



NIOSH Reference: TN-18154
Mfr. Reference: SBC1102

Centers for Disease Control
and Prevention (CDC)
National Institute for Occupational
Safety and Health (NIOSH)
National Personal Protective
Technology Laboratory (NPPTL)
P.O. Box 18070
Pittsburgh, PA 15236-0070
Phone: 412-386-4000
Fax: 412-386-4051
January 27, 2012

Ms. Grace Zhang, Manager
Shenyang Baianda Safety Co., Ltd.
Floor 4, 9# Building No. 17 WenSu Street
Hunnan New District
Shenyang, Liaoning 110168
China

Dear Ms. Zhang:

The National Institute for Occupational Safety and Health (NIOSH) has reviewed your request accepted November 15, 2011. This request was for approval of the air purifying respirator (APR) consisting of a half mask, part number FEA02 with a particulate filter, part number 1201, for protections against particulates at a P100 filter efficiency level, reference assembly matrix SBC1102AM1.xls. In addition, the Shenyang Baianda Safety Company Quality Manual, document number BQ1-02100 R: 1.1, revision 1.1 and revision date 2011-10-02 was presented for review.

This request is granted. Approval is granted only for documentation written in the English language. It is the manufacturer's responsibility to correctly translate materials desired in languages other than English. Approval number TC-84A-5528 has been assigned. This respirator is approved for protection against particulates at a P100 filter efficiency level.

NIOSH has also reviewed the quality manual presented and finds that this manual meets or exceeds the minimum technical requirements for quality assurance plans as outlined in Title 42, *Code of Federal Regulations* (CFR), Part 84.41(a); and, on the basis of this review, this quality manual is accepted.

The CD enclosed with this letter contains the final respirator and filter approval labels. The cautions and limitations which apply to this approval are on the approval labels. Only those assemblies affected by this request, or where new approval numbers are assigned, apply to this approval action. Production approval labels cannot include information on unapproved configurations.

The approved assembly consists of the parts as listed on the approval labels and the assembly matrix. Parts are to be marked with the numbers indicated on the approval labels in a legible and permanent manner (marking cannot be removed without evidence of its previous presence).

This certificate of approval is not an endorsement of the respirator by NIOSH, and such endorsement shall not be stated or implied in advertisements or other publicity. However, you may publicize the fact that this respirator has met the requirements of Title 42, *Code of Federal Regulations*, Part 84 (42 CFR 84).

No changes may be made to any respirator and accompanying documentation without prior written approval of NIOSH. Requests for changes must be submitted to NIOSH and a modification of this approval must be granted before changes are made.

Sincerely yours,

A handwritten signature in blue ink, appearing to read "Heinz W. Ahlers", is written over a faint, circular official stamp.

Heinz W. Ahlers

Chief, Technology Evaluation Branch

National Personal Protective Technology Laboratory

Enclosures



National Institute for Occupational Safety and Health
National Personal Protective Technology Laboratory
Technology Evaluation Branch
Certification, Evaluation and Testing Section
P.O. Box 18070
Pittsburgh, PA 15236

TEST REPORT

Task Number: TN-18154

Manufacturer: Shenyang Baianda Safety Co., Ltd.

Prepared by: Jeremy Brannen

Tests Conducted by: Jeremy Brannen

Date: December 14, 2011

Respirator Tested: FEA02/1201

Background Information

In an application accepted November 15, 2011 Shenyang Baianda Safety Company requested an approval of the air purifying respirator (APR) consisting of a half mask, part number FEA02 with a particulate filter, part number 1201, for protections against particulates at a P100 filter efficiency level, reference assembly matrix SBC1102AM1.xls. In addition, the Shenyang Baianda Safety Company Quality Manual, document number BQ1-02100 R: 1.1, revision 1.1 and revision date 2011-10-02 was presented for review.

Tests Assigned

<u>Test Description</u>	<u>STP Number</u>	<u>Reference</u>
A. Exhalation Resistance Test	RCT-APR-STP-0003	84.180
B. Exhalation Valve Leakage Test	TEB-APR-STP-0004	84.182
C. Inhalation Resistance Test	TEB-APR-STP-0007	84.180
D. DOP P100 Test	TEB-APR-STP-0051	84.181

Overall Results

The items tested passed laboratory testing.

Individual Test Results

See the attached test data sheets.

National Institute for Occupational Safety and Health
Respirator Branch
Test Data Sheet



Task Number: TN-18154

Reference No.: CFR 84.203

Test: Exhalation Resistance Test

STP No.: 3

Manufacturer: Shenyang Baianda Safety Co., Ltd.

