

! " " # \$! % ! & ' # () * !
!
! ! " # \$ % & ' " () * \$ % + ! ! % &
" ## ! \$ % & & ' (!) * + , - + ! . / !
0 & 1 , 2 ! 3 14 ' 2 (5 ! \$ 6 ! 7 8 9 : ; < 7 ; : ; !
= .) !
> ? % , + @ ! A ; B ; C ! D : 9 < " B : 8 !
/ E 1 ' F @ ! [F1EG+&HI J 'K\(K1,121L+2-!](#)
!
\$ % & ' () \$ * + , - .) , / - !
!
M ' (' H ' , N ! . K ? % F 1 & 5 ! O 1 F * ' , ! = , ' * + & (' H P 5 ! # : B " < 4 & + (+ , H !
> & % Q + ((% & ! % Q ! > ? ' F % (% 4 ? P 5 ! / E + & ' H - (5 ! 6 , (H ' H - H + ! Q % & ! O ? & ' (H ' 1 , ! . H - 2 ' + (! A 6 O . C 5 ! R % & % , H % 5 ! # : B ; < 4 & + (+ , H !
> & % Q + ((% & ! % Q ! > ? ' F % (% 4 ? P 5 ! H + , - & + 2 5 ! 6 O . 5 ! R % & % , H % 5 ! # : : # < # : B ; !
S % F 2 + & ! % Q ! S + & E 1 , ! T % % P + U + + & 2 ! O ? 1 ' & ! ' , ! . % K ' 1 F ! 1 , 2 ! > % F ' H ' K 1 F ! > ? ' F % (% 4 ? P 1 H ! 6 O . 5 ! # : : : < B : !
V - FF ! > & % Q + ((% & 5 ! . H 1 H - (! W , F P 5 ! T + 4 1 & H E + , H ! % Q ! > ? ' F % (% 4 ? P 5 ! = , ' * + & (' H P ! % Q ! R % & % , H % 5 ! # : B B < B ; !
) ((% K ' 1 H + ! O & 1 2 - 1 H + ! V 1 K - F H P ! \$ + E G + & 5 ! > ? ' F % (% 4 ? P 5 ! = , ' * + & (' H P ! % Q ! R % & % , H % 5 ! # : : " < B ; !
) 2 X - , K H ! > & % Q + ((% & 5 ! T + 4 1 & H E + , H ! % Q ! > % F ' H ' K 1 F ! . K ' + , K + 5 ! = , ' * + & (' H P ! % Q ! R % & % , H % 5 ! # : B Y < B D !
V 1 K - F H P !) ((% K ' 1 H + 5 ! O + , H & + ! Q % & ! / H ? ' K (5 ! = , ' * + & (' H P ! % Q ! R % & % , H % 5 ! # : : D < 4 & + (+ , H !
\$ + E G + & 5 ! = , ' * + & (' H P ! % Q ! R % & % , H % ! Z % ' , H ! O + , H & + ! Q % & ! [' % + H ? ' K (5 ! # : B : < 4 & + (+ , H !
/ E + & ' H - (! \$ + E G + & 5 ! O & 1 2 - 1 H + ! O + , H & + ! Q % & ! R ? + % F % N ' K 1 F ! . H - 2 ' + (5 ! R % & % , H % ! . K ? % % F ! % Q ! R ? + % F % N P 5 ! # : B ; < !
V - FF ! \$ + E G + & 5 !) 2 * 1 , K + 2 ! T + N & + + ! V 1 K - F H P 5 ! R % & % , H % ! . K ? % % F ! % Q ! R ? + % F % N P 5 ! # : : " < # : B ; !
) ((% K ' 1 H + ! > & % Q + ((% & ! 1 , 2 ! > & % Q + ((% & ! % Q ! > ? ' F % (% 4 ? P 5 ! O 1 F * ' , ! = , ' * + & (' H P 5 ! B 8 D 9 < # : : # \ H + , - & + 2 ! B 8 8 B !
) 2 X - , K H ! V 1 K - F H P ! \$ + E G + & 5 ! 6 O . 5 ! B 8 D Y < # : : # 5 ! 1 , 2 ! M ' (' H ' , N ! > & % Q + ((% & 5 ! 6 O . 5 ! R % & % , H % 5 ! B 8 8 B !
) ((' (H 1 , H ! > & % Q + ((% & ! % Q ! > ? ' F % (% 4 ? P 5 ! R ? + !] ' , N ^ (! = , ' * + & (' H P ! O % F F + N + 5 ! / 2 E % , H % , 5 ! B 8 D B < D 9 !
!
& () / - . 0 % .) 1 ' * 2 3 4 ' 0) ' / \$!
!
V % - , 2 ' , N ! T ' & + K H % & 5 ! O + , H & + ! Q % & ! > ? ' F % (% 4 ? P 5 ! 3 + F ' N % , ! 1 , 2 ! . % K ' 1 F ! / H ? ' K (5 ! 6 O . 5 ! # : B : < B # !
) K 1 2 + E ' K ! T + 1 , 5 ! 6 O . 5 ! # : : " <

!) +(H?+H'K(5!O% ,H' , + ,H1F!>?'F%(%4?P5!O&'H'K1F!R?+%&P5! . %K'1F!1 , 2!>%F'H'K1F!>?'F%(%4?P!
!] 1 ,H5!`' , +H++ ,H?<O+ ,H-&P!>?'F%(%4?P5! / 4'(H+E%F%NP5!>?'F%(%4?P!%Q!b1 ,N-1N+!
! O+&E1 ,5!T -HK?5!b1H' ,5!O&+c!

!

60% / .- *% / &* # 7%0&- *A' ,!O1 ,12'1 ,!Q- ,2(5!- ,F+((! ,%H+2!%H?+&U'(+C!

!

! [%%c!) U1&25!&+K+ '*+2!Q%&! !AO1EG&'2N+! =>5!# : :YC5!Q&% E!
H?+!O1 ,12'1 ,! . %K'+HP!Q%&!O% ,H' , + ,H1F!>?'F%(%4?PL
! [%%c!) U1&25!&+K+ '*+2!Q%&! !AO1EG&'2N+! =>5!# : :7C5!Q&% E!H?+!O1 ,12'1 ,!
. %K'+HP!Q%&!O% ,H' , + ,H1F!>?'F%(%4?PL!R?'(!G%%c!U1(!1F(%!(+F+KH+2!1(!1 ,!W-H(H1 ,2' ,N!) K12+E 'K!
R'HF+!Q%&!# : :9!GP! 5!H?+!X% -& ,1F!%Q!H?+!) E+&'K1 ,!b'G&1&P!) ((%K'1H' % ,L!
>&'(K'FF1!1 ,2! . H1 ,Q%&2!3+'2!R&-(H5!

