

!
" #\$\$#%&'%()* (#+'&&! , -. / (00. -! . /! 1 '0&. -23!45(!67(-'8#%!9%' + (-0'&2! . /! , #-'0!
: '-(8&. -3! ! "#\$"%&'(%&! %&!) * , & - ". (*%+*/&O\$12)"3!
600. 8'#&(1; <'&. -3! 4##+, "35&6)3\$(0%&'\$&0*)"#"3&0(*)+, "3&
: '-(8&(=-!<(!>=?\$8#&'! . %07&89"&8(*: 1";, " & <";)" = > ? + & <"; 1"&8(*: 1";, ">8(*: 1";, " @A&
@.); <'&. -3!B#"\$%#+\$)(#+,&C(,)\$*+,&O*)"#"4D3\$%+*\$3!
AB!C=#'!<DE-0#23!FGHHF!, #-'0!
00#12(-J #=>W-!



!
LHHM)>-(0(%&! ! -(0(%&

LHSG>-(0(%&!

!

LHSG!

Z(1#2+%)"3&('&\$9"&O\$+\$"&)#&E#)\$"2&O\$+\$"3&6)3\$(%/7&8.)(<'&. -!| '&5!d# 7 (0!4!Q>#--. | !#%<!
b '\$\$# 7!X. +#!Y@5'8#P. !9%' +(-0'&2!. /!@5'8#P. !, -(00Z!

!

LHSG!

; <'&. -3! Z"/(#2&O\$+\$", "33& - ". (*%+*/

!
LHLH!

!
LHHM!! [, \$#8%P! Q. +(-('P%&2! : (7. 8-#&'8! 8#>'�! #0! #%! 9)3\$()%"LH%(D,`. "3\! ?+& <";1"&
8(*: 1";), "7&O. \$!oowO3!%x!L3!>>!BG)SSHK!!

!
LHHF!! [6!p=(0&' . %!. /!*'/(!. -!: (#&5`16<7%'0&-#&'+(!" . <'(0!#%<!6<7%'0&-#&'%P!" . <'(0!
'%! X'%(&((%&5)@(%&=-2! , #-'03\! '%! X)",23& ('& FGH"%\$)3"0& 4&! (. H+%+\$);"& 6)3\$(%/(& ('&
FGH"%&C>(*21%"3&)#&C+%3&+#2&?((#7&AfQO&\$(&H%"3"#&K!@K!] #?'(-3!(<K!Y@# 7?-<P(!
@# 7?-<P(!Q85. \$#-0! , -(00Z3!>>K!LBS)VSGK!!

