



**Department of Energy**  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

FEB 26 2016

ESQ:TKM/16-ESQ-0042

MEMORANDUM FOR MONICA REGALBUTO  
ASSISTANT SECRETARY  
FOR ENVIRONMENTAL MANAGEMENT  
EM-1, HQ

FROM:

STACY CHARBONEAU  
MANAGER

A handwritten signature in black ink that reads "Stacy Charboneau".

SUBJECT:

CONTRACT NO. DE-AC06-08RL14788 – CH2M HILL PLATEAU  
REMEDICATION COMPANY (CHPRC) REQUEST FOR A  
PERMANENT VARIANCE FROM 10 CFR 851, WORKER SAFETY  
AND HEALTH PROGRAM

In relation to 10 CFR 851 Subpart D - Variances, the Richland Operations Office (RL) is transmitting the attached request from CHPRC for a permanent variance to 10 CFR 851.23(a)(3), specifically 29 CFR 1910.134(d)(1)(ii), incorporated into 10 CFR 851 by reference, and requiring respiratory equipment configurations to be National Institute of Occupational Safety and Health (NIOSH) approved. The variance request is to use an accessory that is not on the current NIOSH approval label for the Mine Safety Appliance PremAire® Supplied Air System.

RL has reviewed this variance request and finds no technical reason to deny this request. CHPRC has obtained independent test results that support their assertion that the accessory provides equivalent or greater protection to users of the PremAire® system and provided additional information according to the 10 CFR 851 variance process. RL requests consideration and approval of the permanent variance request in accordance with the 10 CFR 851 variance process.

If you have any questions, please contact me, or your staff may contact Jeffrey A. Frey, Assistant Manager for Safety and Environment, at (509) 376-7727.

Attachment

cc w/attach:

Celinda Crawford, EM-11  
Mark Gilbertson, EM-10  
James Hutton, EM-40  
Robert Seifert, EM-11  
Daniel Sigg, EM-41  
Terrance Tracy, EM-40  
Anthony Weadock, EM-42



CH2M HILL  
Plateau Remediation Company  
PO Box 1600  
Richland, WA  
99352

January 11, 2016

CHPRC-1600206

Mr. J. J. Short, Contracting Officer  
U.S. Department of Energy  
Richland Operations Office  
Post Office Box 550  
Richland, Washington 99352

Dear Mr. Short:

**CONTRACT NUMBER DE-AC06-08RL14788 – REQUEST FOR PERMANENT VARIANCE FOR 10 CFR 851, *WORKER SAFETY AND HEALTH PROGRAM*, FOR USE OF ADDITIONAL HARNESS WITH PREMAIRE BREATHING AIR SYSTEM**

In accordance with PRC Section J, Attachment J.2, Title 10 Code of Federal Regulations (CFR), Part 851, *Worker Safety and Health Program*, Subpart D – Variances, CHPRC is providing the attached request for permanent variance to 10 CFR 851.23(a)(3), specifically 29 CFR 1910.134(d)(1) (ii), “The employer to select NIOSH-certified respirators. The respirator shall be used in compliance with the conditions of its certification.” CHPRC requests the use of an additional harness (Mine Safety Appliance [MSA] PremAire respirator belt with an Occidental Leather, *Stronghold, Lights* suspender, Product No. 1546) that is not currently NIOSH approved.

With the understanding that the purpose of the 10 CFR 851 Rule Variance System is to provide alternative methods for specific requirements of DOE standards where equivalent levels of employee protections are provided, CHPRC believes that the use of this harness would provide equivalent or greater protection to the workers using the PremAire breathing air system at the Plutonium Finishing Plant.

The attached permanent variance request is provided for RL’s consideration for transmittal to the DOE’s Chief Health, Safety, and Security Officer for evaluation and approval.

This permanent variance request has been discussed with T. K. Mott and E. D. MacAlister.

Mr. J. J. Short  
Page 2  
January 11, 2016

CHPRC-1600206

Technical questions should be directed to M. T. Hughey at 373-2874, and contractual questions should be directed to K. K. Dickerson at 372-0177.