Filter Type: Filter Only

Item Tested: FEA02/1201

Sample	Maximum Allowable Resistance (MM of H ₂ O)	Actual Resistance (MM of H ₂ O)	Result
	Exhalation	Exhalation	
1	25	7.1	PASS
2	25	7.1	PASS
3	25	7.1	PASS

Overall Result: PASS

Comments:

Was all equipment verified to be in calibration throughout all testing?

☒ Yes ☐ No

Signature:

Engineering Technician

Date: 12/14/2011

National Institute for Occupational Safety and Health
Respirator Branch
Test Data Sheet



Task Number: TN-18154

Reference No.: CFR 84.204

Test: Exhalation Valve Leakage Test

STP No.: 4

Manufacturer: Shenyang Baianda Safety Co., Ltd.

Item Tested: FEA02 Exhalation Valve

LEAKAGE						
Sample	Trial #1 (mL/min.)	Trial #2 (mL/min.)	Trial #3 (mL/min.)	Average (mL/min.)	Maximum Allowable (mL/min.)	Result
Valve 1	2.289	2.282	2.302	2.29	30	PASS
Valve 2	1.809	1.805	1.845	1.82	30	PASS
Valve 3	3.455	3.378	3.394	3.41	30	PASS
Overall Result: PASS						

Signature: 

Date: 12/14/2011

Task Number: TN-18154

Reference No.: CFR 84.204

Test: Exhalation Valve Leakage Test

STP No.: 4

Manufacturer: Shenyang Baianda Safety Co., Ltd.

Item Tested: FEA02 Exhalation Valve

Comments:

Was all equipment verified to be in calibration throughout all testing?

☒ Yes ☐ No

Signature:



Engineering Technician

Date: 12/14/2011

National Institute for Occupational Safety and Health
Respirator Branch
Test Data Sheet



Task Number: TN-18154

Reference No.: CFR 84.203

Test: Inhalation Resistance Test

STP No.: 7

Manufacturer: Shenyang Baianda Safety Co., Ltd.

Item Tested: FEA02/1201

Filter Type: Filter Only

Sample	Maximum Allowable Resistance (MM of H2O)	Actual Resistance (MM of H2O)	Result
	Inhalation	Inhalation	
1	35	19.8	PASS
2	35	20.1	PASS
3	35	19.3	PASS
Overall Result: PASS			

Signature:

A handwritten signature in black ink, appearing to read "Jeremy B. Duane". The signature is written in a cursive, flowing style.

Engineering Technician

Date: 12/14/2011

Task Number: TN-18154

Reference No.: CFR 84.203

Test: Inhalation Resistance Test

STP No.: 7

Manufacturer: Shenyang Baianda Safety Co., Ltd.

Item Tested: FEA02/1201

Comments:

Was all equipment verified to be in calibration throughout all testing?

☒ **Yes** ☐ **No**

Signature:



Engineering Technician

Date: 12/14/2011

National Institute for Occupational Safety and Health
Respirator Branch
Test Data Sheet



Task Number: TN-18154

Reference No.: CFR 84.181

Test: Dioctyl Phthalate (DOP) - P100

STP No.: 51

Manufacturer: Shenyang Baianda Safety Co., Ltd.

Item Tested: 1201

Filter	Flow Rate	Initial Filter Resistance	Maximum Allowable Percent Leakage	Initial Percent Leakage	Maximum Percent Leakage	Result
1	42.5	20.5	0.03	0.000	0.000	PASS
2	42.5	19.9	0.03	0.001	0.000	PASS
3	42.5	20.4	0.03	0.000	0.000	PASS
4	42.5	20.6	0.03	0.000	0.000	PASS
5	42.5	20.0	0.03	0.000	0.000	PASS
6	42.5	20.5	0.03	0.001	0.000	PASS
7	42.5	19.8	0.03	0.000	0.000	PASS
8	42.5	20.3	0.03	0.000	0.000	PASS
9	42.5	19.3	0.03	0.000	0.000	PASS
10	42.5	19.9	0.03	0.000	0.000	PASS
11	42.5	20.7	0.03	0.000	0.000	PASS
12	42.5	21.0	0.03	0.000	0.000	PASS
13	42.5	20.6	0.03	0.000	0.000	PASS
14	42.5	20.2	0.03	0.000	0.000	PASS
15	42.5	19.4	0.03	0.000	0.000	PASS
16	42.5	20.5	0.03	0.000	0.000	PASS
17	42.5	20.9	0.03	0.000	0.000	PASS
18	42.5	20.3	0.03	0.000	0.000	PASS
19	42.5	20.3	0.03	0.000	0.000	PASS
20	42.5	20.0	0.03	0.000	0.000	PASS

Overall Result: PASS

Signature:

Engineering Technician

Date: 12/14/2011

Task Number: TN-18154

Reference No.: CFR 84.181

Test: Dioctyl Phthalate (DOP) - P100

STP No.: 51

Manufacturer: Shenyang Baianda Safety Co., Ltd.