!

L! .H-2'+(!',!O%,H+E4%&1&P!O+&E1,!..%K'1F!
R?%-N?H!(+&'+(L!O1EG&'2N+5! \$ 1((L! \$ 6R!>&+((5!B88B\!414+&G1Kc!B88"L!

!

q. %K'1F!T% E1', (!%Q!] , %UF+2N+@!R+K? , %F%NP5!) &H5!1 , 2!3 +F'N'% , Lr! !D75! , %L!B!
A#: B8C@!Y8<B : BLo!

!

qT'(H1 , H'1F! h 1P(!%Q!] , %U' , N@!T% -N! [F% EG+&N^(!>&%4% (1F!Q%&!1!3 +Q%&E 1H'% , 1F! / 4'(H+E %F%NPLr!
!D75! , %L!B!A#: B8C@!9D<YDLo!

!!

q \$ 1K&% (H&-KH- &+(!1 , 2! . %K'+H1F!>&' , K'4F+(@!) , !) &K?'H+KH% , 'K!O&'H's -+Lr!6 , !
5!M%FL!#@!

5!

B9"<YYL! / 2'H+2!GP!0 %*+&H!ZL! [- 'X(!1 , 2!) , , +HH+!] L! \$ % (?+&L!T%&2&+K?H@! . 4&' , N+&5!#: BDL0!

!

qS'(H%&P!1 , 2!R&1 , (K+ , 2+ , K+!' , !) 2%& , %^(!62+1!%Q!R&-H?Lr!6 , !

5!B#B<"7L! / 2'H+2!GP!>+H+&!0%&2% , 5! / (4+ , !S1EE+&5!1 , 2!) e+F!S% , , +H?L! ` +U!
f %&c@!3% -HF+2N+5!#: BDL0!

!

q>'F%(%4?P5!R&-H?5!1 , 2!H?+! h '(2% E!%Q!b%*+Lr!
7"Lo!

!7D5! , %L!B!AV1FF!#: BDC@!"B<

!!

q. -&4F-(!G+P% , 2!H?+! . -GX+KH@!R&-H?' , !) 2%& , %^(!O&'H's -+!%Q!S -((+&F!1 , 2!S+'2+NN+&Lr!

!##5! , %L!B!A . 4&' , N!#: BDC5!B#"<7 : Lo!

!

qS+N+F5! \$ 1F'Kc5!1 , 2!H?+!>% (H(+K-F1&! . -GF'E+Lr!6 , !

5!7Y< ; YL! / 2'H+2!GP!Z%? , !O1&-1 , 1!1 , 2! \$ 1&c!O1-K?'L!) FG1 , P@! . = ` f!
>&+((5!#: BDL0

!!

q. P , H?+H'K! / *'2+ , K+!1 , 2!WGX+KH'*+!62+ , H'HP@!R?+!O% , H+E4%&1&P! . 'N , 'Q'K1 , K+!%Q! / 1&FP!S -((+&F^(!
O% , K+4H' , !%Q!R&-H?Lr!
B : LBBBBd+X%4LB#B8#Lo!

!# ; 5! , %L!B!A \$ 1&K? !#: BDC@!B##<77\!2% '@!

!

q6 , H&%2 -KH'% , @!uR?+!>% , H!6(!H%!O?1 , N+!6H^Lr!6 , !b1EG+&H!n - '2+&*11&H5!

5!"<#7L! \$ % , H&+1F@! \$ KO 'FF<g -++ , ^(!= , '*+&('HP!

>&+((5!#: BYLo!

!

qS%F'(H'K!) F+H?'K!>F-&1F'(E@!) !3+Q%&E 1H'% , 1F!3+(+1&K? !>&%N&1ELr!

!DB5! , %L!#!

A#: B ; C@!B9 ; <YDLo!!

!

q>&%4% ('H' , 1F!1 , 2! / e'(H+ , H'1F!R&-H?' , ! / 2E- , 2!S -((+&F^(!

Lr!

!# : 5! , %L!B!A . 4&' , N!# : B ; C@!B9 : <D : Lo!

!

q6 , H&%2 -KH'% , @!R&1 , (Q%&E' , N!>?'F%(%4?Plr!6 , !b1EG+&H!n - '2+&*11&H5!

5!"<

. -G(H1, H'*+!&+*'('%, !%Q!1, !+, H&P!Q'&(H!4-GF'(?+2!', !#: : " !1, 2!H?+, !&+*'(+2!', !#: : Y!1, 2!#: BBL

!!

q/1&h?^(!b1E+,H@!.-QQ+&',N5!S%4+5!1,2!h'(2%E!r!>-GF'(?+2!%,F',+!',! 5!((-+!,%L!
B7!%,!
5!Z1,-1&P!#Y5!#: :8Lo!.++!!
?HH4@ddh?+%H?+&X%-&,1FLK%Ed#: :8d:Bd#Yd+1&H?(<F1E+,H<(-QQ+&',N<?%4+<1,2<U'(2%E!d!

!

qR&-H?!\$1HH+&(!S+'2+NN+&!1,2!S%&c?'E+&!','!T'1F+KH'K1F!T'(KF%(-&+Lr! 5!,%L!B79!A h',H+&!#: :DC@!
B"B<; :Lo!)!F%,N+&!*+&('%,!-,2+&!H?+(1E+!H'HF+!144+1&(!','!H?+!G%%cF+H!

5!44L!"D<; ;L!/2L!O?&'(H',1!31UF(L!>'HH(G-&N?@!T-s-+(,+=, '*+&('HP5!
R?+!. 'E%,!. 'F*+&E1, !>?+, %E+, %F%NP!O+, H+&5!#: :DL!

!

qT%%P+U++&2^(!O%,K+4H'%,!%Q!R&-H?@!/ e4%('H'% ,!1,2!O&'H's -+Lr! !Y"!A#: :DC@!
BY:<

+((1P!4-GF'(?+2!' ,!

