



TEST REPORT

NUMBER: SHAH00056319S1

APPLICANT: COOPER BUSSMANN TECHNICAL CENTER
THOMAS A. EDISON RESEARCH &
DEVELOPMENT CENTER (SHANGHAI), 955
SHENG LI ROAD HEQING INDUSTRY ZONE,
NEW DISTRICT SHANGHAI, CHINA.
ATTN: SUSAN ZHAO

DATE: NOV 26, 2008

THIS IS TO SUPERSEDE
REPORT NO. SHAH00056319
DATED MAY 12, 2008

SAMPLE DESCRIPTION:

ONE (1) PIECE OF SUBMITTED SAMPLE SAID TO BE **BEIGE TUBE**.

ITEM NAME : TUBE.
PART NO. : FB031500.
LOT NO. : FN8D21-5.
P.O. NO. : 4501 466095.

TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

SUMMARY:

<u>TESTED SAMPLES</u>	<u>STANDARD</u>	<u>RESULT</u>
SUBMITTED SAMPLES	WITH REFERENCE TO TEST METHOD OF IEC 62321 - 111/95/CDV AND MAXIMUM CONCENTRATION LIMITS QUOTED FROM ROHS DIRECTIVES 2002/95/EC AND AMENDMENT 2005/618/EC	PASS

TO BE CONTINUED

PREPARED AND CHECKED BY:
FOR INTERTEK TESTING SERVICES
LTD., SHANGHAI

AUTHORIZED BY:
FOR INTERTEK TESTING SERVICES
LTD., SHANGHAI

MYRA LV
CHEMICAL DIVISION MANAGER

STEPHEN TSANG
GENERAL MANAGER



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1 (A) TEST RESULT SUMMARY:

TESTING ITEM	RESULT	RoHS LIMIT
CADMIUM (Cd) CONTENT (ppm)	ND	100
LEAD (Pb) CONTENT (ppm)	62	1000
MERCURY (Hg) CONTENT (ppm)	ND	1000
CHROMIUM VI (Cr ⁶⁺) CONTENT (ppm)	ND	1000
POLYBROMINATED BIPHENYLS (PBB) IN ppm		1000
MONOBROMOBIPHENYLS (MonoBB)	ND	--
DIBROMOBIPHENYLS (DiBB)	ND	--
TRIBROMOBIPHENYLS (TriBB)	ND	--
TETRABROMOBIPHENYLS (TetraBB)	ND	--
PENTABROMOBIPHENYLS (PentaBB)	ND	--
HEXABROMOBIPHENYLS (HexaBB)	ND	--
HEPTABROMOBIPHENYLS (HeptaBB)	ND	--
OCTABROMOBIPHENYLS (OctaBB)	ND	--
NONABROMOBIPHENYLS (NonaBB)	ND	--
DECABROMOBIPHENYLS (DecaBB)	ND	--
POLYBROMINATED DIPHENYL ETHERS (PBDE) IN ppm		1000
MONOBROMODIPHENYL ETHER (MonoBDE)	ND	--
DIBROMODIPHENYL ETHER (DiBDE)	ND	--
TRIBROMODIPHENYL ETHER (TriBDE)	ND	--
TETRABROMODIPHENYL ETHER (TetraBDE)	ND	--
PENTABROMODIPHENYL ETHER (PentaBDE)	ND	--
HEXABROMODIPHENYL ETHER (HexaBDE)	ND	--
HEPTABROMODIPHENYL ETHER (HeptaBDE)	ND	--
OCTABROMODIPHENYL ETHER (OctaBDE)	ND	--
NONABROMODIPHENYL ETHER (NonaBDE)	ND	--
DECABROMODIPHENYL ETHER (DecaBDE)	ND	--

REMARKS:

ppm = PARTS PER MILLION = mg/kg

ND = NOT DETECTED

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(B) TEST METHOD :

<u>TESTING ITEM</u>	<u>TESTING METHOD</u>	<u>REPORTING LIMIT</u>
CADMIUM (Cd) CONTENT	WITH REFERENCE TO USEPA 3052, BY ACID DIGESTION AND DETERMINED BY ICP-AES	2 ppm
LEAD (Pb) CONTENT	WITH REFERENCE TO USEPA 3052, BY ACID DIGESTION AND DETERMINED BY ICP-AES	2 ppm
MERCURY (Hg) CONTENT	WITH REFERENCE TO USEPA 3052, BY ACID DIGESTION AND DETERMINED BY ICP-AES	2 ppm
CHROMIUM VI (Cr ⁶⁺) CONTENT	WITH REFERENCE TO USEPA 3060A & 7196A, BY ALKALINE DIGESTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER	1 ppm

