

! "#\$%&'()*+*, - , -*#.\$!("/' ' &! o/*O...!&o)&" 1*" 2*)(3*#(&/&##13.

H\jggh XmiY Ua]bYX'hYY YWncZU[fUhh XY'ci fbU]b[]bhffj Ybh]cb'cb' VzbU]VmfYgc'i h]cb]b]bhja UHY'XntUX]WfY Uhhcbgl]dgg]U'Ub'Yi dYf]a YbHU' XYg] [b"-hk Ug\ndch YglnYX'h Uha]bXZ `mY]Vhhb['XU] mUk UfYbYgg'UbX' Yi dYf]YbWg'cZ [fUhh XY' k ci `X' dfcXi W' U'g] [b]UWbh XYWfYUg']b' hLY' UXcdh]cb'cZbY[Uhj YVzbU]VmfYgc'i h]cb'gmYg'UbX'Ub]bVfYUgY]b'dcg]h]j Y' VzbU]VmfYgc'i h]cb'gfUHY[]Yg" DUfh]V]dUbhg'fUbXca `mUgg] [bYX'hc Y]h'Yf'U' !"#!%#&! ("")*\$+#, ('-'(.)' /###!\$01#2'!(+'(%)*!#'\$'3452\$6'-'\$!7!. 2# 8(."&\$*7&-' 7&!#"9#&!7(&' (" '\$' 3452\$6')*\$+#, (' 8(."&\$*7&-' #: #"+70#;' fYgdYVh]j Y'm' 5` dUfh]V]dUbhg' Ubgk YfYX' hLY' 7cbU]Vh' F Ygc'i h]cb' GmY' <&2#: '=>?@<A'7%#%27\$!#*6', #B("#'\$&2'\$B!#"!C#8(."&\$*7&-'7&!#"9#&!7(&'; UbX'UhUz`ck !i d'cgh]YghUbch'Yf'k c k YY_gUZhYf"8] YfYbVWgVYtk Yyb' d'UWVc'UbX'hfYUha Ybh[fci dg'k YfY'UbU'nmYX'j]U]bXYdYbXYbhg]Ua d'Yg !5!#0!0'\$&2'+C&#-#0'\$+"(00!#0!7&-')C\$0#0' /7!C7&-'(.)0' /##"9\$\$. \$!#2' 97\$' "#)\$!#2' %#\$0. "#0' DEFGDI' I C#%\$!7+' \$&\$*60#0' (B' 8(."&\$*#&!7#0' \$&2'7&!#"97# /0' /7!C'!"#\$!%#&!)"\$!7+7) \$&!0'B. "IC#"#:)("2'!C#0+()# (B'!C#-'\$!7!. 2# #:)#"7&+##!J#! /##&5-"(.)'\$&2' /7!C7&5-"(.)'\$&\$*60#0' 7&27+\$!#1C\$!) "\$!7+7) \$!7(&7&'\$-\$!7!. 2#8(."&\$*7&-7&!#"9#&!7(&""#0. *!#2']b]bVfYUgYX' UXcdh]cb'cZ a cfY' dcg]h]j Y' VzbU]Vh' fYgc'i h]cb' gmYg' UbX' XYWfYUgYX' UX\ YfYbVW'hc bY[Uhj YVzbU]VmfYgc'i h]cb'gmYg' hLY'VfcUXYb! \$&25, .7*2')C#&(%#&(&'70'7&B#"#2'\$0'!C#'. &2#"#67&- '%#+C&\$70%'!C\$! dfcXi WX'hLYgV'dcg]h]j Y'Y' Vh]g'

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() (!. &7!7#0'B(' - "\$!#B. *�H!>(.) *#0'\$"#'\$*0(' . &7Y. #*6'\$))"#+7\$!79#'
cZ cbY' UbcH\ Yf@j a YfY' Yl]ghYbWz' UbX' gj[b]UVWbW']g Ugg][bYX' hc'
0##%7&-*6' . &"#%\$"1\$, *# ' !C7&-0;' !C. 0' \$**(/7&- ' !C70' \$))"#+7\$!79#'
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VčbfUgrždgnVWc`c[]W' gri X]YgUggYfhh\ UhVčbU]VW]g]bchcb`m]bYj]HUY'
Vi hi bYVWggUfmi hc' Vi]X]b[\YU\h m fYU\hcbg\]dg" 7cbU]VW' VVb' VY'
+(&0!" . +!79#7&'!C\$!7!' +\$&'+"#\$!#'+*. #0'\$&2' () ("!. &7!7#0'B (" - (" /!C'7&
fYU\hcbg\]dgž Ug'k Y` Ug'VYbYU'VU' UXUdU\h]cbž Ug'k \Yb Vči d'Yg'YUfb'
hc'dfcWgg'bY[Uhj] Y'U YVhUbX'bY[ch]U\h'X] YfYbWg'f7UbUfmx'7i dUWž
S'P#00%\$& ;'3WW4V'R (!!%\$& ;'3WWTV'P\$+1#6'#!'\$*h; 'ULLLAAH