!
q) &H!6(!`% !V&' ,N+@!) ,!6, H&%2-KH'%, Lr!6, ! 5!44L!B<B#L!
` +U! f %&c@! . HL! \$ 1&H' , ^(!>&+((5!# : : :Lo!
!
q) QH+&U%&2Lr!6, ! 5!44L!#99<9;L! ` +U! f %&c@! . HL! \$ 1&H' , ^(!
>&+((5!# : : :Lo!
!
qO&+1H'*+! [%&2+&!O&%((', N!', !` +U!>-GF'K!O-FH-&+Lr!6, !
5!44L!# : ; <##7L! / 2L! . -(1, !M1, n1, H+, !O 1FF1N?+&!1, 2! \$ 1&c!TL! h 1F?%-HL!b%, 2%, @!
\$ 1KE 'FF1, !>&+((!` +U! f %&c@! . HL! \$ 1&H' , ^(!>&+((5!# : : :Lo!
!
q) -H%, %EP5! ` +N1H'*'HP5!1, 2!6FF-(%&P!R&1, (N&+((', @! \$ +, c+^(!T+K%, (H&-KH'%, !%Q!) 2%&, %^(!
) +(H?+H'K(Lr! 5! . > / >! . -44F+E+, H!B8885!44L!B97<; DL0!
!
q) 2%&, %5!R?+%2%&! h '+(+, N&- , 2@! . -&*+P!%Q!R?%-N?HLr! / , H&P!', 5!M%FL!B5!
44L!B; <# : L! / 2L! \$ 'K?1+F!] +FFPL! ` +U! f %&c@!WeQ%&2! = , '*+&('HP!>&+((5!B88DL0!
!
q) &H'(H'+c+!1-H?+, H'K'H+'H!+, !(%K'1F+!*+&1, HU%&2+F'xc?+'2@!K&+1H'+*+!(41, , , N!', !2+!?!+2+, 211N(+!
c- , (HLr!6, ! 5!44L!B#B<"YL! / 2L!) H'+!R?L!
[&{NN+E1, , <] &- 'XQQ5!S+, c!OL!O++&H(+E15!1, 2! \$ 1&' |HH+!VL! h 'FF+E(+, L!] 1E4+, @!] %c!) N%&15!
B88DL0!AW&'N', 1F!H'HF+@!q) &H'(H'K!) -H?+, H'K'HP!1, 2! . %K'1F!3+(4%, ('G'F'HP@!O&+1H'*+!R+, ('%, !', !
O%, H+E4%&1P!) &H(Lr!T-HK?!H&1, (F1H'%, !GP! \$ 1&H+, !2+!Z%, NLC!
!
q6, H&%2-KH'%, Lr!6, ! 5!44L!B<#DL!
O1EG&'2N+5! \$ 1((L@! \$ 6R!>&+((5!B88YLo!
!
qM%&%?%+2+!, %K?!&1, 2*+&(K?'X, (+F@!S+2+, 211N(+!c-, (H!+, !2+!(H+-, !*1, !2+!(1E+, F+*', NLR! !
; : !AT+K+EG+&!B88; C@!B9 : <9"Lo!AW&'N', 1F!H'HF+@!qb+1*', N!H?+! \$ 1&N', (@!>-GF'K!V-, 2', N!Q%&!
O%, H+E4%&1P!) &H(Lr!T-HK?!H&1, (F1H'%, !GP!S+F++, !] +'I+&LC!
!
qR?+!>%F'H'K(!%Q!) +(H?+H'K!T'(H1, K+Lr!6, ! 5!44L!#"#<"YL! / 2L!>1H&'K'1! \$ +P+&!
.41Kc(L! ` +U! f %&c@! . HL! \$ 1&H' , ^(!>&+((5!B88;Lo!
!
qR&1, (Q%&E', N!) +(H?+H'K(@!3+QF+KH'%, (!%, !H?+! h %&c!%Q!O1F*', !OL! . ++&*+F2Lr!6, ! 5!
44L!B<##L!O&1, 2!3 14'2(5! \$ 'K?L@! / +&2E1, (5!B889Lo!
!
qV1, H1(H'K!R?', N(@!O&'H'K1F! ` %H+(!R%U1&2!1! . %K'1F!W, H%F%NP!%Q!H?+!) &H(Lr! ; :!
AB889C@!"Y<97Lo!
!
qV%&+U%&2Lr! 5!4L!"L! / e?'G'H'%, !O1H1F%NL!O&1, 2!3 14'2(5! \$ 'K?L@!O1F*', !O%FF+N+!
O+, H+&!) &H!O 1FF+&P5!B889L!
!
qS'(H%&P5!) &H5!1, 2!R&-H?@! h +FFE+&^(!O&'H's-+!%Q!) 2%&, %Lr!6, ! 5!44L!B8Y<#B#L!
/ 2L!R?%E1(13L!VFP, , !1, 2!T1F'1!Z-2%*'HIL!) FG1, P@! . H1H+! = , '*+&('HP!%Q! ` +U! f %&c!>&+((5!
B88"Lo!
!

qO% ,H&1<T'KH'% ,@!) 2%& ,%^(!>?'F%(%4?P!%Q!T'(K%-&(Lr!6,!
5!M%FL!B5!44L!B:"<B#DL!/2L!O?'4!. 'FF(!1, 2!
O+%&N+!SL!Z+, (+,L!>%&H(E%-H?5!`LSL@!S+', +E1, ,5! [%P, H%, dO%%c5!B88#Lo!
!
qR?+! .%K'1F! . 'N, 'Q'K1, K+!%Q!) -H%, %E%-(!) &H@!) 2%& ,%1, 2! [{&N+&Lr!
!7D5!, %L!B!A h ', H+&!B88:C@!;B<YYLo!) !H&1, (F1H'% ,!' ,H%!Z141, +(+!144+1&(!' ,!
5!44L!BD9<##"5!+2L! \$ 1&H' , !Z1PL!
!
q` %&E 1H'*+!) +(H?+H'K(!1, 2!O%, H+E4%&1&P!) &H@! [{&N+&^(!O&'H's-+!%Q!) 2%& ,%Lr!6, !
5!44L!#7#<79L!/2L!3 'K?1&2! h %%2Q'+F2L! ` %HH', N?1E!>%FPH+K?, 'K5!B88:Lo!
) F(%5!H&1, (F1H+2!', H%! . F%*+, '1, !1(!q` %&E 1H'* , +!+(H+H'c1!', !(%2%G, 1!- E+H, %(H@! [{&N+&X+*1!
c&'H'c1!) 2%& , 15r! !

!

5!GP! . L! . L! \$ 12+X1!

U'H?!.L!W, -(c1!A.HL!b%-'@!O/ \$ 3 / b5!B8YYCL! !85!, %L!9!AR%%&, H%5!
. +4H+EG+&dWKH%G+&!B8Y8C@!#"L!

*

#\$%&' ()\$*+%4'0-@*A/. '01)' 7 -@* B ,0>-<, 4-@*% / &*+% / '9-*Aop!&+Q+&++2C!