!
LHHG!! [* . 8#&'%P!&5(!@(%&(-!@. %/'%'%P!#%<! : (/%'%P!&5(!@#>'&#\$!&5-. =P5!&5(! , #-'0'#!
U. -&'8#&' . %0K\&

"#: M!! 4&\$J@)8; .5)' \$6, &' ?&5-#\$\$\$. \$8K"5-.)5, #5+; \$O)' +#1\$/#; 9\$-5-10#-.\$+#\$+@/ &.-\$"5-.)5; ;#-\$#. \$>)85.5; ;#-\$CEC_P
CFFC0!\$%!G*6. R^-26!K->6. H*!!; 6+(30!@+26. E!a=(. 0!"#: [N0!_e[!89!e#"9!a6W(*+3!
G6-f3!
"#: M! ^)' .,)885'\$ST&,5-3\$7,O#+\$A),1#-\$&' +\$^); '. #,PJ#<)8; .5)' B\$CDEFPC`E\$! ^*Y!T=+O!! ^TP!; +*330!
"#: [N9!V%!G=. 65W6. !A=-3*9!1W*1G=-+. 6'!=?!U=E*+. !A(35=+%!
"#: [! 7' S8#.#, #\$\$.\$7O@,5; ;#&+&' -\$8K"5-.)5, #55' -.5; ;.5)' '#88#\$6, &' ?&5-#B\$CDEFPCF_E!1; 6+(3!1a ^ <70!"#: "N9!
V%!; (*+*Rg6)(*+!V=%+9!a6W(*+3!G6-f3!
"#: [! U=. 6!& /=-?0!a; 8#-\$A#, 2!\$4&\$85V#, @#.\$88\$, &+5.5)' !1; 6+(3!1!Z6"(26+E0!"#: [N!a6W(*+3!G6-f3!
"#: [! 7-/6. . *!K*36. 0!4%. . !A-. 5!6. E!h("62!U6D! ^*3=. 0! ! "#\$A, #' 1"\$J#<)8; .5)' '\$5'\$R8)V&8\$
T#, ->#1.5-#1`5W6>6!1!a=+. **!P. ()^+3(5%!; +*330!"#: "N!C+*. >W!A(35=+%
"#: e! i -*. 5(. !K*'-*+2=/9! 4#-\$T)8515#, -.\$+&' -\$88\$<588#1\$4&\$1)' -. ; 1.5)' '\$+b; '\$), +, #>; V85!\$G\$T&,5-\$cCE_`P
CFC`d\$1; 6+(3!1; -.\$(>65(=. 3!E*!6!7=+\$=. . *0!"#: "N!ARC+6.>*!
"#: e! G-(6. !h+(HW5!6. E!A979!G=. *30!*E390! T8; ,&85-O\$&' +\$. "#\$M+&\$)6\$. "#\$J#>; V85!\$5'\$A, &' 1#1; 6'H+6)*0!
"#: e! aW6+*31<*6+(>09!T&,5-\$ /, #&O-B\$T&,5-\$%#O),5#-3\$! "#\$^5.2\$&' +\$5.-\$%2-.5; ;#1756. ?=+E!P. ()^+3(5%!
; +*330!"#: : N!C+*. >W!A(35=+%9!!
"#: " ! G62*3!19!786++=Y9! ! "#\$ (&, 6&, #\$\$N. &.#3\$ (), 8+\$ (&, \$MMS 7O#, 51&' -\$&' +\$. "#\$ 7S#\$)6\$Q5\$R)<#, 'O#' .!
!&D?=+E! !&D?=+E! 1. 8-56(7)20[Tj E421(D?=)1(Tr(7)2(8)Tc4200)'\$+b52m &N+++!

LHHA! , '(-[!]. 0#%+#\$. %K!89"&- ". (*+*/&('&-)3\$%13\$0B#3\$)\$1\$)(#3&+#2&C%+*\$)***3&('&! (1#\$\$%L C(,)\$)*3&
)#&6)3\$(%)^+,&C"%B H""\$); "K! ! (1%&+1&! (, '1"&2"&X%+##""!P'+(%!/. -!&5(!Q(#\$2!* (8&=- (0!#&!
@# 7?-'<P(19%' +(-0'&2K!
LHHN! d(#%)*=8!X#%82K! [45(!4 (85%'C=(! . /!&5(!, -(0(%&\!4-#%OK!6P%t0!: (-#\$)W7?(-&!
#%<!Q&(>5(%!bK!Q#I 2(-K!W%!S#&i +=+%+0&C+)#)\$#13&('&TQ&! "+%&K!X(I !g. -c!: #+'<!
b(-%(-K!!

!

&

!

LHSB! I '85!. #0!, '&&2#35#-

K!@.)8. %+(<!I '85!6\$?(-&!b=1#%<!&5(!" (\$/(-!@(%&(-!#&!
&5(!1 #--+#-<!R(%% (<2!Q85. . \$K!V)<#2!%&(-%#&' . %#\$!8. %/(-%8(!I '85!. +(-!NH!
>#-&'8'>#%&0!/- . 7!#-. =%<!&5(!I . -<3!%8\$=<'%P!\$(#<'%P!085. \$#-03!# 7?#00#<. -0!
#%<!<'P%'&#-'(OK!

!

LHSM! K!@.). -P#%'i (<!I '85!
E\$+(-!U(\$85# 73!I '85!&5(!>#-&'8'>#&' . %!. /!, #=\$!, #&&. %!#%<!@5-'0&. >5(-!
" #-?. =-3!W, Q63!" -'0?#%(!6=0&-#\$#K!

!

LHSM! K!@.). -P#%'i (<!I '85!: #'%(\$!Q&('7 (&i)d(%c'%OK!4 I .)<#2!
027>. 0'=7!. %!&5(!'%&(\$8&=#\$!5'0&. -2!. /!SBAM!#%<!&5(!/. \$\$. I 'P!<(8#<(OK!

!

LHSM! !

6=<'(-3!6%<-(I !d#'%85'\$\$\$!T'85#(\$!' (5-(%&3!T'85#(\$!Q8. &&!@5-'0&. /(-0. %K!
: (8(7?(-!F)MK!