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<u>TESTING ITEM</u>	<u>TESTING METHOD</u>	<u>REPORTING LIMIT</u>
MONOBROMINATED BIPHENYLS (MONOBB)	WITH REFERENCE TO USEPA 3540C, BY SOLVENT EXTRACTION AND DETERMINED BY GC/MS AND HPLC	5 ppm
DIBROMINATED BIPHENYLS (DIBB)		5 ppm
TRIBROMINATED BIPHENYLS (TRIBB)		5 ppm
TETRABROMINATED BIPHENYLS (TETRABB)		5 ppm
PENTABROMINATED BIPHENYLS (PENTABB)		5 ppm
HEXABROMINATED BIPHENYLS (HEXABB)		5 ppm
HEPTABROMINATED BIPHENYLS (HEPTABB)		5 ppm
OCTABROMINATED BIPHENYLS (OCTABB)		5 ppm
NONABROMINATED BIPHENYLS (NONABB)		5 ppm
DECABROMINATED BIPHENYLS (DECABB)		5 ppm
MONOBROMINATED BIPHENYLS ETHER (MONOBDE)		5 ppm
DIBROMINATED BIPHENYLS ETHER (DIBDE)		5 ppm
TRIBROMINATED BIPHENYLS ETHER (TRIBDE)		5 ppm
TETRABROMINATED BIPHENYLS ETHER (TETRABDE)		5 ppm
PENTABROMINATED BIPHENYLS ETHER (PENTABDE)		5 ppm
HEXABROMINATED BIPHENYLS ETHER (HEXABDE)		5 ppm
HEPTABROMINATED BIPHENYLS ETHER (HEPTABDE)		5 ppm
OCTABROMINATED BIPHENYLS ETHER (OCTABDE)		5 ppm
NONABROMINATED BIPHENYLS ETHER (NONABDE)		5 ppm
DECABROMINATED BIPHENYLS ETHER (DECABDE)		5 ppm

COMMENT: THE DATA SHOWN IN THIS REPORT MEET THE LIMITS OF ROHS
(2002/95/EC) REQUIREMENT.

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TESTS CONDUCTED

2 (A) TEST RESULT SUMMARY:

TESTING ITEM	RESULT
CADMIUM (Cd) CONTENT (mg/kg)	ND
LEAD (Pb) CONTENT (mg/kg)	62
MERCURY (Hg) CONTENT (mg/kg)	ND
CHROMIUM (VI) (Cr ⁶⁺) CONTENT (mg/kg) (FOR NON-METAL)	ND
POLYBROMINATED BIPHENYLS (PBBs) (mg/kg)	
MONOBROMOBIPHENYL (MonoBB)	ND
DIBROMOBIPHENYL (DiBB)	ND
TRIBROMOBIPHENYL (TriBB)	ND
TETRABROMOBIPHENYL (TetraBB)	ND
PENTABROMOBIPHENYL (PentaBB)	ND
HEXABROMOBIPHENYL (HexaBB)	ND
HEPTABROMOBIPHENYL (HeptaBB)	ND
OCTABROMOBIPHENYL (OctaBB)	ND
NONABROMOBIPHENYL (NonaBB)	ND
DECABROMOBIPHENYL (DecaBB)	ND
POLYBROMINATED DIPHENYL ETHERS (PBDEs) (mg/kg)	
MONOBROMODIPHENYL ETHER (MonoBDE)	ND
DIBROMODIPHENYL ETHER (DiBDE)	ND
TRIBROMODIPHENYL ETHER (TriBDE)	ND
TETRABROMODIPHENYL ETHER (TetraBDE)	ND
PENTABROMODIPHENYL ETHER (PentaBDE)	ND
HEXABROMODIPHENYL ETHER (HexaBDE)	ND
HEPTABROMODIPHENYL ETHER (HeptaBDE)	ND
OCTABROMODIPHENYL ETHER (OctaBDE)	ND
NONABROMODIPHENYL ETHER (NonaBDE)	ND
DECABROMODIPHENYL ETHER (DecaBDE)	ND

NAME OF OPERATION:

mg/kg = MILLIGRAM PER KILOGRAM = ppm

ND = NOT DETECTED

NOTE: DecaBDE IN POLYMERIC APPLICATIONS IS EXEMPTED ACCORDING TO
ROHS DIRECTIVE AMENDMENT 2005/717/EC.