!

qR&-H?!1, 2!>%F'H'K(#!) &+, 2H5!V%-K1-FH5!1, 2!H?+!R&-H?!%Q!>%F'H'K(Lr!6, *'H+2!F+KH-&+5!>?'F%(%4?P!
O%FF% s - ' - E5!0&1, 2!M1FF+P!. H1H+! = , '*+&('HP5! \$ 1&K?!#75!#: #!"L!

!

qR&-H?!>(H<R&-H?@!3+'E 1N', ', N!>?'F%(%4?P!Q%&!1! h %&F2!', !O&'('Lr!6, *'H+2!F+KH-&+!', !H?+!%, F', +!
(+&'(+!
5!V+G&-1&P!#D5!#: #!"L!M'2+%!4%(H+2!1H!H?+!F+KH-&+!)(+&'(+!
U+G('H+@! ?HH4(@dd4?'F%(%4?P', H'E+(%QK&'('LK% E.dL!

!

L!) H!H?+!(- E E+&!K?%%F! !(4%, (%&+2!GP!V%&- E!
O?&'(HF'K?+!. H-2'+, !AQ% • (C5! \$ 1&'1(H+!, !) GG+P5! . U'HI+&F1, 25!Z-FP!B8<#75!#: #!L!b+KH-&+!H'HF+@!
qR?+!6E4%&H1, K+!%Q!R&-H?r!
q) &H'(H'K!R&-H?r!
q) &H5!R&-H?5!1, 2!>%F'H'K(r!

!

q) 2%&, %^(!O&'H's -+!%Q!S+'2+NN+&@!R?+!R+E4%&1F'HP!%Q!R&-H?Lr!6, *'H+2!414+&!Q%&!1!G%%c!+(('%, !%, !
61', ! \$ 1K2%, 1F25! !A#: B8C5! . %K'+HP!
Q%&!>?+, % E+, %F%NP!1, 2! / e'(H+, H'1F!>?'F%(%4?P!%, F', +!K%, Q+&+, K+5! . +4H+EG+&!#75!#: #BL!

!

q. -(1, +, !] L!b1, N+&5!S %F'(H'K!>F-&1F'(E5!1, 2!>(H<R&-H?>%F'H'K(Lr!O% E E+, H1&P!2-&', N!1, !%, F', +!
G%%c!F1-, K?!Q%&!) 2&+', , +!T+, N+&', c!O?14F', 5!
!Ab%, 2%, @! [F%& E (G-&P!) K12+E 'K5!#: #: C5!?(H+2!GP!H?+!
\$ 1&N1+H! [+1-Q%&H!6, (H'H-H+!%Q!R?+%F%NP!', !O1EG&2N+5! / , NF1, 25!) 4&'B!B"5!#: #BL!

!

qu h +?!(4&'K?H!*+&N+?^@!R?+! = , H'E+FP!R'E+F', +((!%Q!) 2%&, %^(! r!O&'H'K1F!R?+%&P!
3%- , 2H1GF+5! \$ K \$ 1(H+&! = , '*+&('HP5!S 1E 'FH%, 5!W, H1&'%5!WKH%G+&!75!#: B8L!

!

!qR&-H?!1, 2!0%&2, +((!6, H+&(KH@!) F+H?'K!S %F'(E!1, 2!>%4%('H%', 1F!R&-H?Lr!6, *'H+2!F+KH-&+!1H!H?+!M=
= , '*+&('HP!) E(H+&21E5!(4%, (%&+2!GP!H?+!. H-2P!0&%-4!O?&'(H'1, !>?'F%(%4?P5! . +4H+EG+&!B; 5!
#: B8L!

!

qO?1, N', N!H?+!. -GX+KH@!S -((+&F5!) 2%&, %5!1, 2!H?+!>%F'H'K(!%Q!R&-H?Lr!3+(4%, (+!H%!414+&(!GP! \$ 1&K'1!
\$ %&N1, !1, 2!] 1H?P!] 'F%?5!', !1!G%%c!+(('%, !%, !
L!) , , -1F!E++H', N5! . %K'+HP!Q%&!>?+, % E+, %F%NP!1, 2! / e'(H+, H'1F!>?'F%(%4?P5!
>+, , (PF*1, '1! . H1H+! = , '*+&('HP5!WKH%G+&!BD5!#: BDL!

!

qR&-H?5!3+(('H1, K+5!1, 2! . %K'+H1F! / *'Flr! / ((1P!4-GF'(?+2!%, F', +!', ! 5!1!Q%&- E!?(H+2!GP!H?+!
6, (H'H-H+!%Q!) &H!1, 2!62+1(!A=] C5!) -N-(H!BY5!#: BY\!

[?HH4\(@ddH?+E1N,'Q'K1\(HLU%&24&+\(\(LK%Ed#:BYd:9d#:d+4<D<&+*%F-H'% ,<'\(,H<U?1H<'H<- \(+2<H%<G+<U<F1EG+&H<I- '2+&*11&HdL!](#)

!

q>'F%(%4?P5!R&-H?5!1,2!H?+! h '(2% E!Q!b%*+Lr!6O. !/ e1-N-&1F!) 22&+((5!R%&&,H%5! \$ 1P!B#5!#:BY!
*'2+%!4%(H+2!1H!?[?HH4\(@ddP%-H-LG+d g I. /W=2S\) . \\$ L!](#)

!

qS'(H%&P!1,2!R&1,(K+,2+,K+!',!)2%&,%^(!62+1!Q!R&-H?Lr!>&+(+,H+2!1H!H?+!K%,Q+&+,K+!q)2%&,%^(!
!1H!V'QHP5r!S1&*1&2!='*+&('HP5!`%*+EG+&!BD<B85!#:B;L!WH?+&!*+&('%,(!
U+&+!4&+(+,H+2!1H!H?+!.'eH?!) , , -1F! \$ ++H',N!%Q!H?+!) ((%K'1H'% ,!Q%&!) 2%&,%!.H-2'+(5!T-c+!
='*+&('HP5! \$ 1&K?!#7<#95!#:BY!1,2!1H!H?+!>'F%(%4?P!O%FF% s - ' -E5!O&1,2!M1FF+P!.H1H+!
='*+&('HP5!`%*+EG+&! "5!#:BYL!

!

