
 - 4.5.1 Measure compressor output per standard practice sheet or by use of a pressure gauge and a flow meter. Record the data.

- 4.5.2 Record the rotational speed of the compressor.
- 4.5.3 Record the temperature of the air receiver at its discharge while flowing air at rated pressure and flow.
- 4.5.4 Take an air sample in accordance with the sampling company's procedures and ship the sample for analysis.
- 4.5.5 Shut down the system and allow it to cool to room temperature. After it has cooled down, run it again for 5 minutes with the intercooler drains open to remove any additional condensation.

4.6 Monitor / Controller Operational Test

- 4.6.1 Verify that the Automatic start/stop function operates.
- 4.6.2 Verify that the Manual start/stop function operates.
- 4.6.3 Verify that the high temperature stop operates properly.
- 4.6.4 Verify that the low oil stop operates properly.
- 4.6.5 Verify that the high CO portion of the monitor operates in accordance with its manual. (Set at 10ppm and 25ppm)
- 4.6.6 Verify that the high dew point portion of the monitor operates in accordance with its manual.
- 4.6.7 Verify the low pressure sensor actuates the reserve air supply. (and there is adequate supply for 5 minutes.)
- 4.6.8 Verify that the audio/visual alarms function whenever any of the above safety features are actuated.

4.7 Filters, Dryer, and Chiller Operation

- 4.7.1 Verify that the filters have the correct elements installed.
- 4.7.2 Verify that the swing dryer has the correct chemicals installed and that it functions in accordance with its operating manual.
- 4.7.3 Verify that the chiller functions in accordance with its operating manual.

5.0 POST OPERATIONAL CHECKOUTS

- 5.1 Verify all tires are at recommended inflation pressure
- 5.2 Set the parking brake. Verify that the parking brakes hold by pushing / pulling the unit. The wheels should skid instead of rolling. Adjust as required.

- 5.3 Verify the surge brakes actuate by towing the unit and applying the brakes. The unit should not push the tow vehicle nor fish tail. Adjust as required.
- 5.4 Verify that the compressor oil level is full.
- 5.5 Verify that the surge brake system is full of brake fluid.
- 5.6 Record final hour meter reading.
- 5.7 Verify that all components are securely mounted.
- 5.8 Verify that the cable reel fully extends and retracts.
- 5.9 Verify that the main landing jack and leveling jacks extend and retract and that the leveling jacks pivot and lock out of the way.
- 5.10 Verify that all DOT lights are functional.
- 5.11 Verify that the brake lights, back up lights and turn signals are functional.

ACCEPTANCE TEST PROCEDURE WORK SHEET

Order # 11234 CUSTOMER: WESTINGHOUSE HAWKOP 9/20/94
 Model # 5014-0001 Serial # 9R940601-8
 Configuration: LP MACT JAN 137 #1
 OPERATOR: _____ INSPECTOR: Gaylord Poed

NO.	TEST DESCRIPTION	INITIALS																																																																														
	COMPRESSOR Make: <u>AERQUIW</u> Model: <u>JAN 137</u> S/N: <u>940601</u> CFM: <u>90</u> PSI: <u>200</u>																																																																															
	MOTOR Make: <u>LINCOLN</u> Model: <u>PART WINDING</u> S/N: <u>41940818264</u> HP: <u>30</u> RPM: <u>1760</u> Volts: <u>460V</u> Phase: <u>3</u> Hz: <u>60</u>																																																																															
	ENGINE Make: _____ Model: _____ S/N: <u>N/A</u> HP: _____ RPM: _____																																																																															
	DRYER <u>948079</u> Make: <u>STUART</u> Model: <u>HL-100</u> S/N: <u>16523J</u> CFM: <u>100</u> PSI: <u>150</u>																																																																															
	CHILLER Make: <u>JENI LAKES</u> Model: <u>GRF-100</u> S/N: <u>16523J</u> CFM: <u>100</u> PSI: <u>150</u> Volts: <u>460AC</u> Phase: <u>3</u> Hz: <u>60</u> S/N: _____ Make: _____ Model: _____ CFM: _____ PSI: _____																																																																															
	DRIVE SYSTEM All belts tight? Yes <input checked="" type="checkbox"/> (1/64" per inch of span) <u>✓</u> All pulleys aligned? Yes <input checked="" type="checkbox"/>																																																																															
	FILTER SYSTEM Model No <u>1055 RGD</u> CFM: <u>100</u> PSI: <u>150</u>																																																																															
	<table border="1"> <thead> <tr> <th>Chamber No</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td>S/N:</td> <td><u>ED68712</u></td> <td><u>13009R</u></td> <td><u>13509R</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Logged?</td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> </tr> <tr> <td>Element p/n:</td> <td><u>607570</u></td> <td><u>3CB/3RB</u></td> <td><u>6075700</u></td> <td></td> <td></td> </tr> <tr> <td>Element type:</td> <td><u>COALCO3</u></td> <td><u>C-AC</u></td> <td><u>PARTIC</u></td> <td></td> <td></td> </tr> <tr> <td>Element sealed:</td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> </tr> <tr> <td>Element installed:</td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> </tr> <tr> <td>Chamber backed off:</td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> </tr> <tr> <td>Burst disk PSI:</td> <td><u>N/A</u></td> <td><u>NA</u></td> <td><u>N/A</u></td> <td></td> <td></td> </tr> <tr> <td>Drain Valve Ops</td> <td>OK <input checked="" type="checkbox"/></td> <td>OK <input checked="" type="checkbox"/></td> <td>OK <input checked="" type="checkbox"/></td> <td>OK <input type="checkbox"/></td> <td>OK <input type="checkbox"/></td> </tr> <tr> <td>ID Tag typed & on:</td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> </tr> <tr> <td>Relief Valve Installed:</td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> </tr> <tr> <td>Check Valve Installed:</td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> </tr> </tbody> </table>	Chamber No	1	2	3	4	5	S/N:	<u>ED68712</u>	<u>13009R</u>	<u>13509R</u>	<u>N/A</u>	<u>N/A</u>	Logged?	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Element p/n:	<u>607570</u>	<u>3CB/3RB</u>	<u>6075700</u>			Element type:	<u>COALCO3</u>	<u>C-AC</u>	<u>PARTIC</u>			Element sealed:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Element installed:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Chamber backed off:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Burst disk PSI:	<u>N/A</u>	<u>NA</u>	<u>N/A</u>			Drain Valve Ops	OK <input checked="" type="checkbox"/>	OK <input checked="" type="checkbox"/>	OK <input checked="" type="checkbox"/>	OK <input type="checkbox"/>	OK <input type="checkbox"/>	ID Tag typed & on:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Relief Valve Installed:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Check Valve Installed:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	
Chamber No	1	2	3	4	5																																																																											
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Logged?	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>																																																																											
Element p/n:	<u>607570</u>	<u>3CB/3RB</u>	<u>6075700</u>																																																																													
Element type:	<u>COALCO3</u>	<u>C-AC</u>	<u>PARTIC</u>																																																																													
Element sealed:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>																																																																											
Element installed:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>																																																																											
Chamber backed off:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>																																																																											
Burst disk PSI:	<u>N/A</u>	<u>NA</u>	<u>N/A</u>																																																																													
Drain Valve Ops	OK <input checked="" type="checkbox"/>	OK <input checked="" type="checkbox"/>	OK <input checked="" type="checkbox"/>	OK <input type="checkbox"/>	OK <input type="checkbox"/>																																																																											
ID Tag typed & on:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>																																																																											
Relief Valve Installed:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>																																																																											
Check Valve Installed:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>																																																																											
	INLET FILTER Installed: Yes <input checked="" type="checkbox"/> Element Installed Yes <input checked="" type="checkbox"/>																																																																															
	STORAGE SYSTEM P/n <u>R230230</u> ASME <input checked="" type="checkbox"/> DOT <input type="checkbox"/> Qty <u>2</u> Psi <u>200</u> Size <u>30 GAL</u> S/N's: #1 <u>238258</u> #2 <u>236319</u> #3 _____ #4 _____																																																																															
	Relief Valve Installed: Yes <input checked="" type="checkbox"/> Psi Setting: <u>200</u> Qty <u>2</u> Psi Setting: <u>200</u> Wired: Yes <input checked="" type="checkbox"/> Drain Valve Installed: Yes <input checked="" type="checkbox"/> Qty <u>2</u>																																																																															

ACCEPTANCE TEST PROCEDURE WORK SHEET

Order # 11234 CUSTOMER: WESTINGHOUSE HANFORD 9/20/74
 Model # 5014-0001 Serial # 92940601-8 41
 Configuration: LP HACE JAN 137
 OPERATOR: _____ INSPECTOR: CHYLAND T2304