J Uf]ci g'a cXY'g'g\ck `h\ Uh VčbU]VW'fYgc'i h]cb' gmiYg' UfY YbUWYX'
/C#&' 0##' /%&' 4' ##(=0#*B5+(&+#"&' (" +(&+#"&' B(" "#0. *!0A' \$&2'
""! '/0%\$ " 4' =+(&+#"&' B(" (!C#"0' (" +(&+#"&' B(" !C# " #\$!7(&0C7)A'
]bhYfgVh' fP i fXY_ž % - (/ N\Ub[ž &\$&\$+L" ? i fXY_ f% - (L' dcg]hg' žci f'
X]gh]bVh' gmiYg' d'cg]h]j Y' dfcV'Ya !gc'j]b[ž Vča d']UbWž VčbU]VW'
#&-\$-#%#&!;' \$&2' /7!C2"\$ /\$*H<&27972. \$*0'\$2()!' '\$2(%7&\$&! '\$) " (\$+C'
\$&2'%) * (6' !C# (!C#"0!6*#0'7&'9\$*67&- '2#- "#0H' l C70' \$-- "#-# !#0!6*#'
U YVh]g YfmxUmVči d'Y]bhYfUW]cbgUbX UfYh\i g]bhY[fU'hc'dfYX]VW]b['
U'Vči d'Yf]fY U\hcbg\]d'g' VVgg'fN\ Ub[ž&\$&\$+L"

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k \]Y'a U]bhU]b]b[`dcg]h]j Y'U YVhUbX'fYei]f]b[`Včbg]XYfU\h]cb'hc' UbX'
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+(&+#2# ' !C#7"" , #0! 7&!#"#0!0' \$&2' %700' () ("!. &7!7#0' ! (') "(% (!#'
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=? (00# " ;' l 7&-5l ((%#6; 'S'] ##; 'ULLLAAH

7cbU]VW'Yb[U[Ya Ybhi]g' \] [\ mUggYfh]j Y' Vi hi bVčcdYfU\h]j Y'k]h'
\$&' Z< /7& ;' 6(. ' *(0# [') (07!7(& ;' \$&2' . 0#0'+(%) #!7&- ' (" 2(%7&\$!7&-'
hVWb]ei Yg'fN\ Ub[ž&\$&\$+L" =h]g'XYgW]VYX Ug'dUfh]U`mXYg'f]i Vh]j Y'k]h'
0(0%#') (07!79# \$0)#+!0' , #+\$. 0#7!0#10!' ('+ (% % . &7+\$!# ; , . !7&9(*9#0'
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3UU ! "#\$%&'()*+&,"#-%,!)+,).+,-%.\$)"(0+-&\$%+,

^7&1;ULLUAH'DO'\$)\$!#"&';7!'!#&20!(2#-\$2#!C#(!C#"")\$"!600'+(&+#"&0'
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I C#'0!. 26'0##10'!('2#!#" %7&#' C(/' !C#'7&2#)#&2#&! '9\$"7\$, *#' (B'
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3Ua ! "#\$%&'()*+&,"#-%,!)+,./-%.\$"(0+-&\$\$+,

_"710(&'=3W4LA'\$0', #!/##&'3W'!('M4'6#\$"0' (*2H' b#') (07!0'!C#7'" %\$7&' 2#9#* ()%#&!\$*'!\$01' \$0'7&!7%\$+6'90H'70(*\$!7(&,' /C#"#7&'!C#' - (\$*'70'!('\$+C7#9#' % . !. \$**6'0\$!70B67&-'"#\$!7(&0C7)0H' I C70', "\$+1#!'C\$0'\$'3N56#\$"" \$-#'"\$&-#;' \$&2'7!'70'"#\$0(&\$, *#!(' \$00. %#'!C\$!' +(&!#: !. \$**9\$"7\$&+#0' VYUHy' gj[b]ÜWUbi X] YfYbWg' k]h\]b' h\Y' dYf]cX' fW["ž % !nYUf' c`Xg' "\$#' 2#)#&2#&! '\$&2' 0!7** 7&' 0+C((*, ML56#\$"" (*20' \$"#'#%)*(6#2' \$&2' ÜbUbVWU`m]bXYdYbXYbH' fBcnX' / : 6YYž &\$%\$Ł" 5g' gj' Wž h\Y' WffYbh')\$"!7+7)\$&!') (** /\$0' +(&0!"\$7'!('7&+*. 2#'6(. &-'\$2. *!0'\$-#0'Ua'!(' M4'=6(1`&, "+-ž: ; (1`&((Łžk \c \Uj Y`VYyb`]b`h\Y]f`WffYbhfca Ubh]W "\$*\$!7(&0C7)'B("'\$!*\$0!'3U', . !'*\$00'!C\$&'M\%'(&!C0'=6(1`&%\$ ž: ; (1` *"% ŁžUbX'gh)``k]h\ci hc' gdf]b[""

7cbÚ]Vh' F Ygc`i h]cb`GhmY` =bj Ybhcfm f7F G=Ł" X\$"!7+7)\$&!00' WcbÚ]Vh' fYgc`i h]cb`ghmYg'k YfY' UggYggYX'j]U' ? i fXY_Łj f% - (Ł'7cbÚ]Vh'

!C#6*71#2'\$&2'272'&(!*71#'\$, (. !'7!;'\$0' / #'**'\$0'\$&6'+C\$&-#0'!C#6'&(!7+#2'
7&!C#%0#*9#0;!C#7'')\$"!&#";'\$&2'!C#7'""*#\$!7(&0C7);'\$0'!C#7&!#"9#&!7(&
)"(+#2#2#2#X\$"!&#"0' / #"#\$01#2' / C#!C#"!C#6'C\$2'&(!2'\$&6'+C\$&-#0'
7&!C#7'')\$"!&#"=!C#')\$"!7+7)\$&!A'7&!C#')#7(2'(B'!C#7&!#"9#&!7(&#'^(''
, (!C;'!C#6' / #"#\$01#2'\$, (. !'\$&6'+C\$&-#0'!C#6'C\$2'&(!7+#2'7&'C(/!C#6'
XYUhk]h `V`bU]VW]b h\YfYU]cbg\]d UbX`h\Y]f`Yj YgcZgU]gZUW]cb]b'
!C#"#\$!7(&0C7)#