!q3+QF+KH'% ,(!% ,! Lr!V'*+!4%(H(!' ,!&+(4% ,(+!H%!1 ,!%,F' ,+!
O&%- ,2! \$ %H'*+! .PE4%(' -E5!6O.5!R%&&,H%5! \$ 1P!#:B;5 [?HH4@ddUUULN&%-,2E%H'*+L,+H@!](#)
qT++4!O&1H'H-2+r!
q3+Q%&E1H'% ,1F!.%K'1F!>'F%(%4?Pr!
qR%U1&2!1!`+U!>%F'H'K(r!
q>'F%(%4?P5!) &H5!1,2!3+F'N'% ,r!
qT%P+U++&25!R&-H?5!1,2!H?+!3+Q%&E1H'% ,1F!R&12'H'% ,r!

!

q. -&4F-(!G+P%,2!H?+! .-GX+KH@!)2%&,%^(!62+1!Q!R&-H?Lr!V'QH?!) , , -1F! \$ ++H',N!%Q!H?+!) ((%K'1H'% ,!Q%&!) 2%&,%!.H-2'+(5!='*+&('HP!%Q! \$ %,H&+1F5!)4&'F!' :5!#:B;L!

!

L! h %&c(?%4!1H!H?+!6,(H'H-H!Q!{!S+&E+ ,+-H'c!- ,2!
3+F'N'% ,(4?'F%(%4?'+5!R?+%F%N'(K?+!V1c-FHaH5!='*+&('HaH!n{&'K?5!.U'HI+&F1,25!K%<(4% ,(%&+2!
GP!H?+!V%&-E!K?&!(HF'K?+!.H-2'+,5! \$ 1&K?!B85!#:B;L!R'HF+(!%Q!H?+!H?&+!F+KH-&+(!N'*+ ,!1&+@!
qS%F'(H'K!)F+H?'K!>F-&1F'(E@!)!3+Q%&E1H'% ,1F!3+(+1&K?!>&%N&1E r!
qS%F'(H'K!R&-H?5!1,2!>&%4%('H'% ,1F!R&-H?r!
q.%K'1F!T'E1' ,(!%Q!R&-H?@!)&H5!3+F'N'% ,5!1,2!.K'+,K+r!

!

qS%F'(H'K!)F+H?'K!>F-&1F'(E@!)!3+Q%&E1H'% ,1F!3+(+1&K?!>&%N&1E Lr!>'F%(%4?P!T+4!HHE+ ,H!
O%FF% s - ' -E5!O1F*' ,!O%FF+N+5!WKH%G+&! ;!1,2!B"5!#:B9L!

!

q>&%4%('H'% ,1F!1,2!/e'(H+ ,H'1F!R&-H?!' ,!/2E- ,2!S-((+&F^(! Lr!6, '*H+2!F+KH-&+5!
]1F1E1I%!!O%FF+N+5!Z- ,+!95!#:B9L!)F(!4&+(+,H+2!GP!' , '*H1H'% ,!H% .H?+!>'F%(%4?P!
O%FF% s - ' -E5!O&1,2!M1FF+P!.H1H+!='*+&('HP5!.+4H+EG+&!#95!#:B9L!

!

qW,! [+ ,N!1!3+Q%&E1H'% ,1F!>'F%(%4?+&@!.4&'H-1F'HP5!3+F'N'% ,5!1,2!H?+!O1FF!H%!b%*+Lr!6, '*H+2!
F+KH-&+5!.K&'4H-&+5!V1'H?5!1,2!.K?%F1&(?'4!(+E' ,1&5!6O.5!`%*+EG+&!B75!#:B7L!>%(H+2!%,F' ,+!1H!
H?+!6O. !6,(H'H-H'% ,1F!3+4%('H%&P@![?HH4@dd?2FL?1,2FL,+HdB:Y9;d""Y7B8L!](#)

!

qO&+1H',N!1!T'(H-&G1,K+@!)&H5!.%K'1F!/H?'K(5!1,2!3+F1H'% ,1F!) -H% ,%EPLr!6, '*H+2!4!4+&!Q%&!1!
(PE4%(' -E!%,! !1H!H?+!1 , , -1F!E++H',N5!/1(H+&!T'*('%,5!)E+&'K1 ,!
>'F%(%4?'K1F!) ((%K'1H'% ,5! [1FH'E%&+5!T+K+EG+&!#Y5!#:B"!)F(!4&+(+,H+2!1(1!,! , '*H+2!
4!4+&!1H!H?+!(PE4%(' -E!
!1H!H?+!='*+&('HP!%Q!R%&&,H%5! \$ 1P!B#5!#:B9\!1(!1 ,! , '*H+2!F+KH-&+!' ,!H?+!O%FF% s - ' -E!
% ,! ! 5!(4% ,(%&+2!GP!H?+!)&K-(!O+ ,H+&!Q%&! .%K'1F!Z-(H'K+!

!

qR?+%2%&!) 2%& , %!' , !>% (HE%2+& , !R'E+(Lr!O% E E+ , H1&P!% , !414+&(!GP!bP2' 1!0%+?&5!0+&H&-2!] %K?5!
1 , 2!V&+2!3 -(?!Q%&!H?+!41 , +F!
5!1 , , -1F!E++H' , N5!) E+&'K1 , !. %K'+HP!Q%&!) +(H?+H'K(5!b%(!) , N+F+(5! ` %*+EG+&!85!#: : YL!

!!

!qR&-H?!1 , 2!6 , H+&4&+H1H'% , @! . K'+ , K+5!3+F'N'% , 5!1 , 2!O-FH-&+Lr!] + , , +H?!] % , P , 2Pc! \$ +E%&'1F!b+KH-&+5!
(4% , (%&+2!GP!H?+! . %K'+HP!%Q!O?&'(H'1 , !>?'F%(%4?+&(5!' , !K% , X- , KH'% , !U'H?!H?+!O+ , H&1F!T'*(' , !
\$ ++H' , N!%Q!H?+!) E+&'K1 , !>?'F%(%4?'K1F!) ((%K'1H'% , 5!O?'K1N%5!) 4&'F!B85!#: : YL!V'&(H!N'*+ , !1H!
O1F* , !O%FF+N+5!) 4&'F!B95!#: : 7!1(!1 , !' , *'H+2!F+KH-&+!' , !H?+!(+&'+(!
L!3+4+1H+2!1H!3+2++E+&! = , '*+&('HP!
O%FF+N+!' , !) , K1(H+&5!W , H1&'%5! . +4H+EG+&!#85!#: : 95!1 , 2!R&' , 'HP!O?&'(H'1 , !O%FF+N+!' , !>1F%(!
S+'N?H(5!6FF' , %'(5!WKH%G+&!#: : 5!#: : 9L!