NO.	TEST DESCRIPTION	INITIALS																																				
3.0.	VISUAL EXAMINATION																																					
3.1.1	No damage:	<u>MP</u>																																				
3.1.2	Clean, no weld spatter, foreign material:	<u>MP</u>																																				
3.1.3	Finish : Uniform, no bubbles, chips nor scratches	<u>MP</u>																																				
3.1.4	Wiring & plumbing secured:	<u>MP</u>																																				
3.1.5	No damage to wires, All connections tight & in place:	<u>MP</u>																																				
3.1.6	All wires tagged	<u>MP</u>																																				
3.1.7	All major components tagged with mfg'r's nameplates:	<u>MP</u>																																				
3.1.8	ABI nameplate stamped & installed:	<u>MP</u>																																				
3.1.9	VIN number stamped on unit No: <u>1A9CM2229RA079112</u>	<u>MP</u>																																				
3.1.10	All wires grounded:	<u>MP</u>																																				
3.1.11	Lunette eye ID > 2.75 inches <u>3 in</u>	<u>MP</u>																																				
4.0.	OPERATIONAL INSPECTIONS AND TESTS																																					
4.1	Break In Inspections																																					
4.1.1	Voltage: *460(230)VAC <u>461</u> Current: <u>N/A</u>	<u>MP</u>																																				
4.1.2	Proper Rotation: (CCW)																																					
4.1.3	Operate each unit according to the following table and record start up and running current																																					
	<table border="1"> <thead> <tr> <th>Motor</th> <th>Engine</th> <th>Speed</th> <th>Load</th> <th>Start Up Current</th> <th>Running Current</th> </tr> </thead> <tbody> <tr> <td>30 Min</td> <td></td> <td>Rated</td> <td>Low</td> <td><u>220</u></td> <td><u>38</u></td> </tr> <tr> <td>3-4 Hrs.</td> <td></td> <td>Rated</td> <td>Rated</td> <td><u>---</u></td> <td><u>38</u></td> </tr> <tr> <td></td> <td>15-30 Min</td> <td>Fast Idle</td> <td>Min</td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td></td> <td>1 Hr</td> <td>Rated</td> <td>Light-Med</td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td></td> <td>2-3 Hrs</td> <td>Rated</td> <td>Rated</td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </tbody> </table>	Motor	Engine	Speed	Load	Start Up Current	Running Current	30 Min		Rated	Low	<u>220</u>	<u>38</u>	3-4 Hrs.		Rated	Rated	<u>---</u>	<u>38</u>		15-30 Min	Fast Idle	Min	<u>N/A</u>	<u>N/A</u>		1 Hr	Rated	Light-Med	<u>N/A</u>	<u>N/A</u>		2-3 Hrs	Rated	Rated	<u>N/A</u>	<u>N/A</u>	<u>MP</u>
Motor	Engine	Speed	Load	Start Up Current	Running Current																																	
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	2-3 Hrs	Rated	Rated	<u>N/A</u>	<u>N/A</u>																																	
4.1.4	Observe unit for:																																					
	Excessive heat	<u>OK</u>																																				
	Strange noises	<u>NONE</u>																																				
	Strange odors	<u>NONE</u>																																				
	Other	_____																																				
	Vibration	<u>OK</u>																																				
4.2	Leak Test																																					
4.2.1	No leaks in system <u>BUBBLE LEAKS ONLY</u>	<u>MP</u>																																				
4.2.2	No leaks in hoses	<u>MP</u>																																				
4.3	Relief Valve Test																																					
4.3.1	Activate all relief valves	<u>MP</u>																																				
4.3.2	All relief valves reset	<u>MP</u>																																				
	<table border="1"> <thead> <tr> <th></th> <th>6</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td>4.3.1</td> <td><u>✓</u></td> <td><u>✓</u></td> <td><u>✓</u></td> <td><u>✓</u></td> <td><u>✓</u></td> <td><u>✓</u></td> </tr> <tr> <td>4.3.2</td> <td><u>✓</u></td> <td><u>✓</u></td> <td><u>✓</u></td> <td><u>✓</u></td> <td><u>✓</u></td> <td><u>✓</u></td> </tr> </tbody> </table>		6	1	2	3	4	5	4.3.1	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	4.3.2	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>MP</u>															
	6	1	2	3	4	5																																
4.3.1	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>																																
4.3.2	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>																																
4.4	Condensate Drain Test																																					
4.4.1	Does not leak during operation <u>✓</u>	<u>MP</u>																																				
4.4.2	Time between dump cycles <u>3 MIN</u> Duration of dump <u>20 SEC</u>	<u>MP</u>																																				
4.4.3	Verify dumps open during Cool Down & Purge <u>✓</u> Time <u>2 MIN</u>	<u>MP</u>																																				
4.4.4	Does not leak after shut off <u>1</u> <u>YES</u>	<u>MP</u>																																				
	<u>PLUGGED AND GRADED</u>																																					

ACCEPTANCE TEST PROCEDURE WORK SHE

Order # 11234 CUSTOMER: WESTINGHOUSE HARROW 7/10/17
 Model # 5014-0001 Serial # 9R940601-8 #1
 Configuration: LP MACE JAN 137
 OPERATOR: _____ INSPECTOR: GAYLORD R. SOO

NO.	TEST DESCRIPTION	INITIALS
4.5	Compressor Operational Test	
4.5.1	Measure Output <u>N/A</u> minutes to fill a <u>N/A</u> cubic feet vessel to <u>N/A</u> psi FAB = <u>82</u> SCFM @ <u>100</u> PSI	<u>MS</u>
4.5.2	Compressor <u>588</u> RPM	<u>MS</u>
4.5.3	Temperature <u>282</u> F	<u>MS</u>
4.5.4	Take Air Sample <u>YES</u> Results <u>SEE TEST ANALYSIS SHEET</u>	<u>MS</u>
4.5.5	After cool down to room temp run for 5 minutes with drains open	<u>MS</u>
4.6	Monitor / Controller Operational Test	
4.6.1	Auto start / stop	<u>MS</u>
4.6.2	Manual start / stop	<u>MS</u>
4.6.3	High temperature stop <u>350-R</u>	<u>MS</u>
4.6.4	Low oil stop	<u>MS</u>
4.6.5	Hi CO operation <u>10ppm</u> ✓ <u>25ppm NO SOURCE AVAILABLE</u>	<u>MS</u>
4.6.6	Hi dew point operation	<u>MS</u>
4.6.7	Low air pressure sensor operation and 5 minutes reserve air available.	<u>MS</u>
4.6.8	Audio / Visual alarm functions with all of the above	<u>MS</u>
4.7	Filters, Dryer and Chiller Operation	
4.7.1	Correct filter elements installed	<u>MS</u>
4.7.2	Chemical installed in swing dryer <u>ALUMINA F200 3/16</u> Operates properly ✓	<u>MS</u>
4.7.3	Chiller operates properly	<u>MS</u>
5.0.	POST OPERATIONAL CHECKOUTS	
5.1	Tire pressure <u>50 PSI</u> <u>ALL</u> _____ _____ _____	<u>MS</u>
5.2	Parking brake functions properly	<u>MS</u>
5.3	Surge brake functions properly	<u>MS</u>
5.4	Compressor oil level <u>FULL</u> ✓	<u>MS</u>
5.5	Surge brake system oil level <u>FULL</u> ✓	<u>MS</u>
5.6	Hour Meter Reading <u>30.33 hrs</u>	<u>MS</u>
5.7	All components securely mounted. No loose bolts, nuts, pins, etc..	<u>MS</u>
5.8	Cable reel pays out and picks up cable	<u>MS</u>
5.9	Main landing jack extends & retracts Leveling jacks extend, retract & pivot & lock out of the way	<u>MS</u>
5.10.	DOT lights are functional	<u>MS</u>
5.11	Brake lights, turn signals, & backup lights are functional	<u>MS</u>

I hereby certify that the above data is true and correct.