!
LHSV!

!W%&(-%#&' . %#\$!027>. 0'=7!. -P#%'i (<!I '&5!Q&(+(%!, '%8=0!#%<!
8.)/= %<(<!?2!g#\$(!9%'+(-0'&2K! 1 (\$<!#&!&5(!67 (-'8#%!9%'+(-0'&2!. /!, #-'0!
'%8\$=<'%P!d. 5%! : #-I '%3!: (07. %<!R'%P3!6%%'8c!* (7>e-'t-(3!d#7 (0!*'+(0(23!
, 5'\$>>(!T'%#-<3!b'\$\$'#7!X. +c3!d(#%)U-e<e-'8!Q85#=?3!d#7 (0!Q>#--. I 3!#%<!
: #+'<!4. <<K!

!
LHSS!

!W%&(-%#&' . %#\$!
027>. 0'=7!#&!&5(!67 (-'8#%!9%'+(-0'&2!. /!, #-'0!I '&5!b'\$\$'#7!X. +c3!d#7 (0!
Q>#--. I 3!, #&-'8c!* (a#\$[03!]. 7#'%!1=-(&3!X'8. \$#0!" #--(2-(3!X'8. \$#0!
: (\$\$#%<(3!, 5'\$>>(!" (i (03!Q#-#5!a(%0?=-P(-3!T#-8)

!
LHSH! 89"&V%+#2&C+%30&! 1,\$1%+,&M),)"1&)#&\$9"&C%(*"33&('&M"\$%H(,)\$(+#)K+\$(#&
! 3!@=\$&=- (0!#%<!a\$. ?#\$'i#&' . %!
Q27>. 0'=73!. -P#%'i (<! ?2! 1 (\$7=&!6%5('(-!#%<!]) #h!W0#-3!: (8(7?(-K!

!
LHSH! 4%*9+"(, (1/&('8\$9"&C+%3&E#2"%l%(1#2!!
! 3! Q27>. 0'=7! . %! , #-'0)
6 70&(-<#7! 9%<(-P-. =%<! . -P#%'i (<! ?2! 6%<-(1! 1 =00(2! #%<! @5-'0&. >5(-!
*'%<(-K!!X. +(7?(-K!

!
LHSH!! 89"&! 1,\$1%&('&M"\$%H(,)\$(+#&- ". (*+*/0&O**#"3&('&M(D,)K+\$(#&)#&\$9"&V%+#2&C+%3&
! 3!WQ6!b. -\$!@. %P-(00!. /!Q. 8'. \$. P2!Y%+&(<!#%<!/'%#%8(<!
?2!]) (0(#-85!@. 77=%&2!V3!d=\$2!SS)SF!



!
LHSB! [45('!'-'&5!. /!&5(!: (7. 8-#&'8!Q. 8'#\$!@. %&-#&3!SM\$H)SMGH\!, . \$&'8#\$!45(. -2!
! b. -c05. >3!Q&#%/ . -<!9%'+(-0&23!T#2!BK!

!
LHSF!! [45'(-0!(&!\$(!<-. ' &!<(1!\$#!e8(00'&e\F+\$3&2["G**H\$)(#3!W%0&'&=&!<De&=<(0!#+#%8e(0!<(!
! , #-'OK!

!
LHSA! q!; \$'(!1 #e+2!. =!\$(0!; e/'0!; (!*D_&#&!; e7. 8-#&'C=(3!s!W%!5. %. -!. /!&5(!
! >=?\$'8#&' . %!. /! ?[b%&2"3&\$/%+#)"33!YT# '0. %!" \$#%85(!^!Q=82)(%)" -'(Z3!LF!
! % . +(7?-(!LHSA!

!
@QAF& ?+&2N. (*+)\$)#%\$(1;+D, "8&?)DN%+,)3. "7&<NH1D,)*+3. "8"\$&, &M*"H\$)(#&2"&C)"%&&<(3+#;+,, (#&
! +1G&F+\$3LE#)35 * (0!; 85#%P(0! 1 '0&. -'. P-#>5'C=(0!U-#%8.)67 (-'8#%'07&
! . -P#%'i (<! ?2!; #+'<!" (\$3!6%&. '%(!*'8&!#%<! , 5'\$>!X. -<K& !V!% . +(7?-(!
! LHSAK

!
LHSA! [U'08#\$!U(<(-#'\$07'!* . 8#&!; (?&!#%<!&5(!@. %0&-=8&' . %!. /!&5(!T . <(-!Q&#&(!%'&5(!
! 9%'&(<!Q&#&(0!#%<!U-#%8(3\!V, (D+, &6)3\$(%&('8\$9"&C(,)\$*3&('8C1D,)*&- "D\$3!
!) 3!, #-'03!d=%(!LHSA!