!!

qR&-H?! \$ 1HH+&(@!S+'2+NN+&!1 , 2!S%&c?+'E+&' , !T'1F+KH'K1F!T'(KF%(-&+Lr!6 , *'H+2!c+P , %H+!F+KH-&+!Q%&!
5!H?+!#9H?!) , , -1F! . PE4%(' - E!%Q!H?+! . 'E% , !. 'F*+&E1 , !
>?+ , %E+ , %F%NP!O+ , H+&5!T-s-+(, +! = , '*+&('HP5!>'HH(G-&N?5! \$ 1&K?!B ; <BY5!#: : YL

q/ 1&H?^(!b1E+, H@! . -QQ+&', N5!S%4+5!1, 2! h '(2% E Lr!6, 1-N-&1F!b+KH-&+5!6, (H'H-H+!Q%&!O?&'(H'1, !. H-2'+(5!
R%&% , H%5! ` %*+EG+&!#B5!#: : "L!>% (H+2!%, F' , +!1H!H?+!6O . !6, (H'H-H'% , 1F!3+4% ('H%&P@!
[?HH4@dd?2FL?1, 2F+L, +HdB: Y9; d#87998L!](#)

!

qO&+1H'*+! [%&2+&!O&% ((' , N@!) &H'(H'K!) -H?+, H'K'HP!1, 2! . %K'1F!3+(4% , ('G'F'HP!' , ! ` +U!>-GF'K!O-FH-&+Lr!
>&+(+ , H+2!1H!H?+! , H+& , 1H'%, 1F!(PE4%(' - E!
5! \$ -(y+!2^1&H!K% , H+E4%&1' , !2+! \$ % , H&y1F5!
` %*+EG+&!;5!#: : "L!

!

q0%%2!O'H'+(5!%&!O'H'+(!%Q!H?+!0%%2z!3 12'K1F!) -N-(H' , '1, (5! . %K'+H1F! . H&-KH-&+(5!1, 2! ` %&E 1H'*+!
O&'H's -+Lr!>&+(+ , H+2!1H!H?+!K% , Q+&+ , K+!
5!O1F*' , !O%FF+N+5! . +4H+EG+&!B#5!#: : "Lo!

!

q \$ +H14?P('K(!1QH+&!) -(K?U'HI@! . -QQ+&', N!1, 2!S%4+!' , !) 2%& , %^(! Lr!) , , - 1F!
\$ ++H' , N(5!O1, 12'1, !>?'F%(%4?'K1F!) ((%K'1H'% , !1, 2!H?+!O1, 12'1, ! . %K'+HP!Q%&!) +(H?+H'K(5!1H!
H?+!O% , N&+((!%Q!H?+! . %K'1F! . K'+ , K+(!1, 2!S - E1 , 'H'+(5!S 1F'Q1e5! \$ 1P!"B5!#: : "Lo!!

!

W&N1, 'I+&5!U'H?! \$ 1&'+< ` % |FF+!3P1, !A>?'F%(%4?P5! \$ % , KH% , != , '*+&('HPC!%Q!H?+!21P<F% , N!(PE4%(' - E!
5!K%<(4% , (%&+2!GP!H?+!O1, 12'1, !>?'F%(%4?'K1F!) ((%K'1H'% , !
1, 2!H?+!O1, 12'1, ! . %K'+HP!Q%&!) +(H?+H'K(5!1H!H?+!O% , N&+((!%Q!H?+! . %K'1F! . K'+ , K+(!1, 2!
S - E1 , 'H'+(5!S 1F'Q1e5! \$ 1P!"B5!#: : "Lo