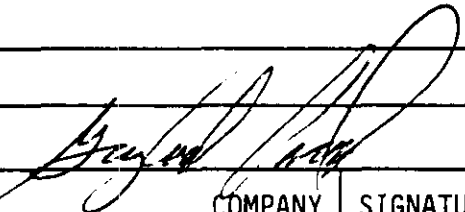
QC Inspector _____
 Date _____

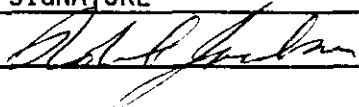
Gaylord R. Soo
9/20/94

TEST EXCEPTIONS

Step #	Description of exception and resolution.
5.2	<p>AFTER ADJUSTING THE PARKING BRAKE, THE WHEELS WOULD NOT SKID. CALCULATIONS SHOW THAT FOR A 15% GRADE, THE FORCE NECESSARY TO PREVENT THE 6400 LB. TRAILER FROM ROLLING IS 893 LBS. USING A CALIBRATED TENSIO METER, WE WERE ABLE TO EXCEED 1100 LBS BEFORE THE WHEELS BEGAN TO ROLL. THIS IS EQUAL TO AN 18.9% GRADE. A REVISED 5.2 PARAGRAPH IS INCLUDED TO REFLECT THE CHANGE IN THE ATP.</p>
	<p>ATP REVISION PARAGRAPH 5.2:</p> <p>SET THE PARKING BRAKE. VERIFY THAT THE PARKING BRAKE HOLDS BY PUSHING OR PULLING THE UNIT. THE BRAKE SHOULD HOLD UP TO 900 LBS OF FORCE (EQUAL TO A 15% SLOPE). ADJUST AS REQUIRED.</p>

TEST COMPLETED BY:



PRINT NAME	COMPANY	SIGNATURE	DATE
ROBERT JACOBIN	AT&T		4/9/94

DUE: 10-31-94

DATE 10-31-94

S.O. # 11234

#1

REQUEST FOR FILTER TAGS

CARTRIDGE: EO68712
1) ~~EO78700~~
2) 3CB-3/3ACB
3) EO78700

4) EO78700

MODEL: 10SS-PGD

W.P. 250 PSI

SERIAL: 1 134-09R
2 130-09R
3 135-09R

FLOW 100 CFM

AND MANIFOLD) → 4 136-09R

FRESH AIR -	
MODEL	<u>LPMACI</u>
SERIAL	<u>92940001-8</u>
PSI	<u>100</u>
CFM	<u>90</u>
RPM	<u>560</u>
HP	<u>30</u>
POWER	<u>480V AC 3PH</u>
Los Angeles, California	

CUSTOMER: WESTINGHOUSE HANFORD

COMPRESSOR/SYSTEM MODEL NO: LPMACI 5014-0001

COMPRESSOR UNIT S/N: ① 92940001

SYSTEM S/N: 92940001-8

MANUAL: JCA

VEHICLE IDENTIFICATION NO. 1A7RM1229KA079119

REQUESTED BY: [Signature]



AirCheck Report^T

WHC-SD-WM-ATR-104
Rev. 0
Appendix A-15 of A-15

P.O. Box 160850 • Austin, TX 78716 • 800-AIR-1024 • 512-328-4076 • FAX 512-328-4122

Customer# 123
American Bristol Ind.
Mr. Chuck Lamoreaux
1600 W 240th St.
Harbor City, CA 90710

Report No.: 94-3848
Date Analyzed: October 27, 1994
Sampled By: K. Lamoreaux
Date Sampled: October 26, 1994
Air Source ID: L. P. Trailer # 1 S/N
1A9CM2229RA079112

Sampled for Westinghouse Hanford

COMPRESSED AIR ANALYTICAL RESULTS

LIMITING CHARACTERISTIC		SOURCE AIR RESULTS	AMBIENT AIR RESULTS	CGA Grade D AIR SPECIFICATION
Oxygen, Volume % Balance Nitrogen		20.9	N/A	19.5-23.5
Carbon Monoxide, ppmv		<0.2	N/A	10
Carbon Dioxide, ppmv		678	N/A	1000
Water, ppmv / Dewpoint, °F		21.5/ -67	N/A	63/ -50 ^{note 1}
TOTAL VOLATILE HYDROCARBON CONTENT (TVHC)	TVHC (including methane), ppmv	8.1	N/A	N/A
	Methane, ppmv	3.5	N/A	N/A
	TVHC (excluding methane), ppmv	4.6	N/A	N/A
Oil (condensed), mg/m ³ and particulates		N/A	N/A	5
Odor (provided by customer)		None/Slight	N/A	None/Slight

This sample COMPLIES with the gas portion only of CGA Grade D air specifications.

NOTES

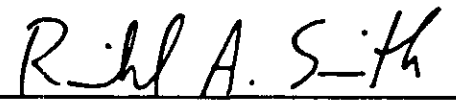
(Note 1) This limit applies to the use of self contained breathing apparatus (SCBA). The above limit applies or 10 degrees lower than the coldest temperature expected in the area. For non-SCBA use the water content may vary with the intended use from saturated to very dry.

This specification is for a PARTIAL sample, i.e., either a source or filter sample was not submitted for analysis. No certificate will be issued since full compliance with the specification cannot be verified.

Laboratory accredited by the American Association for Laboratory Accreditation (A2LA).

Results reported relate only to the items tested. This report shall not be reproduced except in full, without the written approval of this laboratory.

QC DATA	Oxygen	Methane	Carbon Monoxide	Carbon Dioxide	Water	TVHC	Oil/Part.
Accuracy (%)	99	100	101	100	97	100	100
Precision (%)	1.1	1.4	1.2	2.5	0.3	1.1	0.6


Richard A. Smith, C.I.H. - Laboratory Director

5

SEP 14 1994

ENGINEERING DATA TRANSIT

WHC-SD-WM-ATR-104
Rev. 0
Appendix B-1 of B-15

Page 1 of 1
608067

2. To: (Receiving Organization) Core Sampling	3. From: (Originating Organization) Characterization Equipment	4. Related EDT No.: N/A
5. Proj./Prog./Dept./Div.: Core Sampling Aux. Equipment	6. Cog. Engr.: J.L. Smalley	7. Purchase Order No.: 404883
8. Originator Remarks: ETN-94-0023-G This Acceptance Test Procedure is transmitted for approval. The procedure was prepared by the Seller and will be performed at the Sellers location. It will show compliance with specification WHC-S-0251 Rev.0.		9. Equip./Component No.: N/A
11. Receiver Remarks:		10. System/Bldg./Facility: 200 General
		12. Major Assm. Dwg. No.: N/A
		13. Permit/Permit Application No.: N/A
		14. Required Response Date: 9/9/94

15. DATA TRANSMITTED					(F)	(G)	(H)	(I)
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	Approval Designator	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	WHC-SD-WM-ATP-104	N/A	0	Breathing Air Trailer Acceptance Test Procedure	SQ	1	1	1

16. KEY					
Approval Designator (F)		Reason for Transmittal (G)		Disposition (H) & (I)	
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)	1. Approval	4. Review	1. Approved	4. Reviewed no/comment	
	2. Release	5. Post-Review	2. Approved w/comment	5. Reviewed w/comment	
	3. Information	6. Dist. (Receipt Acknow. Required)	3. Disapproved w/comment	6. Receipt acknowledged	

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)											
(G)	(H)	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN	Reason	Disp.
/	/	Cog. Eng. J.L. Smalley	<i>J.L. Smalley</i>	9/13/94	RI-17	O.S.T.I (2)		21-07			
/	/	Cog. Mgr. R.J. Blanchard	<i>R.J. Blanchard</i>	9/13/94	RI-17						
/	/	QA J.J. Verderber	<i>J.J. Verderber</i>	9/14/94	SI-57						
/	/	Safety O.M. Jaks	<i>O.M. Jaks</i>	9-14-94							
		Env. N/A									
/	/	Core Sampling Cog. A.P. Mousel	<i>A.P. Mousel</i>	9/14/94							
		Central Files			LP-04						

18. AJ Kostelnik <i>AJ Kostelnik</i> Signature of EDT Originator	19. AP Mousel <i>A.P. Mousel</i> Authorized Representative for Receiving Organization	20. R.J. Blanchard <i>R.J. Blanchard</i> Cognizant Manager	21. DOE APPROVAL (if required) Ctrl. No. <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/comments <input type="checkbox"/> Disapproved w/comments
--	---	--	---

RELEASE AUTHORIZATION

Document Number: WHC-SD-WM-ATP-104, REVISION 0

Document Title: Breathing Air Trailer Acceptance Test Procedure

Release Date: 09/14/94


* * * * *

**This document was reviewed following the
procedures described in WHC-CM-3-4 and is:**

APPROVED FOR PUBLIC RELEASE

* * * * *

WHC Information Release Administration Specialist:


Kara Broz

(Signature)

09/14/94

(Date)

