

To: R. K. Howell

Date: Sept. 23, 1992

From: F. H. Berger

Subject: NH3 Still
Insulation

On Sunday morning, September 20, 1992 at approximately 8:00 AM, Billy Campbell (Win-Way Ins/Asb Supervisor) called to inform me that, while removing insulation from the Ammonia Still in the Oxide Derivatives Unit, his crew encountered a different type of insulation on one area of the column. He stated over the telephone that he felt this insulation may be asbestos.

I instructed him to not disturb that area of insulation, but to proceed with insulation removal in the areas that were not in question. Also an enclosure should be started being constructed around the suspect area. Since another job was going to be started at midnight that night, I told him I would come out and check both jobs at that time.

Inspection of the Ammonia Still that night showed 6 to 7 linear feet of insulation was different from the remainder of the column. The contractor had wrapped the suspect insulation with plastic, to seal it for protection, and was well under way with construction of the enclosure.

A sample of the material was obtained that night and sent to Houston at noon, Monday, September 21, 1992, for an analysis. Results were received at 6 that evening and showed an asbestos content of 10% to 20%.

The enclosure was complete and the asbestos insulation was stripped Wednesday, September 23, 1992.

117

#2
BUCKS

#1 BUCKS
STEAM JETS

#1 BTG
JET
STACK

#2 BTG
JET
SUCTION

#4 BTG
JET
SUCTION

GRATING

#1
BUCKS
STEAM
JETS

#2
BUCKS

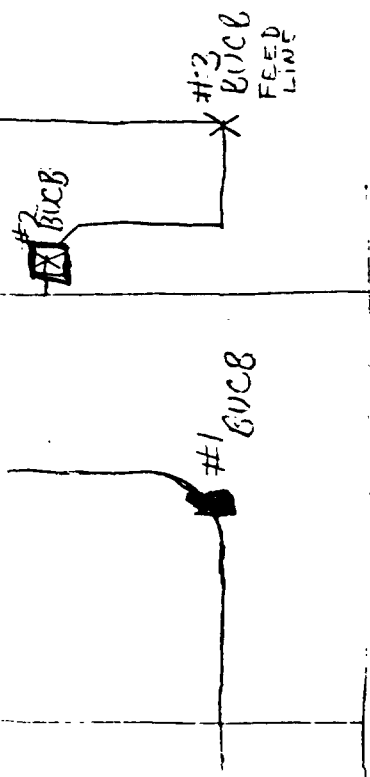
BUCKS
COLUMN

☒ THIS MEANS IT CONTAINS LESS THAN 1% ASBESTOS!
☐ THIS MEANS IT CONTAINS MORE THAN 1% ASBESTOS!