Item Tested: 1201

Comments:

Was all equipment verified to be in calibration throughout all testing?

☒ Yes ☐ No

Signature:



Engineering Technician

Date: 12/14/2011

Degradation Criteria for P100 Filters

Task Number: TN-18154

Test: Degradation Criteria for P100 Filters

Manufacturer: Shenyang Baianda Safety Co., Ltd.

Item Tested: 1201 P100 Filter

Filter	Allowable % Pene BW	Reading #1 % Pene	Reading #2 % Pene	Reading #3 % Pene	Reading #4 % Pene	Reading #5 % Pene	Result
1	0.004	0.000	0.000	0.000	0.000	0.000	PASS
2	0.004	0.000	0.000	0.000	0.000	0.000	PASS
3	0.004	0.000	0.000	0.000	0.000	0.000	PASS
4	0.004	0.000	0.000	0.000	0.000	0.000	PASS
5	0.004	0.000	0.000	0.000	0.000	0.000	PASS
6	0.004	0.000	0.000	0.000	0.000	0.000	PASS
7	0.004	0.000	0.000	0.000	0.000	0.000	PASS
8	0.004	0.000	0.000	0.000	0.000	0.000	PASS
9	0.004	0.000	0.000	0.000	0.000	0.000	PASS
10	0.004	0.000	0.000	0.000	0.000	0.000	PASS
11	0.004	0.000	0.000	0.000	0.000	0.000	PASS
12	0.004	0.000	0.000	0.000	0.000	0.000	PASS
13	0.004	0.000	0.000	0.000	0.000	0.000	PASS
14	0.004	0.000	0.000	0.000	0.000	0.000	PASS
15	0.004	0.000	0.000	0.000	0.000	0.000	PASS
16	0.004	0.000	0.000	0.000	0.000	0.000	PASS
17	0.004	0.000	0.000	0.000	0.000	0.000	PASS
18							
19							
20							

Overall Result: PASS

Test Technician: Jeremy Brannen

Date: December 11, 2011

Approval - Concurrence

Concurrence - Process in order shown, sending the project to the next person on the list.

TN18154 (SBC)

Author - be sure to complete the checklist to include all relevant information for the Program Assistant.

Author Date sent to peer review and MSHA (if applicable)

TDP 01/13/2012 1/13/2012

MSHA representative Date sent to Secretary- N/A

Test & Performance Evaluation Team Date sent to Branch Chief (cc: Secretary)

JAP 1/13/2012

Branch Chief Date sent to Secretary

hwa 1/20/2012

Secretary Date ready for signature

LL 1/26/2012

Secretary Date mailed

LL 1/27/2012

Luncinski, Lillian (CDC/NIOSH/NPPTL)

From: Ahlers, Heinz W. (CDC/NIOSH/NPPTL)
Sent: Friday, January 20, 2012 12:11 PM
To: Luncinski, Lillian (CDC/NIOSH/NPPTL); Peterson, Jeff (CDC/NIOSH/NPPTL); Pouchot, Thomas D. (CDC/NIOSH/NPPTL); Thornton, Terry L. (CDC/NIOSH/NPPTL)
Subject: FW: TN18154 Approval Letter, TN18154SBCnew.doc
Attachments: 18154rep.doc; 18154Concurrence and checklist.xls; TN18154SBCnew.doc

I concur

-----Original Message-----

From: Peterson, Jeff (CDC/NIOSH/NPPTL)
Sent: Friday, January 13, 2012 12:32 PM
To: Ahlers, Heinz W. (CDC/NIOSH/NPPTL)
Cc: Pouchot, Thomas D. (CDC/NIOSH/NPPTL)
Subject: FW: TN18154 Approval Letter, TN18154SBCnew.doc

I concur

-----Original Message-----

From: Pouchot, Thomas D. (CDC/NIOSH/NPPTL)
Sent: Friday, January 13, 2012 8:41 AM
To: Peterson, Jeff (CDC/NIOSH/NPPTL)
Subject: TN18154 Approval Letter, TN18154SBCnew.doc

Jeff,

Attached are the approval letter, test report and concurrence checklist for TN18154 (SBC). The file will be in your office shortly.

Any issues, please contact me.

Tom Pouchot
Ext 4036

The message is ready to be sent with the following file or link attachments:

18154rep.doc
18154Concurrence and checklist.xls
TN18154SBCnew.doc

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.