SUPPORTING DOCUMENT

2. Title Breathing Air Trailer Acceptance Test Procedure	3. N WHC-SD-WM-ATP-104 0
5. Key Words ETN-94-0023-G, Core Sampling, Breathing Air, Specification WHC-S-0251, Trailer, American Bristol, Air Compressor, Purchase Order 404883, Core Sampling Auxiliary Equipment, Portable Breathing Air Supply <i>RMB</i>	6. Author Name: Alois J Kostelnik <i>Alois J Kostelnik</i> Signature Organization/Charge Code 7EA40/N457D
7. Abstract <i>3/14/94</i> APPROVED FOR PUBLIC RELEASE This Acceptance Test Procedure (ATP) will document compliance with the requirements of WHC-S-0251 Rev.0 and ECNs 613530 and 606113. The equipment being tested is a Breathing Air Supply Trailer purchased as a Design and Fabrication procurement activity. The ATP was written by the Seller and will be performed by the Seller with representatives of the Westinghouse Hanford Company witnessing the test at the Seller's location.	
8. PURPOSE AND USE OF DOCUMENT - This document was prepared for use within the U.S. Department of Energy and its contractors. It is to be used only to perform, direct, or integrate work under U.S. Department of Energy contracts. This document is not approved for public release until reviewed. PATENT STATUS - This document copy, since it is transmitted in advance of patent clearance is made available in confidence solely for use in performance of work under contracts with the U.S. Department of Energy. This document is not to be published nor its contents otherwise disseminated or used for purposes other than specified above before patent approval for such release or use has been secured, upon request, from the Patent Counsel, U.S. Department of Energy Field Office, Richland, WA. DISCLAIMER - This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, nor any of their contractors, subcontractors or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or any third party's use or the results of such use of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, 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. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.	10. RELEASE STAMP <div style="border: 1px solid black; padding: 5px; text-align: center;">OFFICIAL RELEASE BY WHC DATE SEP 14 1994 <i>sta. 4</i></div>
9. Impact Level SQ	

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ACCEPTANCE TEST PROCEDURE WORK SHEETS	Page 8
TEST EXCEPTIONS	Page 11

ACCEPTANCE TEST PROCEDURE
MOBILE BREATHING AIR TRAILER
MODEL 5014-0001

WRITTEN BY *Bob Jacobson* DATE *8/23/94*
BOB JACOBSON
PRODUCT ENGINEER

APPROVED BY *Charles Lamoreaux* DATE *8/23/94*
CHARLES LAMOREAUX
PRESIDENT

1.0 SCOPE

This test procedure is to verify that the American Bristol Industries, Inc., Model 5014-0001 low pressure Mobile Breathing Air Trailer, meets or exceeds the requirements of the Westinghouse Hanford specification. (WHC-S-0251)

2.0 SEQUENCE

ABI will complete the following tests in the order deemed best by ABI personnel.

3.0 VISUAL INSPECTION

Visually inspect the unit to verify that it complies with the requirements of the purchase specification. Record the pertinent data on the data sheets provided.

3.1 Visually inspect the unit for:

- 3.1.1 Damage.
- 3.1.2 Cleanliness; no weld spatter; no foreign materials.
- 3.1.3 Uniformity of finish: no bubbles, chips, scratches.
- 3.1.4 All wiring and plumbing secured in place.
- 3.1.5 All wiring undamaged, connections tight.
- 3.1.6 All wires tagged.
- 3.1.7 All major components tagged with manufacturers' nameplates.
- 3.1.8 ABI nameplate stamped & installed.
- 3.1.9 VIN number stamped on unit.
- 3.1.10 All ground wires properly connected.
- 3.1.11 Verify that lunette eye ID is 2.75 inches minimum.

4.0 OPERATIONAL INSPECTIONS

4.1 Break-in Inspections

- 4.1.1 Verify incoming power at the magnetic starter.
- 4.1.2 Verify proper compressor rotation before starting break-in procedures.

- 4.1.3 Operate each unit in accordance with the break-in schedule table on the data sheets. Record the start up current and the running current.
 - 4.1.4 During break-in, carefully observe the unit for any evidence of excessive vibration, excessive heat, strange noises, odors, etc., loose components, interferences between components and leakages. Correct as required.
- 4.2 Leak Test
- 4.2.1 Upon completion of the break-in test, shut the system down with the rated pressure trapped in the system. Bubble test all fittings, joints, valve stems, burst discs, etc. for any evidence of leakage. Correct as required. (Working pressure 80-125 psig)
 - 4.2.2 Attach hose and manifold to system and pressurize to working pressure. Bubble test all joints for any evidence of leakage. Correct as required.
- 4.3 Relief Valve Test
- 4.3.1 With the unit running, activate all relief valves to verify each valve will flow.
 - 4.3.2 Verify each relief valve reseats and does not leak.
- 4.4 Condensate Drain Test
- 4.4.1 With the unit running, verify that there are no leaks in the automatic condensate drain system by immersing the drain tube in water and observe any leakage. Correct as required.
 - 4.4.2 Record the time between dump cycles and the duration of the dump.
 - 4.4.3 Allow the system to shut off automatically. Verify that the dump valves open and that the compressor continues to run in its cool down mode. Record the time of the cool down run.
 - 4.4.4 Close the interstage and filter manual drain valves. Bring the system up to pressure and shut off. Observe for leakage by immersing the drain tube in water.
- 4.5 Compressor Operational Test
- 4.5.1 Measure compressor output per standard practice sheet or by use of a pressure gauge and a flow meter. Record the data.

- 4.5.2 Record the rotational speed of the compressor.
- 4.5.3 Record the temperature of the air receiver at its discharge while flowing air at rated pressure and flow.
- 4.5.4 Take an air sample in accordance with the sampling company's procedures and ship the sample for analysis.
- 4.5.5 Shut down the system and allow it to cool to room temperature. After it has cooled down, run it again for 5 minutes with the intercooler drains open to remove any additional condensation.

4.6 Monitor / Controller Operational Test

- 4.6.1 Verify that the Automatic start/stop function operates.
- 4.6.2 Verify that the Manual start/stop function operates.
- 4.6.3 Verify that the high temperature stop operates properly.
- 4.6.4 Verify that the low oil stop operates properly.
- 4.6.5 Verify that the high CO portion of the monitor operates in accordance with its manual. (Set at 10ppm and 25ppm)
- 4.6.6 Verify that the high dew point portion of the monitor operates in accordance with its manual.
- 4.6.7 Verify the low pressure sensor actuates the reserve air supply. (and there is adequate supply for 5 minutes.)
- 4.6.8 Verify that the audio/visual alarms function whenever any of the above safety features are actuated.

4.7 Filters, Dryer, and Chiller Operation

- 4.7.1 Verify that the filters have the correct elements installed.
- 4.7.2 Verify that the swing dryer has the correct chemicals installed and that it functions in accordance with its operating manual.
- 4.7.3 Verify that the chiller functions in accordance with its operating manual.

5.0 POST OPERATIONAL CHECKOUTS

- 5.1 Verify all tires are at recommended inflation pressure
- 5.2 Set the parking brake. Verify that the parking brakes hold by pushing / pulling the unit. The wheels should skid instead of rolling. Adjust as required.

- 5.3 Verify the surge brakes actuate by towing the unit and applying the brakes. The unit should not push the tow vehicle nor fish tail. Adjust as required.
- 5.4 Verify that the compressor oil level is full.
- 5.5 Verify that the surge brake system is full of brake fluid.
- 5.6 Record final hour meter reading.
- 5.7 Verify that all components are securely mounted.
- 5.8 Verify that the cable reel fully extends and retracts.
- 5.9 Verify that the main landing jack and leveling jacks extend and retract and that the leveling jacks pivot and lock out of the way.
- 5.10 Verify that all DOT lights are functional.
- 5.11 Verify that the brake lights, back up lights and turn signals are functional.