O%FF% s - ' - E5!>?'F%(4?'(K?+(!6, (H'H-H5!0%+H?+<=, '*+&('HaH5!V&1, cQ-&H5!Z- , +!#B5!#: : BL!
!
q] 1, , !E1, !) 2%&, %!*%, !T+&&'21!?!*+&(H+?+, zr!>-GF'K!F+KH-&+!(4% , (%&+2!GP!H?+!T+41&HE+, H!%Q!
>?'F%(4?P5! =, '*+&('HaH!O+(1EH?%K?(K?-F+] 1((+F5!O+&E1, P5! \$ 1P!B:5!#: : BL!) F(%!4&+(+, H+2!
- , 2+&!H?+!H!HF+!q) -H%, %EP5! `+N1H!*'HP5!1, 2!6FF-(%&P!R&1, (N&+((%' , 5r!.. %K'1F!1, 2!>%F'H'K1F!
R?+%&P! . +E', 1&5! =, '*+&('HP!%Q! / 2', G-&N?5! \$ 1P!B5!#: : BL!
!
q) &H5!R&-H?5!1, 2!M%K1H'% , @!M1F'2'HP!1, 2!T'(KF%(-&+!', !S+'2+NN+&^(!) , H'<)+ (H?+H'K(Lr!) , , -1F!
E++H', N5! . %K'+HP!Q%&!>?+, %E+, %F%NP!1, 2! / e'(H+, H'1F!>?'F%(4?P5!>+, , (PF*1, '1! . H1H+!
=, '*+&('HP5!WKH%G+&!;5!#: : : Lo!) F(%!4&+(+, H+2!GP!', *'H1H'% , !1H!H?+! =, '*+&('HP!%Q! h', 2(%&5!
\$ 1&K?!#D5!#: : BL!
!
q0121E+&^(!>?'F%(4?'K1F!S+&E+, +-H'K(@!) , !6, H&%2-KH'% , Lr!O -(H!F+KH-&+5!O1F*', !O%FF+N+5!WKH%G+&!
#"5!#: : : L!
!
q \$ %2+&, 'HP!1, 2!6H(!T'(K%, H+, H(@!) !b+, H+, !3+(4% , (+Lr!6, *'H+2!&+(4% , (+!H%!q @!
/ , 'NE1(!%Q! . K'+, K+!1, 2! h '(2E!Q&%E!>F1H%!H%!T+&&'2!5r!H?+!#: : : ! h', 'Q&+2! / L! h +H+&!V1K-FHP!
) U1&2!b+KH-&+!GP!Z1, +H! [F-EG+&N5! . +1HFF+!>1K'Q'K! =, '*+&('HP5!) 4&'F!B"5!#: : : L!
!
L!>1, +F!1H!H?+!B888!E++H', N!%Q!H?+!
) E+&'K1, !. %K'+HP!Q%&!) + (H?+H'K(!1, 2!H?+!B888!E++H', N!%Q!H?+! . %K'+HP!Q%&!>?+, %E+, %F%NP!
1, 2! / e'(H+, H'1F!>?'F%(4?P!o!
!
q) -H%, %EP5! `+N1H!*'HP5!1, 2!6FF-(%&P!R&1, (N&+((%' , @! \$ +, c+^(!T+K%, (H&-KH'% , !%Q!) 2%&, %^(!
) + (H?+H'K(Lr!) , , -1F!E++H', N5!) E+&'K1, !. %K'+HP!Q%&!) + (H?+H'K(5! h 1(?', NH%, !TO5!WKH%G+&!#85!
B888Lo!) , , -1F!E++H', N5! . %K'+HP!Q%&!>?+, %E+, %F%NP!1, 2! / e'(H+, H'1F!>?'F%(4?P5! =, '*+&('HP!
%Q!W&+N%, 5! / -N+, +5!WKH%G+&!D5!B888Lo!
!
qS1G+&E1(^(!O&'H's -+!%Q!>%(HE%2+&, '(ELr!>&+(+, H1H'% , !H%!1!(-EE+&!(+E', 1&!Q%&!K%FF+N+!H+1K?+&(!% , !
5!O1F*', !O%FF+N+5!Z- , +!;5!B888L!
!
q) -H%, %EP!1Q!H+&!) 2%&, %@!R?+!>&1KH'K+!%Q!) &H!', !R?+!) N+!%Q!6H(!OF%G1F!3+4&%2-K'G'F'HPLr!6, *'H+25!
+ , 2%U+2!F+KH-&+5! / (F'Kc! . PE4%(' - E5!T+41&HE+, H!%Q!>?'F%(4?P5! . HL!b%- '(! =, '*+&('HP5!
WKH%G+&!#D5!B88DL! 3+*' (+2!*+&('%, !4&+(+, H+2!1H!6O . !', !R%&%, H%5!Z1, -1P!#D5!B888L!
!
q. ?%&H!O'&K-'H(!1, 2! \$ 1&c+H!V1'F-&+@!R?+%&' + (!%Q!H?+!O'*'K! . +KH%&Lr!RU+, H'+H?! h %&F2!O%, N&+((!%Q!
>?'F%(4?P5! [(%H%, 5!) -N-(H!B: <B; 5!B88DL!6, !
5!*%FL!7#!AB888DC@!BDY<B8"LI = 3 b!p! ?HH4(@dd2%'L%&N&B :L9D7 : dUK4# : <
41'2+'1B88D7#Y87L!) !F%, N+&!*+&('%, !U1(!4&+(+, H+2!1H!1, !/K%, %E'K(!1, 2! [-(', +((!
T+41&HE+, H!(PE4%(' - E5!O1F*', !O%FF+N+5! . +4H+EG+&!#85!B888L!
!
qO&'H'K1F!R?+%&P! \$ ++H(!`+U!O+, &+!>-GF'K!) &HLr! \$ '2U+(H!O&'H'K1F!R?+%&P!3% - , 2H1GF+5! . HL!b%- '(!
=, '*+&('HP5! . +4H+EG+&!#; <#D5!B88YLo!
!
q) 2%&, %5!S1G+&E1(5!1, 2!H?+!) &H!%Q!>%F'H'K(Lr!) , , -1F! \$ ++H', N!%Q!H?+!) E+&'K1, !>%F'H'K1F! . K'+, K+!
) ((%K'1H'% , !', ! h 1(?', NH%, 5!TLOL5!) -N-(H!#D<"B5!B88YLo!
!
!

q ` %&E 1H'*+!) +(H?+H'K(!1, 2!O%, H+E4%&1&P!) &H@! [{&N+&^(!O&'H's--!%Q!) 2%&, %Lr! • 6!6, H+&, 1H'% , 1F!
O%, N&+(((' , !) +(H?+H'K(5! = , '*+&('HP!%Q! ` %HH', N?1E5! / , NF1 , 25!) -N-(H!#8!<! . +4H+EG+&!#5!
B8DDL0!

!

q. K?+F+&5!O1(('&+&5!1 , 2!R&1 , (Q- , KH'% , 1F!T+Q' , 'H'% , (!%Q!S - E 1 , c' , 2Lr! • M666! h %&F2!O% , N&+(((!%Q!
>?'F%(%4?P5! [&'N?H% , 5! / , NF1 , 25!) -N-(H!#B<#Y5!B8DDL0!

!

qR?+! . %K'1F! . 'N , 'Q'K1 , K+!%Q!) -H% , %E% - (!) &H@!) 2%& , %!1 , 2! [{&N+&Lr!O% , Q+&+ , K+!% , !
5!6 , H+& , 1H'% , 1F!) ((%K'1H'% , !Q%&!>?'F%(%4?P!1 , 2!b'H+&1H-&+5!
= , '*+&('HP!%Q! ` %H&+!T1E+5!) 4&'F!#B<#"5!B8DDL0!

!

qT+*+F%4E+ , H!1 , 2! / , K% - , H+&! , H?+!b'N?H!%Q!b'G+&1H'% , Lr!O% , Q+&+ , K+!% , !
5!V&+! = , '*+&('HP!%Q!) E (H+&21E5!) -N-(H!B : <B95!B8DYL!

!!

q. H&1H+N'+(!Q%&!6 , H+&4&+H' , N!6 , H+ , H'% , 1F!) KH'% , (Lr! . PE4% (' - E!' , !) +(H?+H'K(5!O1F*' , !O%FF+N+5! \$ 1P!Y5!
B8DYL!

!

q3+1F'(E5! \$ %2+& , '(E5!1 , 2!H?+! / E4HP!O?1'Lr!O% , Q+&+ , K+!% , !
5!6 , H+& , 1H'% , 1F!
) ((%K'1H'% , !Q%&!>?'F%(%4?P!1 , 2!b'H+&1H-&+5! = , '*+&('HP!%Q!] 1 , (1(5!) 4&'F!' : !<! \$ 1P!#5!B8DYLo!

!

q) 2%& , %^(!b'Q+!1 , 2! h %&cLr!0+&E1 , ! . H-2'+(!0&%-45!O1F*' , !O%FF+N+5! \$ 1&K? !# : 5!B8D ; L!!

!

q \$ +H?%2%F%N'K1F! . ?12%UG%e' , N!' , ! \$ 1&e'(H!) +(H?+H'K(@!b-ciK(!1, 2!) 2%&, %Lr!6, H+&, 1H'% , 1F!b-ciK(!
. PE4% (' - E5! \$ % , H&+1F5!WKH%G+&!B : <B#5!B8D9Lo!