. I C# ' "#0#\$"+C#" " #+ ". 7!#2'
)\$"!7+7)\$&!0' . 07&- ' 0(+7\$** &#! / ("17&- ' 07!#0' =7#H; '^\$+#, ((1;' I / 7!#!"A;
"#B#" "\$0;' \$&2' + (*2' +\$**0H' D** 7&!#"#0!#2')\$"!7#0' / #"#\$ 7&!#"97# / #2' !(''
XYhYfa]bY]Zh YmU]h\Y]bW g]cb V]hYf]UzUbX`h\Yb []j Yb UdY]a]bUfm
0+"##&7&- !#0!7&' ("2#"! ('#: +*. 2#7&27972. \$*0' / C('%\$6'C\$9#'#: !"#%#'
gV`fYg`cb [fUHYZ `bYgg`cf` V`bU]VW` H\Y`gWYyb]b[`hc` `i` gYX`k Ug`h\Y`

Ubgk YfYX h\Y 7cbÚ]VMF Ygc`i h]cb`GmYg`-bj Ybrcfmf7F G-Łh fYY`hja Yg`
Xi f]b[`dfYhYgh fDF 9Łž h\Y `Ŧfgh dchgthYgh fDC GH%Łž UbX` h\Y Zc`ck`!i d`
) (0!#!0!` =XF@I UAH`_`\$+C` !#0!` /\$0` \$2%7&70!##`2` \$)) (:7%\$!#*6` !/(`
/##`10` \$B!#`" !C#`)"#97(. 0` (&#H` I C(. -C`)\$"!7+7)\$&!0` /##`#` 0+C#2. *#2`
7&27972. \$**6` \$++("27&-` !(` !C#7`" +(&9#&7#&+#;` \$**` (B` !C#%` B(**(/#2`
!C70` !#0!7&-` !7%#`!\$, *#;` \$&2` \$**` !#0!0` /##`#` +(&2. +!#2` /7!C7&` !C#` 0\$%#`
M5% (&!C`)#7(2H` X"7(" !(` !C#`)"#!#0!;`)\$"!7+7)\$&!0` /##`#` \$0!#2` !(`07-&`
+(&0#&!` B("%0` \$&2` /##`#` , "7#B#2` \$, (. !` !C#` 0! . 2600` "#Y. 7"#%#&!0H` D!`
#`\$+C` !#0!7&-`)C\$0#;`)\$"!7+7)\$&!0` \$&0/#`#2` !C#` >?@<7&` \$'Y. 7#!` !#0!7&-`
" (%`\$&2` /##`#` -79#&`\$0% . +C`!7%#`\$0`!C#6`&##2#2` !(`+`%) *#`!7H`! C#6`
0. , %7!#!2` !C#` >?@<(` !C#`"#0#\$`"+C#`" .) (&`+`%) *#`!7(&H

H\Y Ŧfgh7F G=hYgh]b[`njY`XYX`h\Y]f`VUgY]bY`cf`dfYhYghfDF 9Ł7F G`=
0+(`#0;` \$B!#`" /C7+C` !C#` I 5-" (.)`#&-`\$-#2`7&!C#` -"\$!7! . 2#`8(. "&\$7&-`
7&!#`9#&!7(&`B(" !` /` /##`10;` /C7*#` !C#` >5-" (.)`#&-`\$-#2`7&!C#`)*\$+#, (`
8(. "&\$7&-`#`:#`+70#H`! C#`>?@<`) (0!#!0!`=XF@I 3A` /\$0`\$2%7&70!##`2`\$B!#`"
!C#` U5/#`#1`7&!#`9#&!7(&`)#7(2H` DB!#`" !C#`) (0!#!0!;`)\$"!7+7)\$&!0` /#&!`
!C` (. -C` !` /` /##`10` /7!C` &(` \$+!797!6` (" 27`#`+!79#`B` (%` !C#` "#0#\$`"+C#` ;`
, #B("#. &2#`- (7&-` !C#`B`(** /5.)`>?@<!#0!7&-` =XF@I UAH`

H\Y` Ŧg\Vck` ` a Yh`cX` k Ug` i gYX` rc` fUbXca` m gY`VW`H` H! [fci d`
)\$"!7+7)\$&!0` /C(` /##`#7&97!#2` !(` , "7&-` !C#7`")\$"!&#`0` /C#&!C#6`+\$%#`
!(`!C#9#&. #`!(`#0) (&2`!(`XF@I U;` . &!7*4`! 5-" (.)`)\$"!7+7)\$&!0`\$-`##2H`
I C#6` \$&2` !C#7`")\$"!&#`0`)\$"!7+7)\$!#2` 7&` 0%750!` . +! . "#2` 7&!#`97#`/0`
Uh` h\Y` YbX` cZ DC GH&` hYgh]b[. Ŧfghž` h\Y` fYgyUfVW`Yf` VtbXi` VWX` Vf]YZ`
7&27972. \$*7&!#`97#`/0`/7!C`!C#`)\$"!7+7)\$&!0`B`(** (/#2` , 6`!C#7`")\$"!&#`0;`
, #B("#7&!#`97#`/7&-` !C#%`! (-#`!C#`H`DB!#`"XF@I U`!#0!7&-;`\$**`)\$"!7+7)\$&!0`
/##`#` 2#, "7#B#2;` !C\$&1#2;` \$&2` -79#` , \$1#2` - ((20`\$0`+`%) #&0\$!7(&`B`("`
!C#7`")\$"!7+7)\$!7(&H`

J (&B#`" (&&7`+(`"#+!7(&0`B`(""% . *!7) *#`+`%) \$"70(&0` /##`#`\$`)) *7#2` !(`
, (!C` !C#` , #!` /##&50. , 8#+10` =7&2#) #&2#&!`0\$%) *#0` !5!#0!A` \$&2` /7!C7&5