ACCEPTANCE TEST PROCEDURE WORK SHEET

Order # 11234 CUSTOMER: WESTINGHOUSE HANFORD 1/24/17
 Model # 5014-0001 Serial # 9R940602-9
 Configuration: LP MACT 2A137
 OPERATOR: _____ INSPECTOR: GAYLORD PESSOD

NO.	TEST DESCRIPTION	INITIALS																																																																														
	COMPRESSOR Make: <u>ABBORLOW</u> Model: <u>2A137</u> S/N: <u>940602</u> CFM: <u>90</u> PSI: <u>200</u>	<p><i>[Handwritten Initials]</i></p>																																																																														
	MOTOR Make: <u>LINCOLN</u> Model: <u>PART WINDING</u> S/N: <u>1940818263</u> HP: <u>30</u> RPM: <u>1760</u> Volts: <u>460 AC</u> Phase: <u>3</u> Hz: <u>60</u>																																																																															
	ENGINE Make: <u>N/A</u> Model: <u>N/A</u> S/N: <u>N/A</u> HP: <u>N/A</u> RPM: <u>N/A</u>																																																																															
	DRYER Make: <u>STRANS</u> Model: <u>HL-100</u> S/N: <u>948080</u> CFM: <u>100</u> PSI: <u>150</u>																																																																															
	CHILLER Make: <u>BAUTLAGE</u> Model: <u>GLL100</u> S/N: <u>16522-J</u> CFM: <u>100</u> PSI: <u>150</u> Volts: <u>460 AC</u> Phase: <u>3</u> Hz: <u>60</u>																																																																															
	S/N: <u>N/A</u> Make: <u>N/A</u> Model: <u>N/A</u> CFM: <u>N/A</u> PSI: <u>N/A</u>																																																																															
	DRIVE SYSTEM All belts tight? Yes <input checked="" type="checkbox"/> (1/64" per inch of span) <i>[Handwritten]</i> All pulleys aligned? Yes <input checked="" type="checkbox"/>																																																																															
	FILTER SYSTEM Model No <u>1055-260</u> CFM: <u>100</u> PSI: <u>150</u>																																																																															
	<table border="1"> <thead> <tr> <th>Chamber No</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td>S/N:</td> <td><u>13709R</u></td> <td><u>131-09R</u></td> <td><u>13801R</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Logged?</td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> </tr> <tr> <td>Element p/n:</td> <td><u>EG0871A</u></td> <td><u>30B3/B4B</u></td> <td><u>EG08700</u></td> <td></td> <td></td> </tr> <tr> <td>Element type:</td> <td><u>COALES</u></td> <td><u>C+AC</u></td> <td><u>PARTIC</u></td> <td></td> <td></td> </tr> <tr> <td>Element sealed:</td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> </tr> <tr> <td>Element installed:</td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> </tr> <tr> <td>Chamber backed off:</td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> </tr> <tr> <td>Burst disk PSI:</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td></td> <td></td> </tr> <tr> <td>Drain Valve Ops</td> <td>OK <input checked="" type="checkbox"/></td> <td>OK <input checked="" type="checkbox"/></td> <td>OK <input checked="" type="checkbox"/></td> <td>OK <input type="checkbox"/></td> <td>OK <input type="checkbox"/></td> </tr> <tr> <td>ID Tag typed & on:</td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input checked="" type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> <td>Yes <input type="checkbox"/></td> </tr> <tr> <td>Relief Valve Installed:</td> <td>Yes <input checked="" type="checkbox"/></td> <td colspan="2">Psi Setting: <u>200</u></td> <td>Wired:</td> <td>Yes <input checked="" type="checkbox"/></td> </tr> <tr> <td>Check Valve Installed:</td> <td>Yes <input checked="" type="checkbox"/></td> <td colspan="4"></td> </tr> </tbody> </table>		Chamber No	1	2	3	4	5	S/N:	<u>13709R</u>	<u>131-09R</u>	<u>13801R</u>	<u>N/A</u>	<u>N/A</u>	Logged?	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Element p/n:	<u>EG0871A</u>	<u>30B3/B4B</u>	<u>EG08700</u>			Element type:	<u>COALES</u>	<u>C+AC</u>	<u>PARTIC</u>			Element sealed:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Element installed:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Chamber backed off:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Burst disk PSI:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>			Drain Valve Ops	OK <input checked="" type="checkbox"/>	OK <input checked="" type="checkbox"/>	OK <input checked="" type="checkbox"/>	OK <input type="checkbox"/>	OK <input type="checkbox"/>	ID Tag typed & on:	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Relief Valve Installed:	Yes <input checked="" type="checkbox"/>	Psi Setting: <u>200</u>		Wired:	Yes <input checked="" type="checkbox"/>	Check Valve Installed:	Yes <input checked="" type="checkbox"/>				
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Check Valve Installed:	Yes <input checked="" type="checkbox"/>																																																																															
	INLET FILTER Installed: Yes <input checked="" type="checkbox"/> Element Installed Yes <input checked="" type="checkbox"/>																																																																															
	STORAGE SYSTEM Pin <u>R232036</u> ASME <input checked="" type="checkbox"/> DOT <input type="checkbox"/> Qty <u>2</u> Psi <u>200</u> Size <u>306A</u> S/N's: #1 <u>227580</u> #2 <u>236212</u> #3 <u>---</u> #4 <u>---</u>																																																																															
	Relief Valve Installed: Yes <input checked="" type="checkbox"/> Psi Setting: <u>200</u> Qty <u>2</u> Psi Setting: <u>200</u> Wired: Yes <input checked="" type="checkbox"/> (NO) Drain Valve Installed: Yes <input checked="" type="checkbox"/> Qty <u>2</u>																																																																															

ACCEPTANCE TEST PROCEDURE WORK SHEET

Order # 11234 CUSTOMER: WESTINGHOUSE HANFORD
 Model # 5014-0001 Serial # 7R90602-9
 Configuration: LP MACT 2AN137
 OPERATOR: _____ INSPECTOR: Gaylord Posol

9/20/94
 52

NO.	TEST DESCRIPTION	INITIALS																																						
3.0.	VISUAL EXAMINATION																																							
3.1.1	No damage:	<i>[Signature]</i>																																						
3.1.2	Clean, no weld spatter, foreign material:	<i>[Signature]</i>																																						
3.1.3	Finish : Uniform, no bubbles, chips nor scratches	<i>[Signature]</i>																																						
3.1.4	Wiring & plumbing secured:	<i>[Signature]</i>																																						
3.1.5	No damage to wires, All connections tight & in place:	<i>[Signature]</i>																																						
3.1.6	All wires tagged	<i>[Signature]</i>																																						
3.1.7	All major components tagged with mfg'r's nameplates:	<i>[Signature]</i>																																						
3.1.8	ABI nameplate stamped & installed:	<i>[Signature]</i>																																						
3.1.9	VIN number stamped on unit No: <u>1A9CM2220RA079113</u>	<i>[Signature]</i>																																						
3.1.10	All wires grounded:	<i>[Signature]</i>																																						
3.1.11	Lunette eye ID > 2.75 inches <u>2.87</u>	<i>[Signature]</i>																																						
4.0.	OPERATIONAL INSPECTIONS AND TESTS																																							
4.1	Break In Inspections																																							
4.1.1	Voltage: *460(230)VAC <u>459V</u> Current: <u>N/A</u>	<i>[Signature]</i>																																						
4.1.2	Proper Rotation: (CCW)	<i>[Signature]</i>																																						
4.1.3	Operate each unit according to the following table and record start up and running current																																							
	<table border="1"> <thead> <tr> <th rowspan="2">Motor</th> <th rowspan="2">Engine</th> <th rowspan="2">Speed</th> <th rowspan="2">Load</th> <th>Start Up</th> <th>Running</th> </tr> <tr> <th>Current</th> <th>Current</th> </tr> </thead> <tbody> <tr> <td>30 Min</td> <td></td> <td>Rated</td> <td>Low</td> <td><u>180A</u></td> <td><u>36</u></td> </tr> <tr> <td>3-4 Hrs.</td> <td></td> <td>Rated</td> <td>Rated</td> <td><u>N/A</u></td> <td><u>39</u></td> </tr> <tr> <td></td> <td>15-30 Min</td> <td>Fast Idle</td> <td>Min</td> <td>/</td> <td>/</td> </tr> <tr> <td></td> <td>1 Hr</td> <td>Rated</td> <td>Light-Med</td> <td>/</td> <td>/</td> </tr> <tr> <td></td> <td>2-3 Hrs</td> <td>Rated</td> <td>Rated</td> <td>/</td> <td>/</td> </tr> </tbody> </table>	Motor	Engine	Speed	Load	Start Up	Running	Current	Current	30 Min		Rated	Low	<u>180A</u>	<u>36</u>	3-4 Hrs.		Rated	Rated	<u>N/A</u>	<u>39</u>		15-30 Min	Fast Idle	Min	/	/		1 Hr	Rated	Light-Med	/	/		2-3 Hrs	Rated	Rated	/	/	<i>[Signature]</i>
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	1 Hr	Rated	Light-Med	/	/																																			
	2-3 Hrs	Rated	Rated	/	/																																			
4.1.4	Observe unit for:																																							
	Excessive heat <u>NO</u>	<i>[Signature]</i>																																						
	Strange noises <u>NO</u>	<i>[Signature]</i>																																						
	Strange odors <u>NO</u>	<i>[Signature]</i>																																						
	Other _____	<i>[Signature]</i>																																						
	Vibration <u>NO</u>	<i>[Signature]</i>																																						
4.2	Leak Test																																							
4.2.1	No leaks in system	<i>[Signature]</i>																																						
4.2.2	No leaks in hoses <u>BUBBLES LEAKS ONLY</u>	<i>[Signature]</i>																																						
4.3	Relief Valve Test																																							
4.3.1	Activate all relief valves	<i>[Signature]</i>																																						
4.3.2	All relief valves reset	<i>[Signature]</i>																																						
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4.4	Condensate Drain Test																																							
4.4.1	Does not leak during operation <input checked="" type="checkbox"/>	<i>[Signature]</i>																																						
4.4.2	Time between dump cycles <u>3MIN</u> Duration of dump <u>20 SEC</u>	<i>[Signature]</i>																																						
4.4.3	Verify dumps open during Cool Down & Purge <u>YES</u> Time <u>2MIN</u>	<i>[Signature]</i>																																						
4.4.4	Does not leak after shut off <u>YES</u> <u>PROCEEDING ERROR</u>	<i>[Signature]</i>																																						