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TESTS CONDUCTED
(B) RoHS REQUIREMENT:

RESTRICTED SUBSTANCES	LIMITS
CADMIUM (Cd)	0.01% (100 ppm)
LEAD (Pb)	0.1% (1000 ppm)
MERCURY (Hg)	0.1% (1000 ppm)
CHROMIUM (VI) (Cr ⁶⁺)	0.1% (1000 ppm)
POLYBROMINATED BIPHENYLS (PBBs)	0.1% (1000 ppm)
POLYBROMINATED DIPHENYL ETHERS (PBDEs)	0.1% (1000 ppm)

THE ABOVE LIMITS WERE QUOTED FROM 2002/95/EC AND AMENDMENT
2005/618/EC FOR HOMOGENEOUS MATERIAL.

(C) TEST METHOD:

TESTING ITEM	TESTING METHOD	LIMIT QUANTIFICATION
CADMIUM (Cd) CONTENT	WITH REFERENCE TO IEC 62321 - 111/95/CDV, BY ACID DIGESTION AND DETERMINED BY ICP-OES	2 mg/kg
LEAD (Pb) CONTENT	WITH REFERENCE TO IEC 62321 - 111/95/CDV, BY ACID DIGESTION AND DETERMINED BY ICP-OES	2 mg/kg
MERCURY (Hg) CONTENT	WITH REFERENCE TO IEC 62321 - 111/95/CDV, BY ACID DIGESTION AND DETERMINED BY ICP-OES	2 mg/kg
CHROMIUM (VI) (Cr ⁶⁺) CONTENT (FOR NON- METAL)	WITH REFERENCE TO IEC 62321 - 111/95/CDV, BY ALKALINE DIGESTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER	1 mg/kg
POLYBROMINATED BIPHENYLS (PBBs) & POLYBROMINATED DIPHENYL ETHERS (PBDEs)	WITH REFERENCE TO IEC 62321 - 111/95/CDV, BY SOLVENT EXTRACTION AND DETERMINED BY GC/MS AND FURTHER HPLC CONFIRMATION WHEN NECESSARY.	5 mg/kg

NOTE: TESTS WERE CONDUCTED WITH REFERENCE TO 111/95/CDV VERSION 2007-10-12 WHICH IS STILL A DRAFT METHOD AND SUBJECT TO FUTURE CHANGES PRIOR TO PUBLICATION.