Sincerely,


John A. Ciucci  
President and  
Chief Executive Officer

mth/mrc

Attachment

RL - E. D. MacAlister  
T. K. Mott  
S. A. Sieracki

**Electronically Approved by:**



UserName: Ciucci, John (h5427583)  
Title: President and Chief Executive Officer  
Date: Thursday, 14 January 2016, 07:14 AM Pacific Time  
Meaning: Sign as John A. Ciucci

=====

ATTACHMENT

CHPRC-1600206  
CONTRACT NUMBER DE-AC06-08RL14788

**PERMANENT VARIANCE REQUEST FOR 10 CFR 851.23(a)(3)**

Consisting of 13 pages,  
including this cover page

PERMANENT VARIANCE REQUEST FOR 10 CFR 851.23(a)(3)

**10 CFR 851.31(c)(1)**

CH2M HILL Plateau Remediation Company  
P.O. Box 1600  
Richland, WA 99352

**10 CFR 851.31(c)(2)**

US Department of Energy  
Hanford Site  
P.O. Box 550  
Richland, WA 99352

**10 CFR 851.31(c)(3)**

CH2M HILL Plateau Remediation Company (CHPRC) requests U. S. Department of Energy, Office of Environmental Management approval of a variance to Title 10 Code of Federal Regulations (CFR) 851.23 (a)(3), specifically 29 CFR 1910.134(d)(1)(ii) "The employer to select NIOSH-certified respirators. The respirator shall be used in compliance with the conditions of its certification." CHPRC requests the use of an additional harness [Mine Safety Appliance (MSA) PremAire respirator belt with an Occidental Leather, *Stronghold, Lights* suspender, Product No. 1546 (attachment A)] that is not currently NIOSH approved.

With the understanding that the purpose of the 10 CFR 851 Rule Variance System is to provide alternative methods for specific requirements of DOE standards where equivalent levels of employee protections are provided, CHPRC believes that the use of this harness would provide equivalent or greater protection to the workers using the PremAire breathing air system at the Plutonium Finishing Plant.

The PremAire breathing air system, which is being used inside of a level B suit, is a NIOSH approved pressure-demand breathing air system. The MSA PremAire® Supplied-Air Respirator System has an escape cylinder option that "makes [the] system suitable for use in Immediately Dangerous to Life and Health (IDLH) environments." The manufacture has available a shoulder strap that can be used with this system (attachment B). In part, the manufacture's strap is designed to hold the escape cylinder. It is the cylinder, not the strap, however, that makes the system suitable for IDLH environments. The manufacturer's strap was NIOSH tested and approved with the supplied air equipment as an accessory.

The manufacture's strap attaches to the worker's belt at two points to provide support for the air hose, vortex tube, regulator, miscellaneous fittings in addition to the escape bottle. CHPRC has found that for PFP applications the manufacturer's strap is not adequate in length and raises the escape bottle too high for most workers to easily reach and activate their escape bottle. This represents a potential compromise to worker safety. It is also made of a firm plastic and is stressful to wear as it rubs into the side of the worker's neck. Thus CHPRC is seeking permission to adopt the use of an additional harness as a resolution.

**10 CFR 851.31(c)(4)**

The steps that CHPRC has taken to inform the affected workers of the application, was initiated with correspondence between CHPRC's Labor Relations Director, Rhonda Connolly, and Mr. Dave Molnaa, the Hanford Atomic Metal Trades Council (HAMTC) President on September 30, 2015. In that correspondence, Mr. Molnaa delegated Mr. John Hendry, Lead HAMTC Representative, to act on his behalf in this manner. The employees are members of the HAMTC Union and Mr. Molnaa and Mr. Hendry are the Authorized Employee Representatives. A meeting was held with the affected employees on October 5, 2015 to inform workers of the process. A copy of the variance request will be provided to Mr. Hendry and a summary of the application, once approved, will be issued in a Company communication indicating where a copy of the variance request can be examined.

**10 CFR 851.31(c)(5)**

During the Oct 5, 2015 meeting, the employees were informed of their right to petition the Chief Health Safety and Security officer or designees for a conference.

**10 CFR 851.31(d)(2)**

CHPRC is requesting a permanent variance.