ACCEPTANCE TEST PROCEDURE WORK SHEET

Order # 11234 CUSTOMER: WESTINGHOUSE HANTON 7/20/94
 Model # 5014-0001 Serial # 9290602-9
 Configuration: LP MACI 24137
 OPERATOR: _____ INSPECTOR: GAYLORD RUSSELL

NO.	TEST DESCRIPTION	INITIALS
4.5	Compressor Operational Test <u>88@100PSI 92@80 FLOWMETER</u>	
4.5.1	Measure Output <u>N/A</u> minutes to fill a <u>N/A</u> cubic feet vessel to <u>N/A</u> psi FAD = <u>88</u> SCFM @ <u>100</u> PSI	<u>MR</u>
4.5.2	Compressor <u>588</u> RPM	<u>MR</u>
4.5.3	Temperature <u>270</u> F	<u>MR</u>
4.5.4	Take Air Sample <u>YES</u> Results <u>SEE TEST ANALYST SHEET</u>	<u>MR</u>
4.5.5	After cool down to room temp run for 5 minutes with drains open	<u>MR</u>
4.6	Monitor / Controller Operational Test	
4.6.1	Auto start / stop	<u>MR</u>
4.6.2	Manual start / stop	<u>MR</u>
4.6.3	High temperature stop @ <u>350° F</u>	<u>MR</u>
4.6.4	Low oil stop @ <u>20PSI FALLING</u>	<u>MR</u>
4.6.5	Hi CO operation <u>10ppm YES</u> <u>25ppm CANNOT VERIFY, NO SOURCE</u>	<u>MR</u>
4.6.6	Hi dew point operation	<u>MR</u>
4.6.7	Low air pressure sensor operation and 5 minutes reserve air available.	<u>MR</u>
4.6.8	Audio / Visual alarm functions with all of the above	<u>MR</u>
4.7	Filters, Dryer and Chiller Operation	
4.7.1	Correct filter elements installed	<u>MR</u>
4.7.2	Chemical installed in swing dryer <u>ALUMINA F20 3/16</u> Operates properly <u>✓</u>	<u>MR</u>
4.7.3	Chiller operates properly	<u>MR</u>
5.0.	POST OPERATIONAL CHECKOUTS	
5.1	Tire pressure <u>50PSI ALL</u>	<u>MR</u>
5.2	Parking brake functions properly	<u>MR</u>
5.3	Surge brake functions properly	<u>MR</u>
5.4	Compressor oil level <u>FULL ✓</u>	<u>MR</u>
5.5	Surge brake system oil level <u>FULL ✓</u>	<u>MR</u>
5.6	Hour Meter Reading <u>33.56 hrs</u>	<u>MR</u>
5.7	All components securely mounted. No loose bolts, nuts, pins, etc..	<u>MR</u>
5.8	Cable reel pays out and picks up cable	<u>MR</u>
5.9	Main landing jack extends & retracts Leveling jacks extend, retract & pivot & lock out of the way	<u>MR</u>
5.10.	DOT lights are functional	<u>MR</u>
5.11	Brake lights, turn signals, & backup lights are functional	<u>MR</u>

I hereby certify that the above data is true and correct.
 QC Inspector [Signature]
 Date 9/20/94

TEST EXCEPTIONS

Step #	Description of exception and resolution.
5.2	<p>AFTER ADJUSTING THE PARKING BRAKE, THE WHEELS WOULD NOT SKID. CALCULATIONS SHOW THAT FOR A 15% GRADE, THE FORCE NECESSARY TO PREVENT THE 6400 LB. TRAILER FROM ROLLING IS 893 LBS. USING A CALIBRATED TENSIONMETER, WE WERE ABLE TO EXCEED 1100 LBS BEFORE THE WHEELS BEGAN TO ROLL. THIS IS EQUAL TO AN 18.9% GRADE. A REVISED 5.2 PARAGRAPH IS INCLUDED TO REFLECT THE CHANGE IN THE ATP.</p>
	<p>ATP REVISION PARAGRAPH 5.2:</p> <p>SET THE PARKING BRAKE. VERIFY THAT THE PARKING BRAKE HOLDS BY PUSHING OR PULLING THE UNIT. THE BRAKE SHOULD HOLD UP TO 900 LBS OF FORCE (EQUAL TO A 15% SLOPE). ADJUST AS REQUIRED.</p>

TEST COMPLETED BY: *[Signature]*

PRINT NAME	COMPANY	SIGNATURE	DATE
ROBERT JACOBSON	ABF	<i>[Signature]</i>	11/2/97

DUE: 10-31-94

DATE 10-31-94

S.O. # 11234

REQUEST FOR FILTER TAGS

CARTRIDGE: E068712
1) ~~E078700~~
2) 3CB-3/3ACB
3) E078700

4) E078700

MODEL: 10SS-RGD

W.P. 250 PSI

SERIAL: 1 137-09R
2 131-09R
3 138-09R

FLOW 100 CFM

(Aux MANIFOLD) → 4 139-09R

FRESH AIR -	
MODEL	<u>LPMACI</u>
SERIAL	<u>9R9406027</u>
PSI	<u>100</u>
CFM	<u>90</u>
RPM	<u>560</u>
HP	<u>30</u>
POWER	<u>780V AC 3PH</u>
Los Angeles, California	

CUSTOMER: WESTINGHOUSE HANFORD

COMPRESSOR/SYSTEM MODEL NO: LPMACI 5014-0001

COMPRESSOR UNIT S/N: 9R9406027

SYSTEM S/N: 9R9406027-4

MANUAL: 204

VEHICLE IDENTIFICATION NO. 1A72A1-22CRA279113

REQUESTED BY: [Signature]



AirCheck ✓ Report

WHC-SD-WM-ATR-104
Rev. 0
Appendix B-15 of B-15

P.O. Box 160850 • Austin, TX 78716 • 800-AIR-1024 • 512-328-4076 • FAX 512-328-4122

Customer# 123
American Bristol Ind.
Mr. Chuck Lamoreaux
1600 W 240th St.
Harbor City, CA 90710

Report No.: 94-3847
Date Analyzed: October 27, 1994
Sampled By: K. Lamoreaux
Date Sampled: October 26, 1994
Air Source ID: L. P. Trailer # 2 S/N
1A9CM222ORA079113

Sampled for Westinghouse Hanford

COMPRESSED AIR ANALYTICAL RESULTS

LIMITING CHARACTERISTIC		SOURCE AIR RESULTS	AMBIENT AIR RESULTS	CGA Grade D AIR SPECIFICATION
Oxygen , Volume % Balance Nitrogen		21.0	N/A	19.5-23.5
Carbon Monoxide, ppmv		<0.2	N/A	10
Carbon Dioxide, ppmv		101	N/A	1000
Water, ppmv / Dewpoint, °F		5.6 / -85	N/A	63 / -50 <small>note 1</small>
TOTAL VOLATILE HYDROCARBON CONTENT (TVHC)	TVHC (including methane), ppmv	6.9	N/A	N/A
	Methane, ppmv	3.1	N/A	N/A
	TVHC (excluding methane), ppmv	3.8	N/A	N/A
Oil (condensed), mg/m ³ and particulates		N/A	N/A	5
Odor (provided by customer)		None/Slight	N/A	None/Slight

This sample COMPLIES with the gas portion only of CGA Grade D air specifications.

NOTES

(Note 1) This limit applies to the use of self contained breathing apparatus (SCBA). The above limit applies or 10 degrees lower than the coldest temperature expected in the area. For non-SCBA use the water content may vary with the intended use from saturated to very dry.

This specification is for a PARTIAL sample, i.e., either a source or filter sample was not submitted for analysis. No certificate will be issued since full compliance with the specification cannot be verified.