DATE SAMPLE RECEIVED: MAY 6, 2008
TESTING PERIOD: MAY 6, 2008 TO MAY 9, 2008

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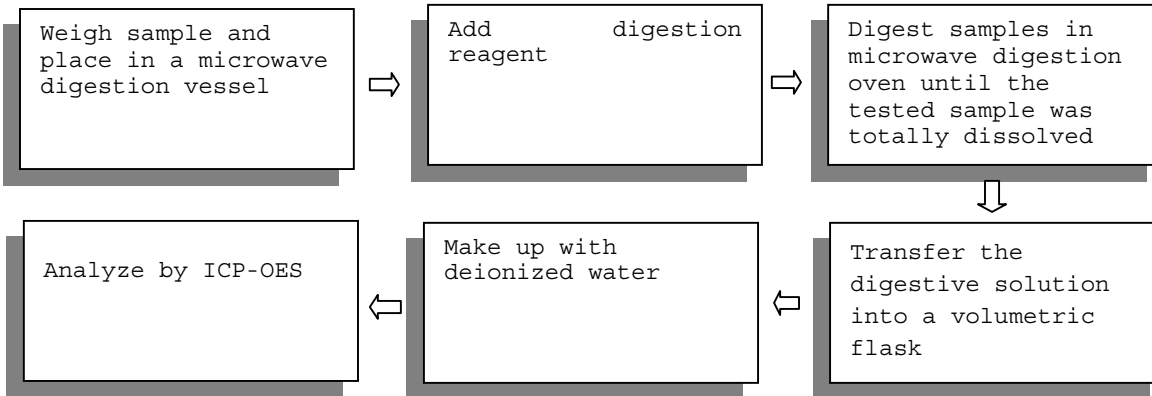
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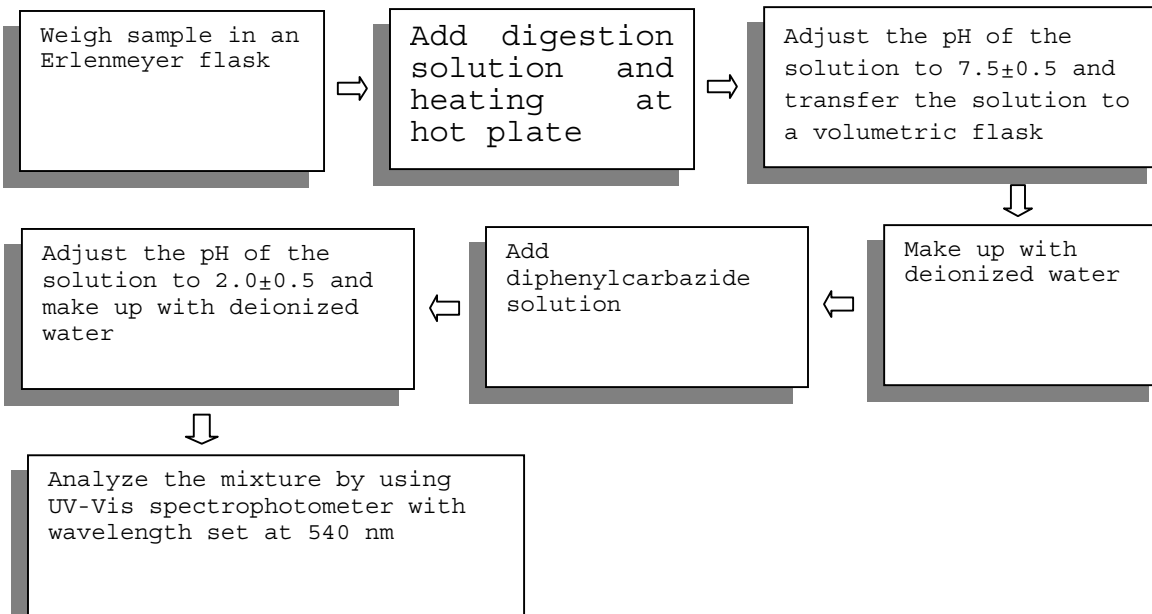
TESTS CONDUCTED

1 MEASUREMENT FLOWCHART

1. TEST FOR Cd/Pb/Hg CONTENTS (USEPA3052)



2. TEST FOR CHROMIUM (VI) CONTENT



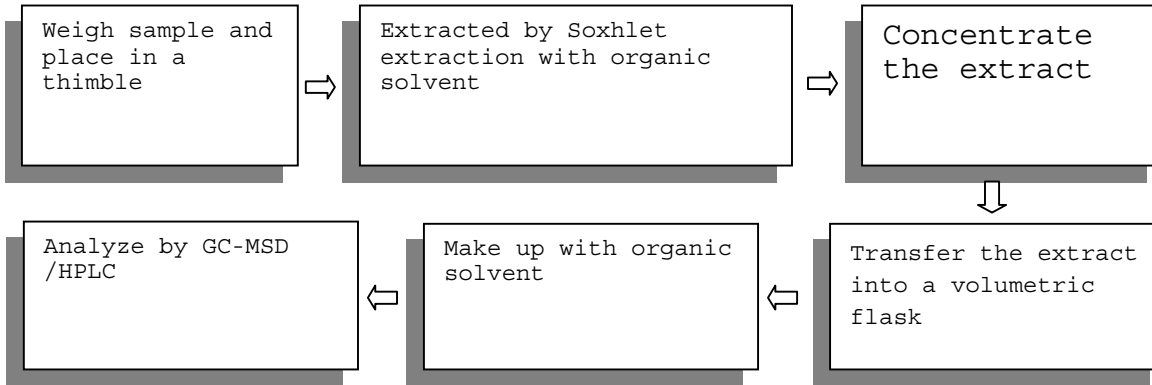
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TESTS CONDUCTED