**10 CFR 851.31(d)(2)(i)**

CHPRC has evaluated the use of the harness in conjunction with the PremAire breathing air system at PFP and determined that the harness provides better protection for the workers who initially brought the request forward. The harness not only replaces the MSA strap, it provides additional functions as well. The harness allows the escape cylinder to be easily accessed by the worker removing the potential for a situation adverse to worker safety and attaches to the worker's belt at four points rather than two points as provided by the MSA strap. This harness also supports the air hose, vortex tube, regulator, miscellaneous fittings and escape bottle. The harness provides greater support for the worker as the weight of the equipment is more evenly distributed on the worker's body. The harness also provides a means of securing additional monitoring devices (i.e. heat stress monitors, radiation dosimetry, and communication devices) that are worn inside of the level B suit.

**10 CFR 851.31(d)(ii)**

Although the additional harness was not part of the NIOSH testing for the PremAire breathing system, it has been tested by a testing laboratory to the same criteria (See attachment C) with satisfactory results. The manufacturer of the PremAire breathing system has provided written documentation that the harness does not interfere, replace or alter any approved safety-related configuration of the PremAire breathing system (attachment D). By continuing the use of the

supplemental harness, it is our belief that the methods, conditions, practices, and use of the harness is safer than the manufacture's approved accessory strap.

CHPRC has concluded that the use of the supplemental harness is effective and safe, provides an equivalent level of employee protection, and does not compromise employee protection standards. Based on the foregoing, CHPRC is requesting a variance to use the supplemental harness MSA PremAire respirator belt with an Occidental Leather, *Stronghold Lights* suspender, Product No. 1546, in conjunction with the PremAire breathing air system at the Plutonium Finishing Plant (PFP).

**ATTACHMENT A**

Picture of Supplemental Harness, MSA PremAire respirator belt with an Occidental Leather, *Stronghold Lights* suspender, Product No. 1546