Laboratory accredited by the American Association for Laboratory Accreditation (A2LA).

Results reported relate only to the items tested. This report shall not be reproduced except in full, without the written approval of this laboratory.

QC DATA

	Oxygen	Methane	Carbon Monoxide	Carbon Dioxide	Water	TVHC	Oil/Part.
Accuracy (%)	99	100	101	100	97	100	100
Precision (%)	1.1	1.4	1.2	2.5	0.3	1.1	0.6

Richard A. Smith, C.I.H. - Laboratory Director



From: Electrical Power Systems Engineering
Phone: 376-8109 L4-90
Date: October 17, 1994
Subject: CORE SAMPLING EQUIPMENT BREATHING AIR COMPRESSORS

To: Al Kostelnik R1-17
cc: CMM File/LB

Unit Descriptions

Two breathing air compressor units have been assembled by American Bristol Company, 1600 West 240th Street, Harbor City, California from components supplied by a variety of vendors.

The units consist of an industrial control panel, a 30 hp electric motor connected by belt drive to the compressor, a chiller with hermetic sealed compressor, and a swing dryer.

FLA for the motor is 37 amps, 4.5 amps for the chiller and 1 amp for the dryer.

The control panel was manufactured by Klockner-Mueller under their UL label for industrial control equipment. The control panel includes the main disconnect switch and main overcurrent protection devices, three 60 amp fuses.

The power is supplied through a 4 conductor #6 flexible cord installed on a Hannay brand cord reel. The four brush slip ring is rated 50 amps. The cord reel model is CR 1616-17-18. There is no evidence of a UL label on the cord reel, it is suspected that the manufacturer, a well known long established manufacturer of electrical cord reels has a UL listing available for this device.

The motor is a Lincoln Totally Enclosed Fan Cooled (TEFC) high efficiency 1760 RPM motor of 30 hp at 480 volts three phase. This motor is a split winding soft start motor having a nameplate FLA rating of 37 amps. The windings are split evenly. Therefore a winding FLA of 18.5 amps is used to calculate conductors and overload protection. The conductors are 3#10 THWN/THHN per winding. Both sets of conductors are in the same conduit. Derating for conduit fill still allows adequate conductor ampacity. The overload protection is by solid state motor overloads set at 21 amps.

Items requiring further attention

1. There were several small discrepancies noted during the initial visual inspection. These were communicated directly to the Production Engineer. Correction of the discrepancies was accomplished during the site visit.

Al Kostelnik
Page 2
October 17, 1994

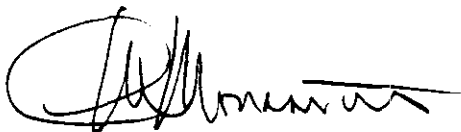
2. The liquidtight flexible metal conduit between the EMT raceway and the motor terminal housing is not secured within 12 inches of the motor enclosure as required by NEC Article 351-8.
3. The cord reel slip rings are rated for 50 amps. The flexible cord is rated for 55 amps. Therefore the circuit supplying this unit shall be no larger than 50 amps.
4. There are several drawing errors noted. The Rev C drawing shows contacts and overloads after the 60 amp supply fuses. This is not the case. The 60 amp fuses are on the load side of a disconnect, there are no contacts or overloads associated with the fuses. The fuses shown on the schematic do not have the amp rating or type of fuse specified. For instance the input fuses are 60 amp class R fuses, in the proper fuse holders. The schematic does not document the type of fuse required.

Recommendations

1. No action is necessary for this item.
2. Receipt inspection of the liquidtight flexible metal conduit for proper support is required.
3. The generator provided to supply the breathing air compressor has been verified as having the proper overload and fault protection to supply this unit. No further action is necessary.
4. Receipt inspection of the schematic drawing for as built errors will be required.

Conclusion

There are no NEC violations or electrical safety concerns that should prevent this unit from safely performing it's intended function.



CM Monasmith, NEC Interpretive Authority
Electrical Power Systems Engineering

rmg

AMERICAN BRISTOL INDUST

1600 W. 240th Street
Harbor City, CA 90710
(310) 534-5981
Fax 310-539-0430

FACSIMILE TRANSMISSION

COMPANY:	WESTINGHOUSE HANFORD COMPANY	FAX NO:	509-373-1050
ATTN:	AL KOSTELNIK		
FROM:	BOB JACOBSON	OUR FAX NO:	310-539-0430
DATE:	6 OCTOBER 1994	NO. OF PAGES INCL. COVER:	2
SUBJECT:	EMERGENCY AIR SUPPLY TEST		

Attached please find a copy of our test data for the 5 minute emergency air supply test.

We are changing the two units here to the new regulators and to 3/8" tubing to improve the product. Your existing unit can meet the requirements with just a change out of the regulators.

BOB JACOBSON

Bob Jacobson, Product Engineer

WESTINGHOUSE
 EMERGENCY AIR SUPPLY TEST

Replaced existing regulator with High flow model Aqua Environments p/n 873-150

Used existing 1/4" tubing (.049 wall) and 3/16" ID hoses

TIME	TANK PSI	OUTLET PSI	MEASURED FLOW	AIR TEMP	AMB TEMP	CORRECTION FACTOR	ACTUAL FLOW
0.0	4400	90	72	61	69	0.9915	72.62
0.5	3300	90	72	59		0.9896	72.76
1.0							
1.5	2600	85	72	52		0.9829	73.25
2.0	2100	85	72	47		0.9781	73.62
2.5	1200	85	72	43		0.9742	73.91
3.0							
3.5	900	80	72	34		0.9654	74.58
4.0	550	80	72	31		0.9625	74.80
4.5	200	75	70	29		0.9605	72.88
5.0	0	50	70	24		0.9556	73.25
END	200	110	0	21			

THIS SHOWS THAT THE NEW REGULATOR AND EXISTING PLUMBING WILL DO 72 SCFM FOR 5 MINUTES

We replaced the 1/4 tubing with 3/8"

TIME	TANK PSI	OUTLET PSI	MEASURED FLOW	AIR TEMP	AMB TEMP	CORRECTION FACTOR	ACTUAL FLOW
0.0	4800	92	72	67	69	0.9972	72.20
0.5	3800	92	72	55		0.9857	73.04
1.0	3300	90	72	53		0.9838	73.18
1.5	2800	90	72	50		0.9810	73.40
2.0	2400	90	72	45		0.9761	73.76
2.5	2000	90	72	42		0.9732	73.98
3.0	1600	88	72	37		0.9684	74.35
3.5	1300	90	69	34		0.9654	71.47
4.0	950	86	69	31		0.9625	71.69
4.5	550	85	72	27		0.9586	75.11
5.0	0	80	70	24		0.9556	73.25
END	350	115	0	21			

correction factor = square root of [(460+ air temp) / 530]

actual flow = measured flow / correction
factor

(ref: Hedland Div of Racine Federated, manufacturer of flow meter)

AMERICAN BRISTOL INDUST

1600 W. 240th Street
Harbor City, CA 90710
(310) 534-5981
Fax 310-539-0430

FACSIMILE TRANSMISSION

COMPANY: WESTINGHOUSE HANFORD CO.		FAX NO: 509-373-1050
ATTN:	Post-It™ brand fax transmittal memo 7671 # of pages ▶ 3	
FROM:	To Carol Powe Co. HEHF	From Al Kostelnik Co. WHC
DATE:	Dept.	Phone # 3-0788
SUBJECT	Fax # 6-3399	Fax # 3-1050
		OUR FAX NO: 310-539-0430
		NO. OF PAGES INCL COVER: 3

AIR QUALITY TESTING

Two copies of the air sampling test reports, herewith attached, present the Air Quality Certifications.

Note that the water content for trailer #1 is 21.5 ppmv (-67°F) while trailer #2 is 5.6 ppmv (-85°F). This is because unit #2 has run longer (16 hours vs. 11.5) and the chemicals in the drier have had a longer reactivation time.

We intend to send the balance of the documentation tomorrow. Please review and approve the reports so that we may ship the units at the earliest possible moment, hopefully next week.

Carol, Powe ^{HEHF}
Please check these
test-results and
let me know if you
see anything that could
be a problem.
Thank,
Al Kostelnik
3-0788

Response, 10/31/94
From Ed Smith, ^{HEHF}
CO₂ levels should be
the same but
otherwise no problem.