!
LHSN!!!!!!!!!!!!!!!!!!!!!![" (2. %<!&5(!4. 8C=(+'\$\$#%T 2&5!]) (+ '0'&'%P!Q&. -'(0!67 (-'8#%0!#%<!U-(%85!4 (\$\$!
! 45(70(\$+(0!6?. =&!'" P!a. +(-%7 (%&K\!9%'+(-0'&2!. /!@5'8#P. 3!: (#%00!Q#\$. %!
! / . -!&5(!: ' + '0'. %!. /!&5(!1 = 7#%&'(OK! 3!6>-'\$!SFK!

!
LHSV! [6<. \$>5(!45'(-0!#%<!&5(!>#27 (%&! . /!&5(!U-#%8.) , -=00'##%!I #-!-(>#-#&' . %0\
! Q27>. 0'=7! . %! 4&C(,)\$*+, &6)3\$(%&('8C1D,)*&
! - "D\$3 rF 1%(H"&+#2&\$9"&E#)\$"2&O\$+\$"37&'%(. 8\$9"&?+\$"8F)19\$""#\$9&! "#\$1%/%h3&
! 3!d=%(!LN

!

LHSL! [O(-' < 8&'. %!#%<1&5(!*'?(-#Q&#&(!. /!; f8(>&'. %!'%1 (-7#%!T (\$+'\$\$00!'' '\$\$2!'' =<<\!
Q(7'%#-!?'[NHN"&"\$&, +&H, 1. "3!
K!T #-85!GK!

!

LHSL! [, (%0(-! , #-'03! >(%0(-! \$(! >. =+. '-! *D_ &#&! (& \$#! +'\$\$(! 8#>'&#\$(! #=! oW o(! 0't8\$(\!
?s1%0+#)3+\$)(#&"#&! 9)#"&"\$&,s9)3\$(0)%&2"&,s1%D+#)3+\$)(#&2"&C+%Q3!6%%"(' (-P(-&@=-'(!
Y@X] QZ3! y5=! o#. 2#%P! 晓Y9%+(-0'&e! " ('<#3! , ec'Z3! g=#%! y5'P#%P! 冈!]
Yze8. %. 7'0&(!9%'+(-0'&e!U=<#%3!Q5#%P5#Z3!6%%"(!U. =-8#=&!Y9%'+(-0'&e! , #-'0!
W! , #%&5e. %)Q. -?. %%(ZK!
!LA!h#%+'(-K!

!

LHSS! [45(!@#0(!. /!' '\$\$2!'' =<(!) (>-(0(%&#&' +(! T (%3! 4(--. -!#%<! &5(!*'?(-#Q&#&(!. /!
; f8(>&'. %K\!Q(7'%#-!OE] 4; o3!
K!
: (8(7?(-!SHK!

!

LHSS! [*#! , (&'&(! &-#+(-0e(! <=! a-#%<! , #-'OK! O(-0! =%(! #>>-(5(%0'. %! P\$. ?#\$(! <(0!
u# 7?'#%8(0D! <#%0! \$D(0>#8(! 7e&-. >. \$&#'%K\! E%(!. /! &5-(! /'%'#&0&0! '%+'&(<!&. !
>-(0(%&! . =-!#-&'8\$(! / . -!#!>-'i (!YLGHH! (= . OZ!P'+(%!)?2!&5(!W%0&'&=&(! / . -!&5(!@'&2!
#%<!@. 77(-8(K!Q(>&(7?(-!LF!#&!&5(!
3!
!

!

LHSS! [X. &5'P!Q=88((<0! *'c(!U#'\$--(!* . 8#W7>#8&!. /! a\$. ?#\$(! T (P#); +(%&0!%'! X(! !
g. -c!#%<! , #-'0!%'&5(!! #c(!. /!/#\$(<!E\$27>'8!?'<0\!Y! '85!Q8. &&!Q#7. %Z!
3!T #2!GK!

!