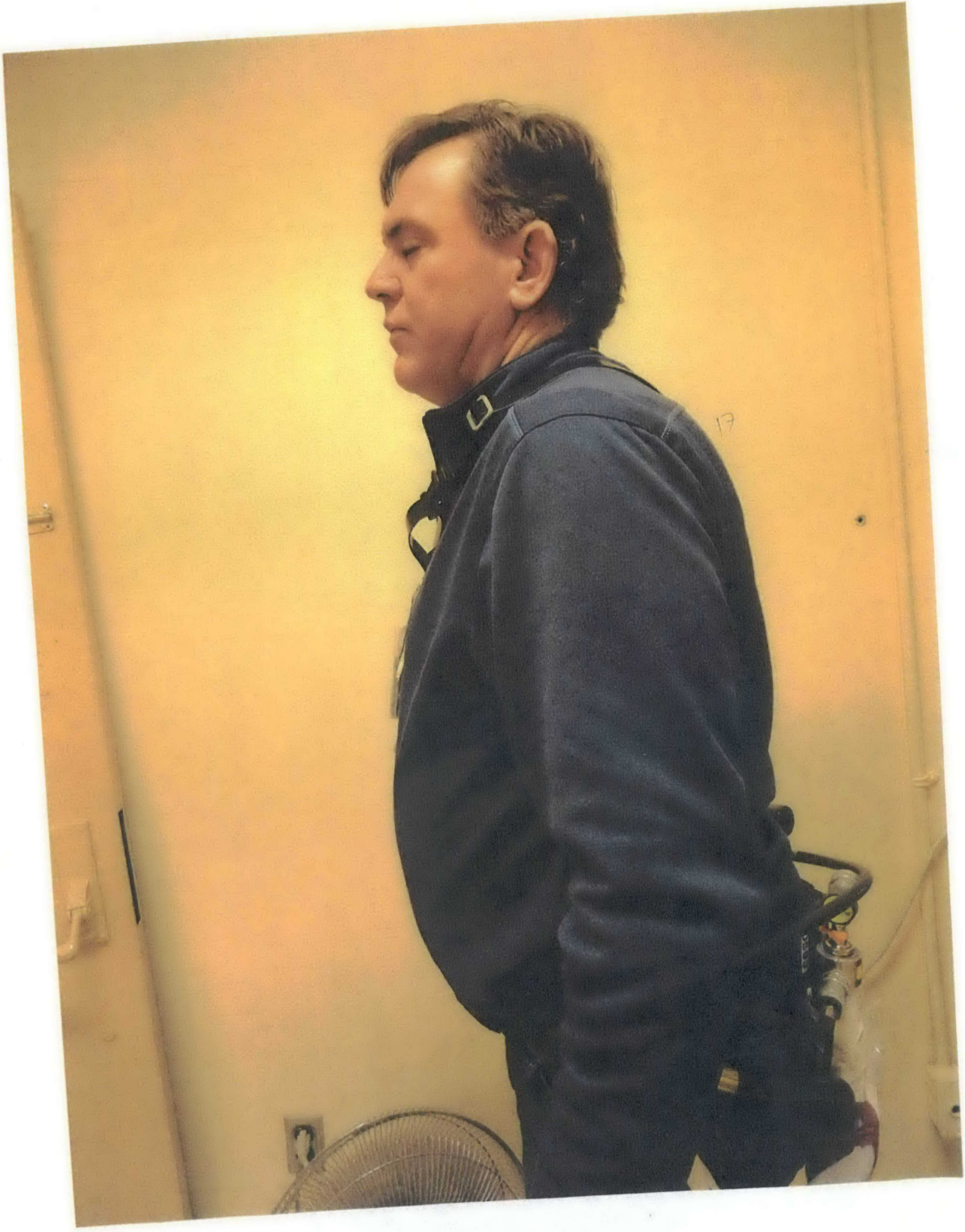


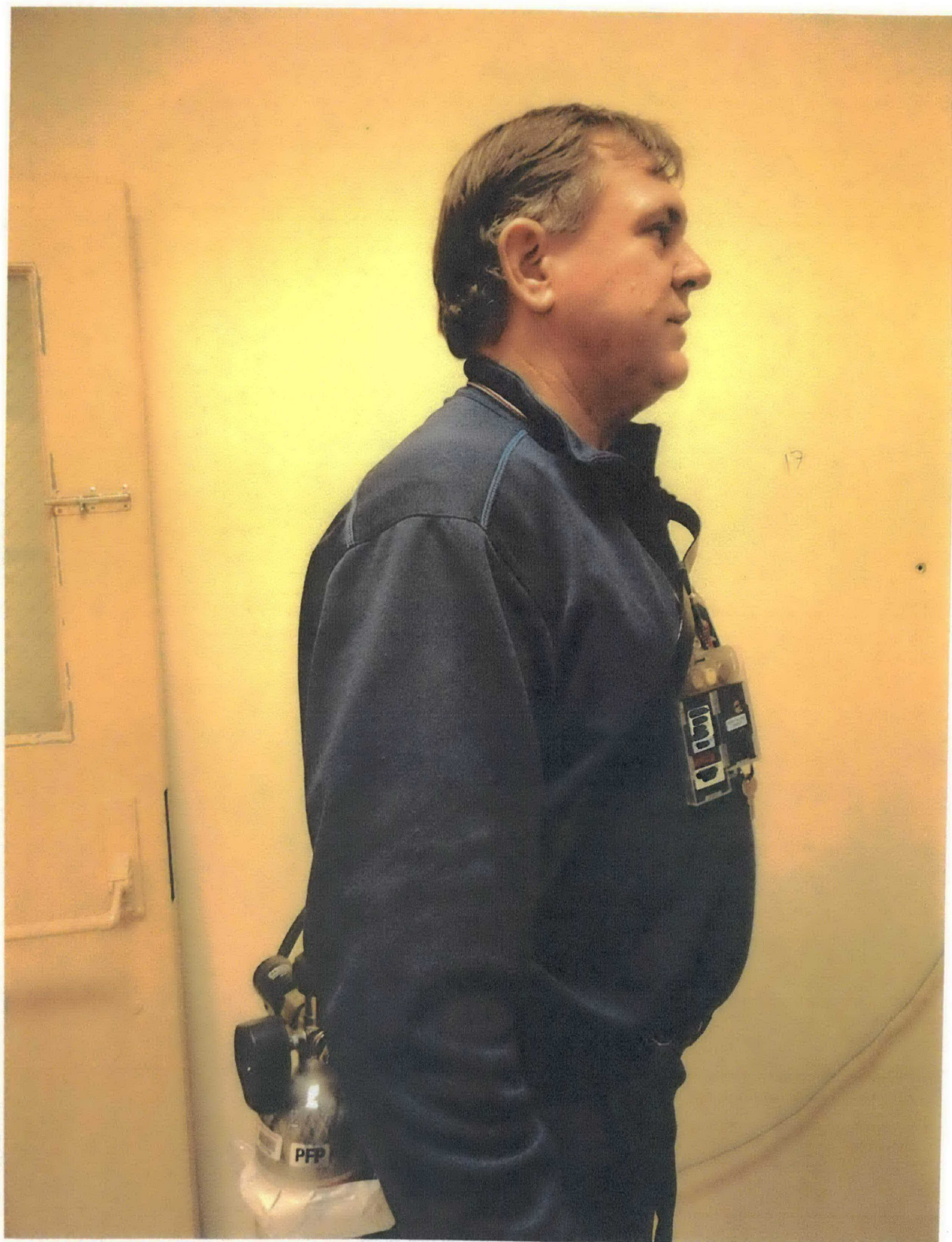


**ATTACHMENT B**  
NIOSH Approved Strap

CHPRC-1600206  
ATTACHMENT  
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## ATTACHMENT C

## INTERTEK TEST DATA SHEETS

Page 2 of 3

Client/Ref #: CH2M Hill Plateau Remediation Engineer: Andrew Rulison  
 Job No.: G102306800 Tested By: Andrew Rulison Date: 9/29/15  
 Product: MSA PremAire respirator belt with an Occidental Leather, Stronghold Lights suspender Reviewed By: Jason Allen Date: 9/29/15  
 Model No.: Product No. 1546 Standard: Section 84.151 (Type C respirator)  
 Quote #/Customer# Qu-00639382 TRANSCRIBED TEST DATA

Paragraph	Test Description	Results
(B)(1)	The harness employed on Type B supplied-air respirators shall not be uncomfortable, disturbing or interfere with the movements of the wearer.	The product was found to be comfortable and did not interfere with any movement while donned.
(B)(2)	The harness shall be easily adjustable to various sizes.	The product was found to have adjustments and could easily be adjusted to meet a range of different sizes.
(B)(3)	The hose shall be attached to the harness in a manner that will withstand a pull of 45 kg. (100 pounds) for 30 minutes without separating or showing signs of failure.	Fitting withstood 100 lbs. for a period of 30 minutes. Yes/NO Fitting #1- Withstood The Load Fitting #2- Withstood The Load
(B)(4)	The design of the harness and attachment of the line shall permit dragging the maximum length of hose considered for approval over a concrete floor without disarranging the harness or exerting a pull on the face piece.	The design of the product was found to be adequate to not pull on the face piece or disarrange the harness in any fashion.