AirCheck Report

WHC-SD-WM-ATR-104
Rev. 0
Appendix C-7 of C-8

P.O. Box 180850 - Austin, TX 78716 - 800-AIR-1024 - 512-328-4076 - FAX 512-328-4122

Customer# 123
American Bristol Ind.
Mr. Chuck Lamoreaux
1800 W 240th St.
Harbor City, CA 90710

Report No.: 94-3847
Date Analyzed: October 27, 1994
Sampled By: K. Lamoreaux
Date Sampled: October 26, 1994
Air Source ID: L. P. Trailer # 2 S/N
1A9CM222ORA079113

Sampled for Westinghouse Hanford

COMPRESSED AIR ANALYTICAL RESULTS

LIMITING CHARACTERISTIC		SOURCE AIR RESULTS	AMBIENT AIR RESULTS	CGA Grade D AIR SPECIFICATION
Oxygen, Volume % Balance Nitrogen		21.0	N/A	19.5-23.5
Carbon Monoxide, ppmv		<0.2	N/A	10
Carbon Dioxide, ppmv		101	N/A	1000
Water, ppmv / Dewpoint, °F		5.6 / -85	N/A	63 / -50 ^{note 1}
TOTAL VOLATILE ORGANIC COMPOUNDS (TVHC)	TVHC (including methane), ppmv	6.9	N/A	N/A
	Methane, ppmv	3.1	N/A	N/A
	TVHC (excluding methane), ppmv	3.8	N/A	N/A
Oil (condensed), mg/m ³ and particulates		N/A	N/A	5
Odor (provided by customer)		None/Slight	N/A	None/Slight


This sample COMPLIES with the gas portion only of CGA Grade D air specifications.

NOTE: (Note 1) This limit applies to the use of self contained breathing apparatus (SCBA). The above limit applies or 10 degrees lower than the coldest temperature expected in the area. For non-SCBA use the water content may vary with the intended use from saturated to very dry.
This specification is for a PARTIAL sample, i.e., either a source or filter sample was not submitted for analysis. No certificate will be issued since full compliance with the specification cannot be verified.

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Results reported relate only to the items tested. This report shall not be reproduced except in full, without the written approval of this laboratory.

	Oxygen	Methane	Carbon Monoxide	Carbon Dioxide	Water	TVHC	Oil/Par.
QC Accuracy (%)	99	100	101	100	97	100	100
QA Precision (%)	1.1	1.4	1.2	2.5	0.3	1.1	0.6


Richard A. Smith, C.I.H. - Laboratory Director



AirCheck Report™

P.O. Box 160850 • Austin, TX 78716 • 800-AIR-1024 • 512-328-4076 • FAX 512-328-4122



Customer# 123
American Bristol Ind.
 Mr. Chuck Lamoreaux
 1600 W 240th St.
 Harbor City, CA 90710

Report No.: 94-3848
 Date Analyzed: October 27, 1994
 Sampled By: K. Lamoreaux
 Date Sampled: October 26, 1994
 Air Source ID: L. P. Trailer # 1 S/N
 1A9CM2229RA079112

Sampled for Westinghouse Hanford

COMPRESSED AIR ANALYTICAL RESULTS

LIMITING CHARACTERISTIC		SOURCE AIR RESULTS	AMBIENT AIR RESULTS	CGA Grade D AIR SPECIFICATION
Oxygen, Volume % Balance Nitrogen		20.9	N/A	19.5-23.5
Carbon Monoxide, ppmv		<0.2	N/A	10
Carbon Dioxide, ppmv		678	N/A	1000
Water, ppmv / Dewpoint, °F		21.5 / -67	N/A	63 / -50 ^{note 1}
TOTAL HYDROCARBON (TVHC)	TVHC (including methane), ppmv	8.1	N/A	N/A
	Methane, ppmv	3.5	N/A	N/A
	TVHC (excluding methane), ppmv	4.6	N/A	N/A
Oil (condensed), mg/m ³ and particulates		N/A	N/A	5
Odor (provided by customer)		None/Slight	N/A	None/Slight

This sample COMPLIES with the gas portion only of CGA Grade D air specifications.

NOTES

(Note 1) This limit applies to the use of self contained breathing apparatus (SCBA). The above limit applies or 10 degrees lower than the coldest temperature expected in the area. For non-SCBA use the water content may vary with the intended use from saturated to very dry.

This specification is for a PARTIAL sample, i.e., either a source or filter sample was not submitted for analysis. No certificate will be issued since full compliance with the specification cannot be verified.

Laboratory accredited by the American Association for Laboratory Accreditation (A2LA).

Results reported relate only to the items tested. This report shall not be reproduced except in full, without the written approval of this laboratory.


	Oxygen	Methane	Carbon Monoxide	Carbon Dioxide	Water	TVHC	Oil Part.
Accuracy (%)	99	100	101	100	97	100	100
Precision (%)	1.1	1.4	1.2	2.5	0.3	1.1	0.6






Richard A. Smith, C.I.H. - Laboratory Director

PO 404883

QUALITY ASSURANCE INSPECTION PLAN

Sheet 1 of 2
Safety Class 3

Item Title Breathing Air Supply Trailer	Drawing/Spec. No. WHC-S-0251	Rev 0
	Item Description Trailer Mounted Breathing Air Compressor, Dryer, and Filter System	
	Supplier American Bristol Inc.	Inspection No. 3585
	P.O. Subcontract 404883 WBJ-XVV-404883	
Prepared by Al Kostelnik <i>[Signature]</i> Verderber	Date 12/2/94	Item No. 1 Qty. 2 Inspected by <i>[Signature]</i>  Date DEC 19 1994





Char. No.	Inspection Characteristics	INSPECTION STATUS					Remarks	
		Acc	Hld Tag	Rej	NCR	Cont Acc		
	<p>SAMPLE SIZE DETERMINATION Sample size (number of items to be inspected in a lot), shall be determined by using Table I and Table III-A of the latest edition of MIL-STD-105 as follows:</p> <ul style="list-style-type: none"> Select the Sample Size Code Letter from Table I, based on the lot size of material received and the General Inspection Level indicated by the QAIP (Level I, II, or III). Select the sample size from Table III-A using the Sample Size Code Letter obtained from Table I and the AQL number specified by the QAIP. The minimum sample size utilizing Level II, AQL 4.0, Table III-A shall be 8 or 100%, if the lot size is less than 8. <p>NOTE: If any samples are found nonconforming, the entire lot shall be placed on HOLD pending engineering evaluation and NCR disposition.</p>							
1	Verify the Breathing Air Trailer was not damaged during shipment.						DEC 19 1994	
2	Verify 4 stabilization jacks are included.		X		X			NCR 053269
3	Verify that the electrical supply cable mounted on the cable reel has an Appleton ADP6034 plug on the cord end.						DEC 22 1994	
4	Verify there are two (2) 100 foot lengths (±10 ft.) of 1" I.D. hose with Hansen ML8-H36 and a ML8-K36 couplings on each end.						DEC 19 1994	
5	Verify there are two (2) 50 foot lengths (±5 ft.) of 1" I.D. hose with Hansen ML8-H36 and a ML8-K36 couplings on each end.						DEC 19 1994	

12 02 94 15:50
 0509 070 5805
 MO 234 / QA
 85
 *** D

QUALITY ASSURANCE INSPECTION PLAN
(Continuation Sheet)

Sheet 2 of 2
Safety Class 3

Item Title Breathing Air Supply Trailer	Drawing/Spec. No. WHC-S-0251 Rev. 0
	P.O. No. 404883
	Item No. 1

Char. No.	Inspection Characteristics	INSPECTION STATUS					Remarks
		Acc	Hld Tag	Rej	NCR	Cond. Acc	
6	Verify there is a 12 port manifold with a Hansen MLB-K36 inlet coupling, a pressure regulator, filter, and (12) MSA-55597 female coupling outlets with dust covers. <i>Per Cog Engineer</i>	 FEB 22 1995			X		NCR 053269
7	Verify all valves and switches are labeled in accordance with Spec. requirements.	 DEC 18 1994		1994			
8	Verify there are no Suspect Fasteners on the Breathing Air Compressor Trailer.	 DEC 18 1994		1994			
9	Verify Receipt of 8 copies of Vendor Data. A. Assembly drawings showing general equipment layout, subassembly details, interface dimensions and identification of all major components. B. Piping and Instrumentation Diagram is included. Verify the drawing accurately reflects the trailer piping configuration. C. Schematic electrical drawings of wiring systems, including operating and safety devices, control panels, instrumentation and alarms. Include make, model and part numbers of items. Verify accuracy of the Schematic Electrical Drawing for the entire system using a Point-to-Point or Continuity check. D. Operating and maintenance instructions. E. Pictorial parts list and part numbers. F. Recommended spare parts list. G. Recommended maintenance procedures.	 FEB 22 1995					

12 02 94 15:54
 27509 070 5835
 NO 234 / QA
 55