3. TEST FOR PBBs/PBDEs CONTENTS



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TEST REPORT

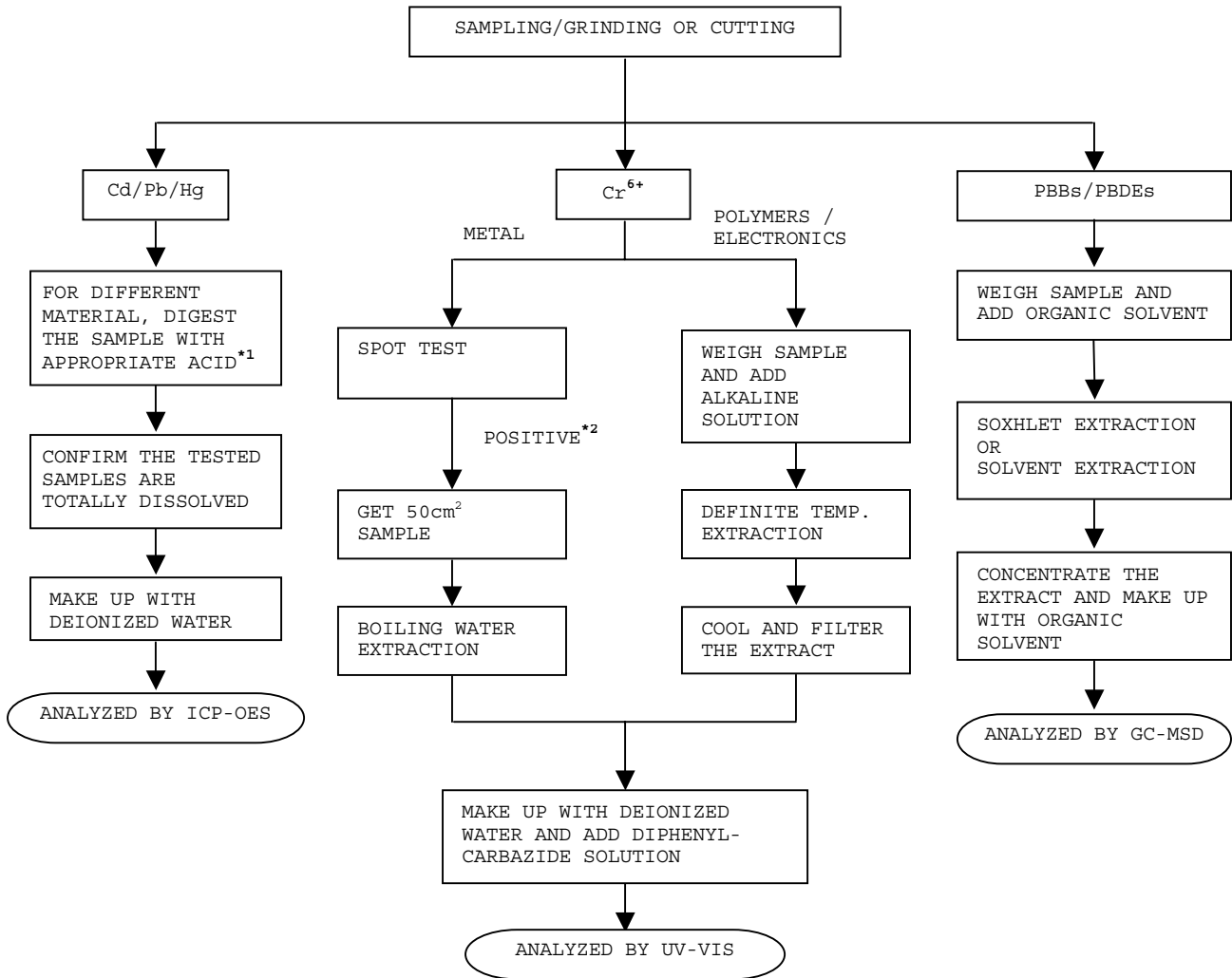
NUMBER: SHAH00056319S1

TESTS CONDUCTED

2 MEASUREMENT FLOWCHART:

TEST FOR Cd/Pb/Hg/CHROMIUM (VI)/PBBS/PBDES CONTENTS

REFERENCE STANDARD: IEC 62321 (111/95/CDV)



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REMARKS:

*1: LIST OF APPROPRIATE ACID:

<u>MATERIAL</u>	<u>ACID ADDED FOR DIGESTION</u>
POLYMERS	HNO ₃ , HCl, HF, H ₂ O ₂ , H ₃ BO ₃
METALS	HNO ₃ , HCl, HF
ELECTRONICS	HNO ₃ , HCl, H ₂ O ₂ , HBF ₄