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hUh\hYfY'k YfY'bc'g][b]UWbhX] YfYbWg'VYrk Yyb'[fci dg]b hY'Zci f'
VtbU]Vh fYgc'i h]cb'ghfUHY[]Ygž j U]XUh]b['hY' fUbXca 'Ugg][ba Ybh cZ'
)\$"!7+7)\$&!0'!('-'(.)0H' I C#' X?_' 0+("#0' \$*0(' 0C(/#2' !C\$!' >?@<5XX@'
)"(2. +#2'!C#'C7-C#0!'%#\$&'0+("#'\$+"(00', (!C'! '\$&2'X'-(.)0;'B(**(/#2'
, 6' >?@<5C ;' 2#%(&0!"\$!7&-' !C\$!' /7!C2"\$/\$*' /\$0' !C#' % (0!' 2(%7&\$&!'
bY[Uh]j YVtbU]Vh fYgc'i h]cb'ghfUHY[mZcf hY'gUa d`Y"

3ML ! "#\$%&'()*+&,"#-%,!)+,). +, /-%.\$)"(0+-&\$%+,

YUW`UbUmg]gZcf`Vch`[fci dg`UbX`h\Y`U[i fYgfYdcfhYX`]b`HUV`Yg&`UbX`
M'\$++("2`/7!C`/C#!C#""!C#'\$00.%)!7(&`/\$0'0.))("!#2'("97(*\$!#2H`
?#0.*!0'B("!"!C#`/7!C7&5-"(.)0'\$&\$*60#0'(B`!C#`I5-"(.)`/##`#`
+(&070!#&!`/7!C`!C#`C6)(!C#0#0`!C\$!)\$"!7+7)\$!7(&'7&'!C#`-"\$!7!. 2#`
]bhYfj`Ybh]cb`g][b]UWUbhmi`]bVWYUgYX`h\Y`UXcdh]cb`cZ`dcb]h]j`Y`
dfcV`Ya`!gc`j]b[`gfUH[]YgZ`UbX`g][b]UWUbhmi`ck`YfYX`hYbXYbVWYg`hc`
UXcdh`bY[Uh]j`Y`dfcV`Ya`!gc`j]b[`V\Uj`]cfgz`h`ci`[\`Y`YVWj`YbYgg`]b`
2#+`#\$07&-`/7!C2"\$/\$*!#&2#&+7#0`/\$0'%"#`0C("!"!#"%`=0##`I`\$,`*#`U`;
:][i`fYg`%(E`G][b]UWUbhia`U]b`X]`YfYbWg`k`YfY`YgLUV`]g`YX`UMWcgg`U``
)\$7"/70#'+(%)\$70(&0'(B`\$**0. ,0+\$*#0'(B`!C#`2#)#&2#&!9\$7\$,`*#`X(0!`
\cWYghg]g`ck`YX`U`dU]fk`]gY`Wta`dUf]gcbg`hc`VY`g][b]UWUbhzi`YI`WdhZcf`
>?@<5c`'X\$7""M`/C#`#'XF@I`3'=6(1`+)&Z`;;(1`%`*E`UbX`DC`GH&fL6(1`
\HW4';;;(1`%*-E`UbX!(1`'\$"\$)' "

C - A A

?#0.*!0'B("!"!C#`>5-"(.)`/7!C7&5-"(.)0'\$&\$*60#0*\$0(0.))("!#2!C#`
a`U]b`\mclh`YgYg`B`c`g][b]UWUbhX]`YfYbWg`k`YfY`Zci`bX`Zcf`h\Y`dU]fk`]gY`
+(%)\$70(&0'(B`>?@<5>_`;>?@<5XX@`;\$&2`>?@<5>`0+("#0H`!C#0#`
"#0.*!0`=0##`I`\$,`*#`MA`7%)`*6`!C\$!`.&*71#)`\$"!7+7)\$!7(&'7&'!C#`-"\$!7!. 2#`
7&!#`9#&!7(&';)`\$"!7+7)\$!7(&'7&'A6DS)`P`dW`W`A`W` `A`@`P`H`F`W`R`Q`M`K`H`G`H`S`H`G`H`O`M`Y`D`U`L`D`E`O`H`7`K`R`X`J`K`D`V`L`J`Q`L`F`D`M`

@DQG !'

HUV`Y&`HfYUra Ybh; fci d`A Yub GWfYg`UbX`G`Lub`X`UfX`8`Yj`JUfjcbgZcf`DF`9Z`DC`GH%Z`Ub`X`DC`GH&Z`@A9\$` . #0`\$&2`X\$7" /10#`>`(<`%`)\$"70`(&0`
 J#1/#&`X`?`_`\$&2`XF@1`3;`X`?`_`\$&2`XF@1`U;`\$&2`XF@1`3;`\$&2`XF@1`U`B(";>`?@<5>`_`.'>`?@<5>`X`@;`>`?@<5>`C` ;`\$&2`>`?@<5>

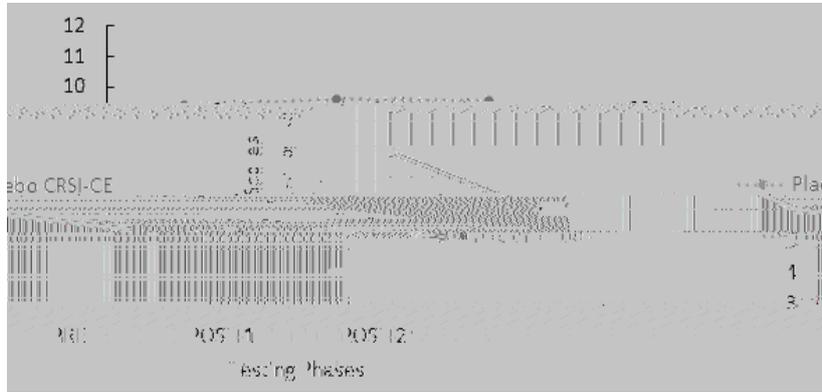
p Values of Post Hoc Pairwise Comparisons