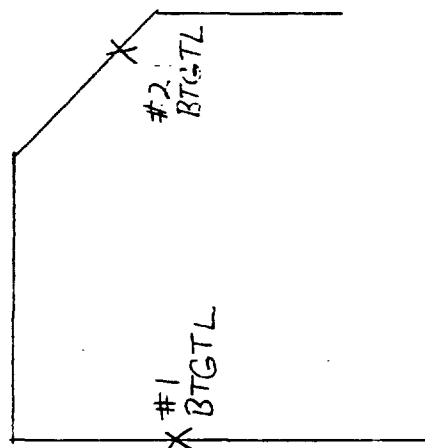
029698

ODV BUCB Column

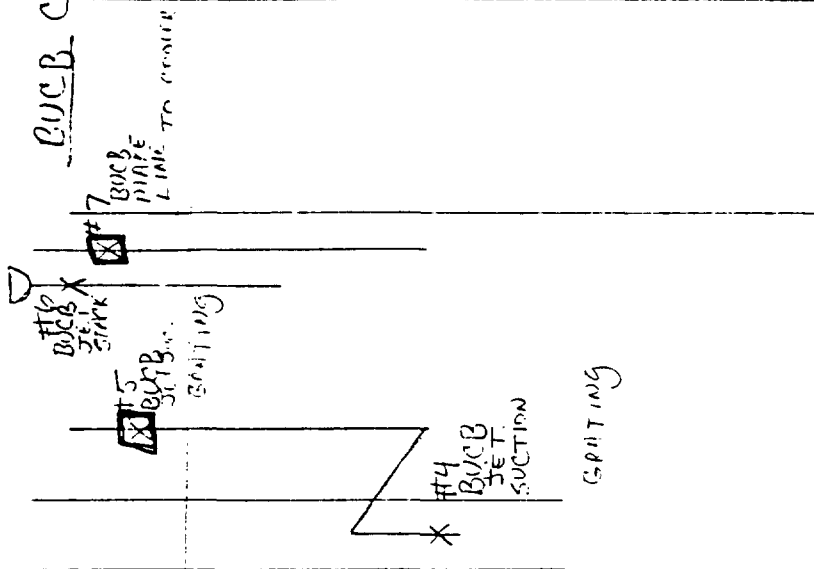
INSIDE ORIENT



BTG TAILS LINE



BUCB COLUMN



Kevco

LABORATORY & CONSULTING SERVICES

BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 10/31/90

TEST METHOD: 40 CFR CH. I (1-1-87 EDITION) PT 763,
SUBPT. F APP. A. PAGES 293-299.

REPORT TO: UNION CARBIDE
P.O. BOX 186
PORT LAVACA
ATTENTION: CAL JONES

TX 77979

ANALYST SIGNATURE:

GARY LANDINI

KEVCO JOB NUMBER:	11564	11564	11564
DATE RECEIVED:	10/31/90	10/31/90	10/31/90
DATE ANALYZED:	10/31/90	10/31/90	10/31/90
CLIENT SAMPLE ID:	#2 BTGTL	BUCBJ #1	BUCBJ #2
PROJECT ID:			
SAMPLE LOCATION:			
IS THE SAMPLE HOMOGENEOUS?	YES	YES	YES
DOES IT CONTAIN LAYERS?	NO	NO	NO
IS THE SAMPLE FIBROUS?	YES	YES	YES
SAMPLE COLOR:	WHITE	WHITE	WHITE
SAMPLE CONTAIN ASBESTOS FIBERS?	NO	NO	NO
ASBESTOS TYPE AND PERCENT:			
TOTAL PERCENT ASBESTOS:	0 PERCENT	0 PERCENT	0 PERCENT
FIBROUS MATERIALS AND PERCENT:	CELLULOSE 40 - 50	CELLULOSE 35 - 45	CELLULOSE 40 - 50
NONFIBROUS CONSTITUENTS:	BINDER-FILLER	BINDER-FILLER	BINDER-FILLER
DEVIATION FROM TEST METHOD:			

- THIS TEST REPORT RELATES ONLY TO THE ITEMS TESTED AND MUST NOT BE REPRODUCED EXCEPT WITH THE APPROVAL OF THE LABORATORY.
- ALL SAMPLES WILL BE DISPOSED OF 90 DAYS FOLLOWING SAMPLE RECEIPT UNLESS OTHERWISE INSTRUCTED BY THE CLIENT.
- UNDER CURRENT EPA REGULATIONS, AN "ASBESTOS CONTAINING MATERIAL" CONTAINS MORE THAN ONE PERCENT ASBESTOS.

029700

Kevco

LABORATORY & CONSULTING SERVICES

BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 10/31/90

TEST METHOD: 40 CFR CH. I (1-1-87 EDITION) PT 763,
SUBPT. F APP. A. PAGES 293-299.