(B)(5)	The arrangement and suitability of all harness accessories and fittings will be considered.	The product and its fittings and accessories were found to be suitable for use.
(C)	The harness employed on Type C respirators shall be similar to that required on the Type B respirator, or, it may consist of a simple arrangement for attaching the hose to a part of the wearer's clothing in a practical manner that prevents a pull equivalent to dragging the maximum length of the hose over a concrete floor from exerting pull upon the respiratory-inlet covering.	The product was found to be a simple to attach the hose to the wearer's clothing and prevented a pull equal to dragging the maximum length of hose and exerting force on the respiratory-inlet covering.


## Testing Pictures



INTERTEK TEST DATA SHEETS

Page 3 of 3

Client/Ref #: CH2M Hill Plateau Remediation Engineer: Andrew Rulison  
 Job No.: G102306800 Tested By: Andrew Rulison Date: 9/29/15  
 Product: MSA PremAire respirator belt with an Occidental Leather, Stronghold Lights suspender Reviewed By: Jason Allen Date: 9/29/15  
 Model No.: Product No. 1546 Standard: Section 84.151 (Type C respirator)  
 Quote #/Customer# Qu-00639382 **TRANSCRIBED TEST DATA**

Paragraph	Test Description	Results
		

**ATTACHMENT D**  
**MSA Verification of Review Letter**



July 15, 2013

CH2M-Hill PRC  
Attn: David Chojnacki  
PO Box 1000  
Richland, WA 99352

**MSA North America**  
**Ryan Lab**  
1100 Cranberry Woods Drive  
Cranberry Township, PA 16066  
  
724.776.7700

Dear Mr. Chojnacki,

MSA has reviewed the attached image. The harness assembly that is the subject of your inquiry appears to be a PPE accessory intended to provide user comfort and stress relief. The images do not show that this harness interferes, replaces or alters any approved configuration of the respiratory protection device or changes how it is worn or used.