	PRE M(SD)	POST1 M(SD)	POST2 M(SD)	F	PRE-POST1	PRE-POST2	POST1-POST2
7`cbU]M]9b[Lu]`Ya`Ybh	7.97 (2.89)	6.00 (1.78)	5.45 (1.13)	45.98	.00**	.00**	.01*
X`0(07199#`X`"(`,`*`#`%`'`@`(*978`-`	15.20 (2.39)	17.42 (1.72)	18.37 (1.14)	57.45	.00**	.00**	.00**
C`7!C2`"/`\$`*`	9.67 (2.75)	7.52 (1.86)	6.95 (1.69)	41.18	.00**	.00**	.05
>`(<`%`)`7\$&+#`	9.12 (3.58)	6.70 (1.71)	6.07 (1.38)	35.77	.00**	.00**	.01*

?`"%`!`DF`9`1`DFYf`gZ`DC`GH%1`DcghY`g%Z`DC`GH&1`DcghY`g%1`O`"\$`)"`!`!`!(`F`!L.3H

HUV`Y" ""7cbfrc"; fci d A Yub GWfYgUbx GHbXUfX 8 Yj JUfcbgZcf DF 9ZDCGHl%ZUbX DC GHl &Z@69\$* . #0'\$&&2'X\$T"/10#> (%) \$'70 (&0' J#1/#&'X? '\$&&2'XF@I 3;'X?_ '\$&&2'XF@I U;'\$&&2'XF@I 3'\$&&2'XF@I U'B('"'?D@;'> ?@<5>_.'> ?@<5XX@;'> ?@<5C;'\$&&2'> ?@<5>

	PRE M(SD)	POST1 M(SD)	POST2 M(SD)	F	PRE-POST1	PRE-POST2
7cbU]M9b[Uj Ya Ybh	9.41 (3.26)	9.58 (3.33)	9.56 (3.20)	0.68	.59	.00
X(07i79#X"(, *#%'@(*97&-	14.28 (2.02)	14.28 (1.95)	14.33 (1.93)	0.07	.00	.00
C 7!C2"\$/\$*	9.56 (2.10)	9.94 (2.10)	10.02 (2.12)	4.87	.05*	.02*
> (%) 7\$&+#	7.38 (3.57)	7.46 (3.17)	7.69 (2.82)	1.10	.21	.27



@\$-1/'(CB(

8(. "&\$* . &!0;' \$0' /#*** \$0' MT4' %#\$&7&-B. * 7&!#"97#/' . &!0' /#"#'
h Ya Uh]W`niUbU`mYX`UbX`WHY[cf]nYX`]bhc`Uj`Y`Yj`Y`g`f`Z`ca`U`f`gh`Y`j`Y`
%#\$&7&-B. * . &!0;' !(' 0#+(&25*#9#*' +(2#0;' !(' !C7"25*#9#*' 0. , ("27&\$!#'
h Ya Yg`z`hc`Zci`fh`!`Y`j`Y`g`i`dY`cf`X]bUH`h`Ya`Yg`z`UbX`]bhc`UbU`U`Z`h`!`Y`j`Y`
+\$!#- ("7#0A!`D&(!C#"#""#0#\$"+C#"#"/\$0'\$01#2'!(+'(2#"\$""\$&2(%'0\$%) *#'(B'
!C#`Y. \$*7!\$!79#`2\$!\$'0#10'7&' ("2#"#!(' #0!\$, *70C'7&!#"5"\$!#"9\$*727!6H`I`C#`
UbU`WHY[cf]Yg`Wb`VY`Zci`bX`]b`HUV`Yg('UbX)"

. H\Y`UbU`WHY[cf]Yg`

2#"79#2' B'(%' !C#` -"\$!7!. 2#` 8(. "&\$*0' #*. +72\$!#` !C#` !"#-#`0' (B' !C#`
-"\$!7!. 2#"#:#)#"7#&+#;' /C\$!'\$&2' /C('!C#`-"\$!7!. 2#'(, 8#+!0' /#"#;' \$&2' !('
/C(%' !C#` -"\$!7!. 2#`70'\$!!"7, . !#2H`D+!7(&0;')#() *#;' Y. \$*7!7#0'7&')#() *#;'
#:#)#"7#&+#0'\$&2' (, 8#+!0' /#"#'\$**'+(&072#"#2' (, 8#+!0' (B' -"\$!7!. 2##

H\Y`UbU`WHY[cf]Yg` \YfY` j`U`]XUH`YX`UbX]b[g`]b` fYgYUfW` h`Uh`
-"\$!7!. 2#'+\$&' , #'\$!!"7, . !#2', (IC'!((' !C#"0'\$&2'!((' !C#"0#`BH`<!`70' (B'&(!#`
h`Uh`h`Y`]h`Ya`g`gd`Y`W]U`W`mid`Y`f`H`J]b]b[`hc`h`Y`d`U`f`h`b`Y`f`U`f`Y`bi`a`Y`f`ci`g`f`f`1`
(' E`UbX`]bV`M`XYX`]b`U`UbU`WHY[cf]Yg`z`Vi`h`h`Uh`[f`U`h`h`XY`g`U`g`W]V`YX`
!('%\$&6%' ("#`#` !#"&\$*#&!7!7#0'!C\$&'8. 0!'!C#')\$"!&#";7&+*. 27&-`B\$%7*6`
%#%# , #`0;' B"7#&20; / ("1%\$!#0;' !C#` -" (.)' (&#` , #*(&-0' !(';\$&2' R(2H`
<&!#"&\$* \$!!"7, . !7(&' (B' -"\$!7!. 2#` /\$0' \$*0(' 0C(/&; '\$0' !C#` 2\$!\$' 0C(/0`
-"\$!7!. 2#` "#\$+!7(&' B(" (�' (/&')" (50(+7\$** , #C\$97(" '\$&2') (07!79#`
)#"0(&\$*)"\$+!7+#0H