REPORT TO: UNION CARBIDE
P.O. BOX 186
PORT LAVACA
ATTENTION: CAL JONES

TX 77979

ANALYST SIGNATURE:

GARY LANDINI

KEYCO JOB NUMBER:	11564	11564	11564
DATE RECEIVED:	10/31/90	10/31/90	10/31/90
DATE ANALYZED:	10/31/90	10/31/90	10/31/90
CLIENT SAMPLE ID:	BUCS #1	BUCS #2	#1 BTGTL
PROJECT ID:			
SAMPLE LOCATION:		**ASBESTOS IN GRAY CAP ONLY**	
IS THE SAMPLE HOMOGENEOUS?	YES	YES	YES
DOES IT CONTAIN LAYERS?	NO	NO	NO
IS THE SAMPLE FIBROUS?	YES	YES	YES
SAMPLE COLOR:	TAN	TAN-GRAY	WHITE
SAMPLE CONTAIN ASBESTOS FIBERS?	NO	YES	NO
ASBESTOS TYPE AND PERCENT:		CHRYSTOTILE < 1%	
TOTAL PERCENT ASBESTOS:	0 PERCENT	LESS THAN 1 PERCENT	0 PERCENT
FIBROUS MATERIALS AND PERCENT:	FIBROUS GLASS 20 - 30 CELLULOSE 01 - 02	FIBROUS GLASS 25 - 35 CELLULOSE < 1% SYNTHETIC 01 - 05	CELLULOSE 35 - 45
NONFIBROUS CONSTITUENTS:	BINDER-PERLITE	BINDER-PERLITE- MATRIX	BINDER-FILLER
DEVIATION FROM TEST METHOD:		*1	

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*1 MATRIX OF SAMPLE DISSOLVED IN TETRAHYDROFURAN, HEATED, EVAPORATED, THEN ANALYSIS CONTINUES ACCORDING TO TEST METHOD

029701

Kevco

LABORATORY & CONSULTING SERVICES

BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 10/31/90

TEST METHOD: 40 CFR CH. I (1-1-87 EDITION) PT 763,
SUBPT. F APP. A. PAGES 293-299.

REPORT TO: UNION CARBIDE
P.O. BOX 186
PORT LAVACA
ATTENTION: CAL JONES

TX 77979

ANALYST SIGNATURE:

PAUL HURN

KEVCO JOB NUMBER:	11564	11564
DATE RECEIVED:	10/31/90	10/31/90
DATE ANALYZED:	10/31/90	10/31/90
CLIENT SAMPLE ID:	BTG #3	BTG #4
PROJECT ID:		
SAMPLE LOCATION:		**ASBESTOS IN GRAY CAP AND SAMPLE**
IS THE SAMPLE HOMOGENEOUS?	YES	YES
DOES IT CONTAIN LAYERS?	NO	NO
IS THE SAMPLE FIBROUS?	YES	YES
SAMPLE COLOR:	PINK	GRAY
SAMPLE CONTAIN ASBESTOS FIBERS?	NO	YES
ASBESTOS TYPE AND PERCENT:		CHRYSTILE 01 - 05 AMOSITE 40 - 50
TOTAL PERCENT ASBESTOS:	0 PERCENT	TOTAL: 41 - 55
FIBROUS MATERIALS AND PERCENT:	SYNTHETIC 10 - 20	SYNTHETIC 01 - 02
NONFIBROUS CONSTITUENTS:	BINDER-PERLITE	BINDER-MATRIX
DEVIATION FROM TEST METHOD:		*1

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029702

Kevco

LABORATORY & CONSULTING SERVICES

BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 10/31/90

TEST METHOD: 40 CFR CH. I (1-1-87 EDITION) PT 763,
SUBPT. F APP. A. PAGES 293-299.

REPORT TO: UNION CARBIDE
P.O. BOX 186
PORT LAVACA
ATTENTION: CAL JONES

TX 77979

ANALYST SIGNATURE:

Paul Hurn
PAUL HURN

KEVCO JOB NUMBER:	11564	11564	11564
DATE RECEIVED:	10/31/90	10/31/90	10/31/90
DATE ANALYZED:	10/31/90	10/31/90	10/31/90
CLIENT SAMPLE ID:	BUC8 #7	BTG #1	BTG #2
PROJECT ID:			
SAMPLE LOCATION:	**ASBESTOS IN GRAY CAP ONLY**		
IS THE SAMPLE HOMOGENEOUS?	YES	YES	YES
DOES IT CONTAIN LAYERS?	NO	NO	NO
IS THE SAMPLE FIBROUS?	YES	YES	YES
SAMPLE COLOR:	GRAY	PINK	PINK
SAMPLE CONTAIN ASBESTOS FIBERS?	YES	NO	NO
ASBESTOS TYPE AND PERCENT:	CHRYSTILE < 1%		
TOTAL PERCENT ASBESTOS:	LESS THAN 1 PERCENT	0 PERCENT	0 PERCENT
FIBROUS MATERIALS AND PERCENT:	CELLULOSE 75 - 85	SYNTHETIC 10 - 20	CELLULOSE < 1% SYNTHETIC 15 - 25
NONFIBROUS CONSTITUENTS:	BINDER-MATRIX PERLITE	BINDER-PERLITE	BINDER-PERLITE
DEVIATION FROM TEST METHOD:	*1		

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029703

Kevco

LABORATORY & CONSULTING SERVICES

BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 10/31/90

TEST METHOD: 40 CFR CH. I (1-1-87 EDITION) PT 763,
SUBPT. F APP. A. PAGES 293-299.

REPORT TO: UNION CARBIDE
P.O. BOX 186
PORT LAVACA
ATTENTION: CAL JONES

TX 77979

ANALYST SIGNATURE: Paul Hurn

PAUL HURN

KEYCO JOB NUMBER:	11564	11564	11564
DATE RECEIVED:	10/31/90	10/31/90	10/31/90
DATE ANALYZED:	10/31/90	10/31/90	10/31/90
CLIENT SAMPLE ID:	BUCB#4	BUCB #5	BUCB #6
PROJECT ID:			
SAMPLE LOCATION:		**ASBESTOS IN GRAY CAP ONLY**	
IS THE SAMPLE HOMOGENEOUS?	YES	YES	YES
DOES IT CONTAIN LAYERS?	NO	NO	NO
IS THE SAMPLE FIBROUS?	YES	YES	YES
SAMPLE COLOR:	BROWN	BROWN-GRAY	BROWN
SAMPLE CONTAIN ASBESTOS FIBERS?	NO	YES	NO
ASBESTOS TYPE AND PERCENT:		CHRYSTILE < 1%	
TOTAL PERCENT ASBESTOS:	0 PERCENT	LESS THAN 1 PERCENT	0 PERCENT
FIBROUS MATERIALS AND PERCENT:	CELLULOSE < 1% SYNTHETIC 05 - 15	FIBROUS GLASS 20 - 30 SYNTHETIC 01 - 02	FIBROUS GLASS 20 - 30 SYNTHETIC 05 - 10
NONFIBROUS CONSTITUENTS:	BINDER-PERLITE	BINDER-PERLITE- MATRIX	BINDER-MATRIX GLASS BEADS-PERLITE
DEVIATION FROM TEST METHOD:		*1	*1

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029704

Kevco

LABORATORY & CONSULTING SERVICES

BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 10/31/90

TEST METHOD: 40 CFR CH. I (1-1-87 EDITION) PT 763,
SUBPT. F APP. A. PAGES 293-299.

REPORT TO: UNION CARBIDE
P.O. BOX 186
PORT LAVACA
ATTENTION: CAL JONES

TX 77979

ANALYST SIGNATURE:

Paul Hurn

PAUL HURN

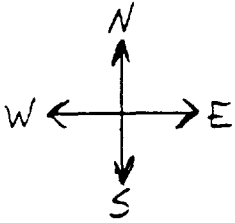
KEVCO JOB NUMBER:	11564	11564	11564
DATE RECEIVED:	10/31/90	10/31/90	10/31/90
DATE ANALYZED:	10/31/90	10/31/90	10/31/90
CLIENT SAMPLE ID:	BUCB #1	BUCB #2	BUCB #3
PROJECT ID:			
SAMPLE LOCATION:			
IS THE SAMPLE HOMOGENEOUS?	YES	YES	YES
DOES IT CONTAIN LAYERS?	NO	NO	NO
IS THE SAMPLE FIBROUS?	YES	YES	YES
SAMPLE COLOR:	TAN	TAN	TAN
SAMPLE CONTAIN ASBESTOS FIBERS?	YES	YES	NO
ASBESTOS TYPE AND PERCENT:	CHRYSTILE 05 - 10	CHRYSTILE < 1%	
TOTAL PERCENT ASBESTOS:	TOTAL: 5 - 10	LESS THAN 1 PERCENT	0 PERCENT
FIBROUS MATERIALS AND PERCENT:	FIBROUS GLASS 20 - 30	SYNTHETIC 10 - 20	FIBROUS GLASS < 1% CELLULOSE < 1% SYNTHETIC 10 - 15
NONFIBROUS CONSTITUENTS:	BINDER-PERLITE	BINDER-PERLITE	BINDER-PERLITE
DEVIATION FROM TEST METHOD:			

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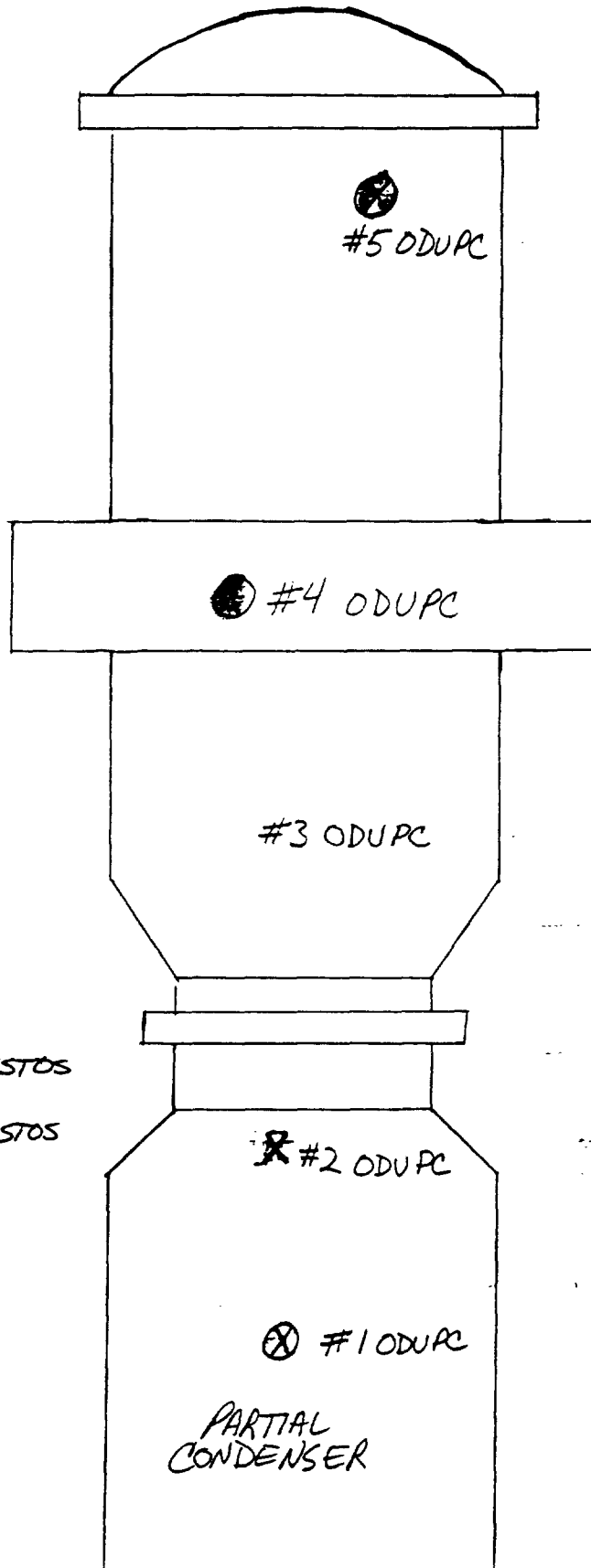
029705

SKETCH - GARY D. KLASSEN
APPROVED - J. DE T. BOTT JR.