LHSS! [* . 8#\$(! '' =-(#-8-#823! 9%'+(-0#\$(! , . I (-! 45(! , . \$&'8#\$(! @. %0&=-8&'. %! /! Q8#\$(! '%!
] (+. \$=&'. %%-2! , #-'03!SFMB)SMMSG\
K!T #-85!FK!

!

LHSS! W%+'&(<! : '08=00#%&! / . -! #! 027>. 0'=7! . %! [Q>. %&#%('&2! #%<! E-P#%'! #&'. %! '%!
; =-. >(#%!: (7. 8-#&'8!@. %&(%&'. %K\
! 45(!
027>. 0'=7! I #0! . -P#%'i (<! ?2! R=-&! b(2\$#%<! #%<! '8\$=<(<! '%+'&#&'. %0! &. !
R#&5\$(\$@#%#%'P3! : #+'<!Q5# / (-3!d. %#&5#%Q>(-?(-!#%<!T'85#(\$!a(2(-K!

!

LHSH! [*De85. !<(!\$#!Uw&(<(!!#!Ue<e-#&'. %!#=#f!_&#&0)9%'0\!! (. . N. (%+\$)(#&2"&, +&Xc"\$&2"&
?+&XN2N%+\$)(#!E-P#%'i (<! ?2!; 77#%=(!*\$(!) . 2! *#<=-'(!#%<!a(-P(0)1 (%-'!
Q. =&. =K!d=%(!LG3!#&!&5(!
K!

!

LHSH!! [U-. 7!9&. >'#!&. !90. %'#!#%<!/- . 7!@-#?P-#00!&. !@(\$(?-#&'. %!@-'&'8#\$(! , (-0>(8&'+(0!
'%167(-'8#%!9-?#%U. -7\! , \$(%#-2!\$(8&=-(!P'+(%! / . -!&5(!T #0&(-D0! , -. P-#7!%!
9-?#%!, \$#%#%'P3!
3!d#%=-2!SSK!

!

LHHB!! [*#! 7=%'8'>#&'&e! H+%)3)"##"! ^! \$De>- (=+(! <D=%(! -e+. \$=&'. %! '%+#q+)3"3\! Qe7'%#'-(!<(!
, '-(-!Q(-%#3! S%2%"3&"\$&2N3(%2%"3&2+#3&, "&C+%Q3&2"&, +&<N; (.1\$)(#&rAeeQLAPARh3!
3!: (8(7?(-!SAK!

!

LHHM!! [: e/'%'-!=%!'&e-w&!>#-&'8=\$'(-!>#-'0'(%3!SMNH)SMNMK\! , #>(-!P'+(%! / . -!&5(!Q(7'%#-!
41\$(1%&2"&, +&<N; (.1\$)(#&AerQLAPRO!Y6%&. '%(! *'\$&'! #%<! d(%#)*=8! @5'#>>(2Z! #&!
3!T #2!LVK!

!

LHHF!! [9%(!7=%'8'>#&'&e!8#>'&#\$(K! *D#<7%'0&-#&'. %!<(! , #-'0!<#%0!\$#!>-(7't-(!7. '8'e!<=!
oW o 0't8\$(3\! , #>(-!>-(0(%&(<!%'&5(!0(7'%#-3!0"%)%&[F+\$&^B^e^&8)* , "37!T #-8!
E\$+'(-!'' #-=85!(&!6\$#%'!@5#&-. &3! 3!d#%=-2!SBK!

!

LHHA!! [45(!E?h(8&'&2!. /! /6-85'+(0!#%<!6-85'+(0!#0!E?h(8&0K\! , #>(-!>-(0(%&(<!%'!&5(!
0(7'%#-3!?'3&*9(3"3&"\$&, "3&. (\$33!
3!6>-'!LNK!

!

LHHG

9%(!C=(0&'. %!<(!+'(!. =!<(!7. -&K!*(!8. ->0!#<7%'0&-#&'!(&!\$#<7%'0&-#&'! %!<(0!
8. ->0!#=#!OWO(!0't8\$(!^!, #-'OK !: '08=00#%&3!@5-'0&'#%!' '#=<(\$. &3! ?+D(%+\$()%"&2"3&
0*)"#"3&O(*)+, "3!

[, . | (-0! . /!, #-'0!&5(!@'&23!&5(!@#>'!&5(!@(%&(-\! ! ! !!!!!!!!!!!!!LHHM)LHSS!
!
!