^7BIC] #9#>\$1# - ("7#0
D!!"7, . !7(&!(P'X(07179#'
I C7&-0!(FIC#*0
X*\$0. "#
X(07179#X"\$+17+#0

_: #%) *\$*0

e.) #("27&\$1#! C##%0'<&+. 2#2

ZP6'6(. &-#"", "(IC#"70C. %, #'
\$&2'0(')\$!7#&![_&171#0'_: !#"&\$*(P#:X#()#*D'(. &2'P#'b\$9#'

Z0#0\$%#2'#007&- /\$0'6. %%%6[

Z< /\$0\$, *#!(C#) '\$P"7#&2[

3M\ ! "#\$%&'()*+&,"#-%,!)+,).+,-.%\$)"(0+-&\$%+,

dUfhVdUbh UbX']b' h\Y' XntXtj' fYUh]cbg\]d' XntUa]Vtj' H\Y' UbU' VUhY[cf]Yg' fYUVMi dYfWj] YX' VUUb[Yg' Vch']b' h\Y' dUfhVdUbhg' UbX' 7&' !C#7"" "#\$!7(&0C7)0' =0##' I \$, *# ' 4A' B" (%' &#-\$!79#' \$0)#+!0' (B' !C#7"" "#\$!7(&0C7)' \$&2' 7&' !C#7"")#"0(&\$' !#&2#&+7#0')"7(" !(' 7&!#"9#&!7(&' hc' dcg]h]j Y' Y' YVtg' dchg]bhYfj Ybh]cb" GdYVUUVh Ya Yg' i bXYf' 9' YVtg' cZ >ci fbU]b[' 9I YfVYgY' Vt]bVYXY' X]fYVMi m k]h' h\Y' df]a Ufm [cU' cZ !C# 8(. "\$*7&- '7&!#"9#&!7(&' /C7+C' /\$0' !(' "#B(+. 0' !C# %7&2' !(/\$ "20' % ("#') (07!79#' !C7&-0H' @.)#" ("27&\$!#' !C#%#0' "#) ("!#2' 7&+*. 2#2' @#*B5 YI Ua]bUh]cbz hU_]b['UA cfY Dcg]h]j Y: cWgZ Dcg]h]j Y DYfgcbU' 9' YVtg' =#H-H;') (07!79#' B##*7&-0A;' \$&2' X" (50(+7\$* J#C\$97("0'B" (%' !C#* 26\$2' =#H-H;']bVfYUg]b['YI dfYgg]cb' cZ[fU]h] XYE' H\ci [\ h\Y Y' YVtg' cZ h\Y [fU]h] XY' 8(. "\$*7&- '7&!#"9#&!7(&' /# "#) ("!#2' !(' , # 2(%7&\$&!*6') (07!79#;' \$' !C7"2'+\$!#- ("6;' >"7!7+70%' (B' : #"+70#; "#9#*\$*2'0(%#&#-\$!79#'B##2, \$+1' cb]hZ gdYVUUV`mi h\Uhi k f]]b[' Om\UbXQ]g' fYU`mi h]f]b["i' H\]g' a Um C\$9#7%) *7+\$!7(&0'B("B. !. "#\$)) *7+\$!7(&0' (B' !C#7&!#"9#&!7(&H

C

=h k Ug' \m\ch\Yg]nYX' h\Uhi]bXi V]b[' a]bXZ `` YI dYf]YbWg' cZ [fU]h] XY' VUb]bVfYUgY' h\Y' i gY' cZ dcg]h]j Y' Vt]bU]VM fYgc' i h]cb' ghmYg' Ug' /#**'\$0'2#+"#\$0# '!C#*2()!7(&' (B' &#-\$!79#'0!6*#0'7&7&27972. \$*0' /C(' \$"#

#:)#"7#&+7&-'"\$!7!. 2#'27%7&70C#2!C#!#&2#&+6!('#&-\$-#7&'\$--"#0079#
cf` \cgh]Y Vt̃bÚ]Vñ fYgc`i h]cbž gi Va]gg]cb` UbX` bcb!Vta a i b]Vh]cbž
\$&2'\$9(72\$&+ #'7&!C#'"#\$!7(&0C7)H' I C#`Y. \$*7!\$!79#` \$&\$*6070')" (972#0'
0(%#0.)) ("!!(!C#0#!C#%#0H'^ ("7&0!\$&+#;'7&!#"97#/'+(2#0'7&+*. 2#2'
0. +C' (, 0#"9\$!7(&0'7&!C#'+(.) *#'\$0;Z%(' #')#&'!(*70!#&7&-['Z\$, *#!(''
HJ_UVci hdfcV`Ya gĭž UbX`Í VYVWa Y`Uk UfY`cZk \Uhk ci `X`gYha Y`c `Í`
F9#"\$\$*;' +(.) *#0' 7&!#"97#/#2' &(!#2' !C#7"" Z7%)" (9#2' 7&!#")#0(&\$*
fYUh]b[ĭžÍY YVtg]h UhZUW]hUhY`X]Uc[i Yĭž UbX`Í]a dfcj YX`a YhcxXgcZ
)" (, *%5"#0(*. !7(&H['I C#!C#%#?'#+7)" (+7!6'C7-C*7-C!0'!C\$! /C#&' (&#'
)\$"!&#"#&-\$-#0'7&') (07!797!6;'!C#'(!C#'")\$"!&#"!#&20'!("#0) (&2' /7!C'
) (07!797!6'\$0' /#*H'
I C#', " (\$2#&5\$&25, . 7*2'B"\$%# / ("1' \$00#"!0' !C\$!' '\$'07&-*#') (07!79#'
#:)#"7#&+ #' +\$&' #: !#&2' \$&2' 7&!#&07B6', #+\$. 0#') (07!79#' #%(!7(&0' \$&2'
) (07!79#' \$+!7(&0' +7'+*# '\$&2', . 7*2'B" (%' \$&2' (&!(' (&# '\$&(!C#;' !C. 0'
+"#\$!7&-'.) /\$"2' 0)7"\$0' =^"#2"7+10(&,' ULL3V' ^"#2"7+10(&,' >(C&,'
7c Ynř DY_ž/ `:]b_Yž &&\$, Ł"; fUh]hi XY`]g k]XYmUW\bck `YX[YX`]b`