However, since this harness is a non-MSA accessory, MSA has not evaluated its performance and cannot verify its suitability or effectiveness. MSA can advise that it is a recommended practice that respiratory protection devices be fit tested with all accessories that are used in workplace conditions.

Regards,

Jay G. Mears

A handwritten signature in cursive script that reads "Jay G. Mears".

Product Line Manager  
Industrial Supplied Air Respirators

Cc: Paul Steiger - MSA

MSA Corporate Center  
1000 Cranberry Woods Drive  
Cranberry Township, PA 16066  
800.MSA.2222  
www.MSAnet.com




Department of Energy  
Washington, DC 20585

April 28, 2016

MEMORANDUM FOR DAVID M. KLAUS

DEPUTY UNDER SECRETARY FOR  
MANAGEMENT AND PERFORMANCE

FROM:

MATTHEW B. MOURY   
ASSOCIATE UNDER SECRETARY FOR  
ENVIRONMENT, HEALTH, SAFETY AND SECURITY

SUBJECT:

Approval of a Permanent Variance for the Use of an Additional  
Harness with the Mine Safety Appliance PremAire® Breathing System  
at CH2M Hill Plateau Remediation Company

**ISSUE:** Whether to approve a permanent variance request (eVariance # 1029), made by CH2M Hill Plateau Remediation Company (CHPRC) at the Hanford Reservation Plutonium Finishing Plant, from certain respiratory protection requirements in title 10, Code of Federal Regulations, part 851 (10 CFR 851, the Rule), *Worker Safety and Health Program*.

**BACKGROUND:** Title 10 CFR 851.23 requires contractors to comply with the safety and health standards in 29 CFR 1910, *Occupational Safety and Health Standards*, that are applicable to the hazards at their workplace. In situations where verbatim compliance with a standard is not practical, the contractor may request a variance from the provisions of the rule; however, the contractor must commit to specific alternative means of providing equivalent safety.

The Deputy Assistant Secretary for Safety, Security, and Quality Programs, within the Office of Environmental Management (EM), indicates that EM Headquarters and Richland Operations Office endorse this permanent variance request. Copies of EM's approval and the CHPRC variance application are attached.

**JUSTIFICATION:** CHPRC is requesting a permanent variance from 10 CFR 851.23(a)(3), that requires in 29 CFR 1910.134(d)(1)(ii), the employer to "select NIOSH-approved certified respirators. The respirator shall be used in compliance with the conditions of its certification." CHPRC is requesting the use of an additional harness (MSA PremAire® respirator belt with an Occidental Leather, *Stronghold, Lights* suspender, Product No. 1546) in conjunction with the PremAire® Breathing System that is not currently a National Institute for Occupational Safety and Health-approved accessory.

CHPRC has shown that the use of the additional harness, in conjunction with the PremAire® Breathing System, would provide equivalent or greater protection to the workers using the system at the Hanford Reservation Plutonium Finishing Plant. Also, the manufacturer of the PremAire® breathing system provided written documentation that the additional harness does not



interfere, replace, or alter any approved safety-related configuration of the PremAire® Breathing System.

Based upon a review by AU subject matter experts, AU recommends approval of CHPRC's variance application. The recommended approval is contingent upon implementation of the specific conditions, practices, means, and methods being used as described in the documentation provided that proposes to provide workers a place of employment that is as safe and healthful as would result from compliance with the standard from which the variance is sought as required by 10 CFR 851.31, *Variance Process*.

**RECOMMENDATION:** That you approve this permanent variance.

APPROVE:  \_\_\_\_\_

DISAPPROVE: \_\_\_\_\_

DATE: 4/23/2016 \_\_\_\_\_