PARTIAL CONDENSER O.D.U.



SECOND FLOOR
ODU



⊗ LESS THAN 1% ASBESTOS

⊗ MORE THAN 1% ASBESTOS

029711

Kevco

LABORATORY & CONSULTING SERVICES

BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 11/21/90

TEST METHOD: 40 CFR CH. 1 (1-1-87 EDITION) PT 763,
SUBPT. F APP. A, PAGES 293-299.

REPORT TO: UNION CARBIDE
P.O. BOX 186
PORT LAVACA
ATTENTION: CAL JONES

TX 77979

ANALYST SIGNATURE: Paul Hurn

PAUL HURN

KEVCO JOB NUMBER:	11706	11706	11706
DATE RECEIVED:	11/20/90	11/20/90	11/20/90
DATE ANALYZED:	11/21/90	11/21/90	11/21/90
CLIENT SAMPLE ID:	#1	#2	#3
PROJECT ID:	CDUPC	CDUPC	CDUPC
SAMPLE LOCATION:			
IS THE SAMPLE HOMOGENEOUS?	YES	YES	YES
DOES IT CONTAIN LAYERS?	NO	NO	NO
IS THE SAMPLE FIBROUS?	YES	YES	YES
SAMPLE COLOR:	WHITE	TAN	TAN
SAMPLE CONTAIN ASBESTOS FIBERS?	YES	YES	NO
ASBESTOS TYPE AND PERCENT:	CHRYSTOTILE 05 - 10	CHRYSTOTILE 20 - 30	
TOTAL PERCENT ASBESTOS:	TOTAL: 5 - 10	TOTAL: 20 - 30	0 PERCENT
FIBROUS MATERIALS AND PERCENT:	FIBROUS GLASS 15 - 25	FIBROUS GLASS 10 - 20	CELLULOSE 01 - 02 SYNTHETIC 15 - 25
NONFIBROUS CONSTITUENTS:	BINDER PERLITE	BINDER PERLITE	BINDER PERLITE METAL
DEVIATION FROM TEST METHOD:			

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029712

Keyco

LABORATORY & CONSULTING SERVICES

BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 11/21/90

TEST METHOD: 40 CFR CH. I (1-1-87 EDITION) PT 763,
SUMP. F APP. A. PAGES 293-299.

REPORT TO: UNION CARBIDE
P.O. BOX 186
PORT LAVACA
ATTENTION: CAL JONES

TX 77979

ANALYST SIGNATURE:



PAUL HURN

KEYCO JOB NUMBER:	11706	11706	
DATE RECEIVED:	11/20/90	11/20/90	
DATE ANALYZED:	11/21/90	11/21/90	
CLIENT SAMPLE ID:	#4	#5	
PROJECT ID:	ODUPC	ODUPC	
SAMPLE LOCATION:		(CHRYSTILE IN CAP AND SAMPLE)	
IS THE SAMPLE HOMOGENEOUS?	YES	YES	
DOES IT CONTAIN LAYERS?	NO	NO	
IS THE SAMPLE FIBROUS?	YES	YES	
SAMPLE COLOR:	GRAY	GRAY	
SAMPLE CONTAIN ASBESTOS FIBERS?	YES	YES	
ASBESTOS TYPE AND PERCENT:	CHRYSTILE 01 - 05 AMOSITE 40 - 50	CHRYSTILE 01 - 05 AMOSITE 30 - 40	
TOTAL PERCENT ASBESTOS:	TOTAL: 41 - 55	TOTAL: 31 - 45	
FIBROUS MATERIALS AND PERCENT:	CELLULOSE < 1% SYNTHETIC 01 - 05	SYNTHETIC 01 - 05	
NONFIBROUS CONSTITUENTS:	BINDER MATRIX METAL	BINDER MATRIX METAL	
DEVIATION FROM TEST METHOD:	*1	*1	

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029713