3MT ! "#\$%&'()*+&,"#-%,!)+,).+,-.%\$)"(0+-&\$%+,

\$**' (B' /C7+C' \$"#' #*#%#&!0' \$&2' (. !+(%#0' (B' !C#' , "(\$2#&5\$&25, .7*2'
)C#&(%#&(&'=#^"7+10(&'ULL3V'^"7+10(&'#!'\$*H;'ULLTAH'I C#%#0'

!C# 7&!# "9#&!7(&') "(+#00H' I C(. -C' 7&0!' . +!7(&0' /#"#'+(%) "#C#&079#;'
"#%7&2#"0' /#"#'-79#&' "#-. *\$**6' \$&2' +(%%. &7+\$!7(&' , #!/##&' !C#
"#0#\$"+C#" "\$&2') \$"!7+7) \$&!0' /\$0' /#"**5%\$7&!\$7' 7!'70'. &+#!"\$7&'C(/
/##** !C#') \$"!7+7) \$&!0' B(**(/#2' !C#') "(!+(*\$0' 7!' /\$0' 7&!#&2#2' =#H-H;'
/"7!7&- '#&! "7#0'#9#"6'2\$6A;' -79#&' !C\$!' !C#6' /#"#*\$"-#*6**B!'! ('+(%) *#!#
!C#*8(. "&\$*7&- '#: #"+70#'\$!' !C#7""270+"#!7(&H' > (&!' (*\$&2'+ (&070!#&+6'7&
!C#*17%7&- '\$&2'0#!!7&- 'B(" !C#!#0!7&-') C\$0#0'+\$&'\$*0(, #7%) "(9#2;'07&+#'
hYgh]b[\ UX hc VY Xcb Y'cb X] YfYbhXUng]hc UWVta a cXUHy'dUfh]VjdUbgD
0+C#2. *#0H'

C

H\Y' WffYbh ghi Xm VzbUfa g' hUhi dUfh]VjdUhc]]b' U [fUhi XY
^ci fbU]b[]bhYfj Ybh]cb' VUb' g] [b]UWUbhmiU YVh VzbU]Vh fYgc'i h]cb']b'
7&!7%\$!# '26\$27+' "#\$!7(&0C7) 0H' _&C\$&+7&- '\$/\$"#�'\$&2' #:)#"7#&+#0'
cZ [fUhi XY'Y YWwX'Ub']bVWYUgY]b UXcdh]b['hY Vzbghfi Vh]j Y'VzbU]Vh
"#0(*. !7(&' 0!6*#' (B') (07!79#') "(, *%# ' 0(*97&-H' <! '\$*0(' 2#+ "#0#2' !C#
UXcdh]cb'cZbY [Uhj YVzbU]Vh fYgc'i h]cb' gmiYgZ' _YVta d']UbWzVzbU]Vh
#&-\$-#%#&!;' \$&2' /7!C2"\$/\$*H' I C# 0!. 2600' "#0. *!0' 2#% (&0! "\$!#' !C\$!'
#&C\$&+7&- ' !C# - "\$!7!. 2#'#:)#"7#&+#'97\$ - "\$!7!. 2#*8(. "&\$*7&- '\$&'C\$9#
"#%\$ "1\$, *#'. !7*!6'7&' + (. &0*7&- '\$&2' !C#" \$) #. !7+7&!#"9#&!7(&0H' <!' +\$&
, #') # "B (" % #2' 7&27972. \$**6' \$&2') "79\$!#*6;' \$&2' %\$6' , # " # + (%%#&2#2'
B (" + \$0#0' /C#"# () #&�' \$&2' 27\$*(-. # '\$"#' +. ""#&! 700. #0H' <' 70' \$'