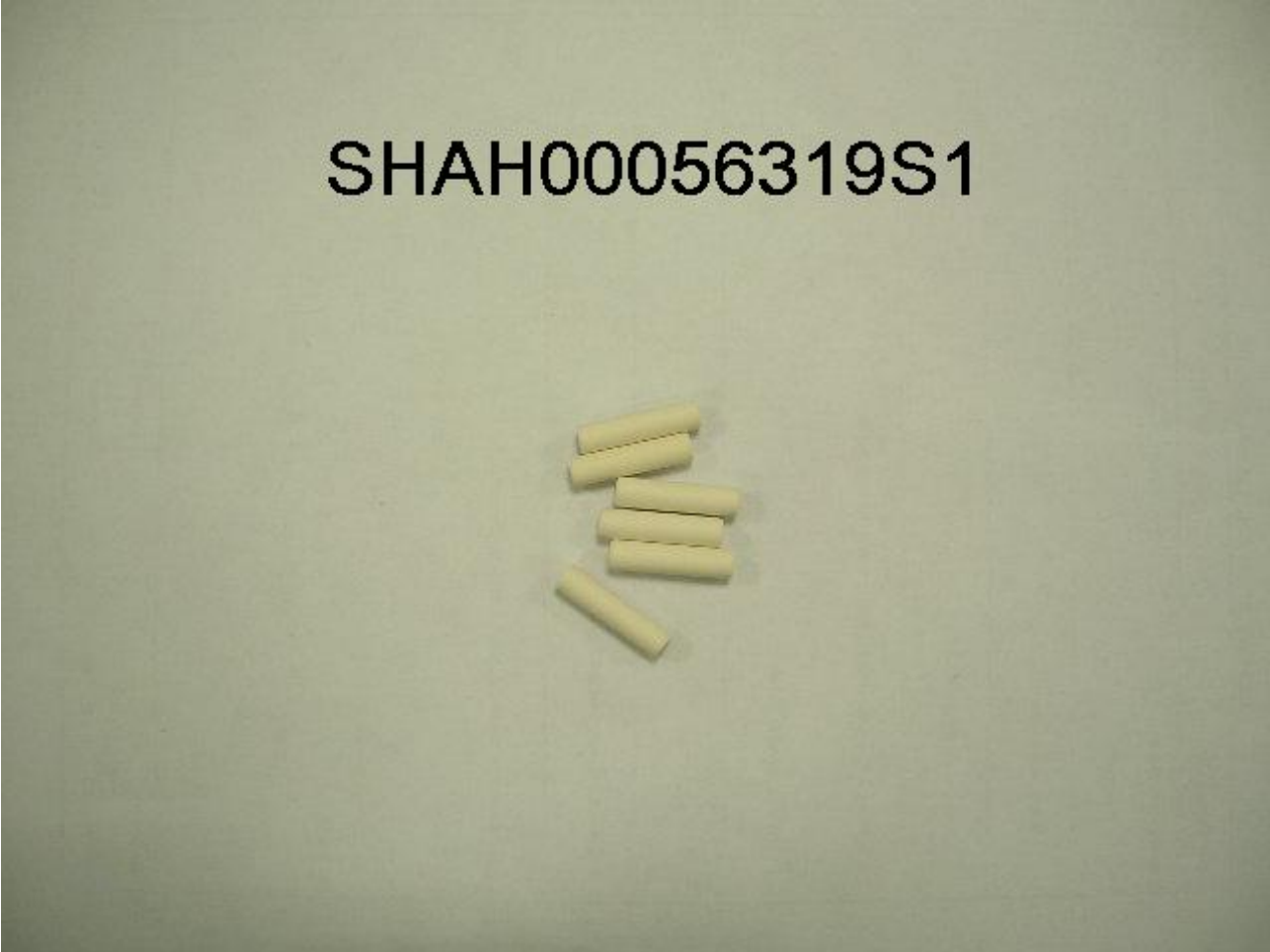
*2: IF THE RESULT OF SPOT TEST IS POSITIVE, CHROMIUM VI WOULD BE DETERMINED AS DETECTED.

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END OF REPORT



To: Cooper Bussmann Technical Center

Attention: Susan Zhao

Date: Nov 26, 2008

Re: Report Revision Notification

Intertek Testing Services Report Number SHAH00056319 Dated May 12, 2008, Please be informed that all the content recorded in the above captioned report will be void. This captioned report is now supersede by a revised Intertek Testing Services Report SHAH00056319S1.

Thank you for your attention.

PREPARED AND CHECKED BY:
FOR INTERTEK TESTING SERVICES
LTD., SHANGHAI

MYRA LV
CHEMICAL DIVISION MANAGER

AUTHORIZED BY:
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