3aL ! "#\$%&'()*+&" , #-%, !)+,). +, /-%. \$)" (0+-&\$%+,

C

D*-(#;@H;R\$, *#;@H;'S'P\$70#*; 'EH'=UL3LAH'<!00!C##*7!!*#!C7&-0K'_9#"62\$6'
-\$!7!. 2#'\$0'\$', ((0!#"0C(!'B("'"(%\$&!7+'*#\$!7(&0C7)0H' H' /#"40,(
I ',0%\$"4#+\$! #.(CJ=UA;'U3N5UMMH'
5[cYzG"z<U]Xhž>"ž/ ; UV'YzG'f&\$,\$, Ł"6YncbX'fWYdfcVjrm; fUj]hi XY'
\$&2'"#\$!7(&0C7)0'7&'#9#"62\$6'*7B##'K9'"%"4.(L=MA;'aU45aUWH'
6UfihYhžA "Mž/ '8YGHYbcž8" f&\$*\$'Ł"; fUj]hi XYUbxdfcgcVjU VY\Uj]cf.
b#*)7&-'/C#&'7!+(0!0'6(.H'H#)*+", "-\$*0,(:*\$'4*'.(CJ.(M3W5MU4H
6Ui a Y]ghYfžF ": "ž/ @YUfnžA "F "f% -) Ł"H\YbYYXtc VY'cb[. '8YgjYfYžcf'
7&!#)"#0(&\$*\$!\$+C%#&!0'\$0'\$'B. &2\$%#&!\$*C. %\$&'%(179\$!7(&H'
H#)*+", "-\$*0,(M1,, '%\$4.(CCJ.'aWN54UWH
6cmXž 8" F "ž/ '6YYž < " '@' f&\$%\$Ł" N+'(2' &' , " ! \$4-(*+,\$,2'=3U!C' #2HAH'
J(0!(&K'X#\$"0(&H
6Ui Wta ž8"ž<U`k Y[ž? "ž5h_]bgž8"ž9b[ž>"ž/ 'H\i fa U]Yfž: "f&\$*\$'Ł"
](&-5!#"%')"#27+17(&'(B'%"\$!"7!\$*Y. \$*7!6'B(**(/7&- '\$"#\$!7(&0C7)'
#2. +\$!7(&')(-"\$%K'J#7&-') (07!79#'7&'\$'+(&0!" . +!79#'/ \$6H'0" 1/40,(
"F@09\$)(H#)*+", "-). (DP=MA;'aaT5a44H
6cgnca Ybnj]B U[nž="ž/ ? fUgbYfžž6" f%, *Ł'M' %<' ' 4(-\$&'(042(%0Q' R(5(

: "\$0,(H#)*+","-).(LG.(MNN5MTWH
_%%(&?'?H'DH;'S'P70C"\$;'DH'=UL33AH'c C6' -"\$!7!. 2#' #&C\$&+#0' /#**5
, #7&-K'c C\$!/#'1&(/;/C\$!/#'&##2!'('1&(/H'&'`H'P#H'@C#*2(&:'I H'
JH` \$0C2\$&:'S'P#H^H'@!#-#"'=_20HA; ; '#\$-4\$4-(! "\$%\$&'(! #) *+","-)R(
NOQ\$4-(#%" *Q(042(9"&\$4-(F"/<0/2'=))H'UaT5U\UAH'E#/j ("1;'Ej K'
F: B("2'k&79#"07!6'X"#00H
_ "710(& ;_H'bH'=3W4LAH'T+\$,2+" "2(042(#" *\$%)B(E#/j ("1K'E ("!(&H
:]g\Yfž>"ž/ '7cfVdfUbž? "f% - (L' 6' 0#1/' #('F"/(*,\$4\$*0,(! /0*%\$* R(5(
#"1/*' 8""Q=(G(*H3AH'E#/j ("1;'Ej K' I C#'^##"X"#00H
^"#2"7+10(& ;'JH' =ULL3AH' I C# " (*#' (B') (07!79# #%(!7(&0' 7&') (07!79#'
)06+C(*(-6K' I C#', " (\$2#&5\$&25, . 7*2'!C#('6' (B') (07!79# #%(!7(&0H'
59' /\$*04(H#) *+","- -\$#%.(WU=MA;'U3T5UU\H
^"#2"7+10(& ;'JH']H'=ULLWAH'H"#%\$&\$%)B(E#/j ("1K'?\$&2(%'b(. 0#H
: fYXf]Wgcbž6"ž7c\bžA "ž7c Ynž? "žDY_ž>"ž/ :]b_YžG" f&\$\$, L'CdYb'
C#\$"10' , . 7*2' *79#0K' X(07!79# #%(!7(&0;' 7&2. +#2' !C" (. -C' *(97&-5
17&2�' % #27!\$!7(& ;' , . 7*2' +(&0#Y. #&!7\$*')#"0(&\$*' "#0(. "+#0H'
0"1/40,('F(H' /#" 40,\$%) (042(: "\$0,(H#) *+","-).(VW=4A;'3La453L\UH
R#" \$-C16;'DH'c H;'c ((2;'DH'PH;'S'b6*\$&2;'PH'_H'=UL3LAH'D!"7!7(&'B' (%'
0#"B527"#+!#27&!#"9#&!7(&0K'<&9#0!7-\$!7&-!C#"#\$!7(&0C7)', #!/##&
)06+C(*(-7+*\$') "#27+! ("0;'7&!#"9#&!7(&' +(&!#&! '\$&2'2") (. !'B' (%'
\$', (26'2700\$!70B\$+!7(&'7&!#"9#&!7(&H(: "\$0,(; *\$' 4** (X(6' 2\$*\$4'.(JC.
ML5MNH'
R("2(& ;>H']H;'D"&#!#;'?H'DH;'S'@%7!C;'?H'_H'=UL33AH'b\$9#'6(. !C\$&1#2'

3aU ! "#\$%&'()*+&,"#-%,!)+. +, /-%.\$" (0+-&\$%+,

< YbXf]Wž G" G"ž 8 J]WYž 5 "ž/ ' < YbXf]Wž 7" f% - , Ł" H\Y`F`Y`U]cbg\]d`
D00#00%#&!@+\$*#H'0"1/40,(YF: " *\$0,(542(H' /#" 40,(I ' ,0%" 4#+\$! #.(
CW=3A;'3MN53aUH

N\Ub[žE "f&\$+\$+Ł": Ua]mVt&a a i b]Vh]cb'dUhtYfbg'UbX'Vt&bU]Vt&gmYg'
7&'>C7�#')\$"&!5+C7*2""#*\$!7(& C7)0H'T"9914\$*0%"4(Z10/%' /.)
WW=3A;'33M53UTH

A A

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