!

q \$ %21F!) +(H?+H'K(!1, 2! \$ %21F!R?+%&P@! . ++&*+F2!% , !T%P+U++&2^(!b+N1KPLr!O% , Q+&+ , K+!% , !

qu)+(H?+H'K!62+1(^!1,2!H?+!3%F+!%Q!)&H!',!]1,H^(!/H?'K1F!S+&E+,+-H'K(Lr!V'QHP</'N?H?!),,-1F!
\$ ++H',N5!>1K'Q'K!T'*('%,5!)E+&'K1,!>'F%(?4?'K1F!)((%K'1H'% ,5!b% ,N! [+1K?5!O1F'Q%& , '15!
\$ 1&K?!B8D7Lo!)F(%5!RU+,HP</'N?H?!),,-1F!O%,N&+(5!O1,12'1,!>'F%(?4?'K1F!)((%K'1H'% ,5!
0 -+F4?5!W ,H1&'%5!Z- ,+!B8D7Lo!

!
q)+(H?+H'K!M1F-+@!b',25!O1*+FF5!1,2!R&- 'HHLr!6,*'H+2!K% E E+,H1&P5!.4+K'1F!.+((%,5!)E+&'K1,! .%K'+HP!
Q%&!)+(H?+H'K(5! \$ %,H&+1F5!) -N-(H!#75!B8D"Lo! !

!
q)&H'(H'K!R&-H?!',!1!V1F(+! .%K'+HP@!3+QF+KH'% ,(!,!)2%& ,%^(! Lr! • M66! h %&F2!O% ,N&+(!
%Q!>'F%(?4?'P5! \$ %,H&+1F5!) -N-(H!B8D"Lo!

!
quR&-H?<6E4%&H^!',!)2%& ,%^(!)+(H?+H'K!R?+%&Plr!V%&H'+H?!),,-1F! \$ ++H',N5!)E+&'K1,! .%K'+HP!Q%&!
)+(H?+H'K(5! [1,QQ5!)FG+&H15!WKH%G+&!B8D#Lo!

!
L!V% -&!414+&(!4&+(+,H+2!H%!Q1K-FHP!E+EG+&(!',!H?+!1&H(5!
T%&2H!O%FF+N+5! \$ 1P!B :<B#5!B8D#L!

!
q>'F%(?4?'P5!)&H5!1,2!>&1e'(!',!)2%& ,%^(!)+(H?+H'K!R?+%&Plr! h %&c(?%45!T+41&HE+,H!%Q!>'F%(?4?'P5!

[+F',21!>'&&KP5!

\$ 1HH! [+1*+&(% ,5! / eH+&, 1F! / e1E ', +&5!O%E4&+?+, ('*+!g -1F'QP', N! / e1E(' ,! / ,NF'(?!b'H+&1H-&+!1H!
\$ 'K?'N1 ,! .H1H+! = , '*+&('HP5!Z1 , -1&P!B887L!

!

. (#\$/ '0#*! ' ' ' + '(, #!Ao!p!4&'E1&P!(-4+&*'(%&!O \$!p!O% E E 'HH++! \$ +EG+&C!

!

T1 , '+FF+! f +HH5!q \$ 1c', N! . + , (+@!) , ! / e41 , ('*+! . H-2P!%Q!6E1N' , 1H' % , 5! . H&-KH-&1F! \$ +H14?%&5!1 , 2!
) +(H?+H'K! ` %&E 1H'*'HP!U'H?'O1F*' , ! . ++&*+F2Lr! \$) !R?+('5!>'F%(%4?P5!6O . !#: B8L!AO \$ C!
O1&F%(!V&+2+&'K%!>+&+'&1!WFy15!qM+&212+!+E!S1G+&E1(!AB897<B8Y"Cr!fR&-H?'! , !S1G+&E1(!AB897<
B8Y"C,5! = , '*+&('212+! / (H12-1F!2+!b% , 2&' , 15! [&1!F5!#: B7L!A . -4+&*'(%&!Q%&!1!&+(+1&K?!*' ('H!H%!H?+!
= , '*+&('HP!%Q!R%&% , H%5!V1FF!#: B7LC!

\$ 1HH?+U! /L!Z% ? , (% , 5!qb'G+&1H' , N! / E+&N+ , K+@!S -E1 , !T+4+ , 2+ , K+!1 , 2!) -H% , %EP! , ! / E+&N+ , H'(E5!
S+&E+ , +-H'K(5!1 , 2!>&1NE1H'(ELr! \$) !R?+('5!>'F%(%4?P5!6O . !#: B7L!AO \$ C!
[&P1 , !3 'K?1&25!qWUA , C' , N! / e'(H+ , K+@!S -E1 , ! \$ +1 , ' , N5!62+ , H'HP!1 , 2!3+(4% , ('G'F'HP! , !S+!2+NN+&^(!
Lr! \$) !R?+('5!>'F%(%4?P5!6O . !#: B"LIAO \$ C!

Z+FF+!S - '(E1 , 5!qR&1 , (F1H' % , (!%Q!H?+!6E4F'K'H@!R&1K' , N!S %U!b1 , N-1N+! h %&c(!G+P% , 2!0+ , 2F' , !1 , 2!
T+&&'21Lr! \$) !H?+('5!>'F%(%4?P5!6O . !#: B#Lo!

] +*' , !S - ' , ' , c5!q h ?1H!O?'F2&+ , !O1 , !T%@!) !>%FPK-FH-&1F!01&2+ , !R?+%&P!%Q!T+*+F%4E+ , H!Q%&!
/2-K1H' % , Lr! \$) !H?+('5!>'F%(%4?P5!6O . 5!#: BBL!AO \$ C!

3P1 , ! / -*+&E1 , 5!q>-E4' , N!6 , H- 'H' % , (!1 , 2! \$ 1c' , N!>&1KH'K+!T'QQ+&+ , H@!3 'K?1&2!3%&HP^(!u6 , H- 'H'*+^!
) KK% - , H!%Q!3+Q+&+ , K+!1 , 2!R&-H?Lr! \$) !H?+('5!>'F%(%4?P5!6O . 5!#: B : L!AO \$ C!

Z1 , +H!3+125!q \$ +H14?%&'K!R&-H?@! . ++ , N!1 , 2! . 1P' , N! , ! \$ +&F+1-<>% , HP!1 , 2!3 'K%+-&5!U'H?1!1 [&%12+&!
/H?'K(!*!1!n - '2+&*11&HLr! \$) !H?+('5!>'F%(%4?P5!6O . 5!#: B : L!AO \$ C!

>1-F!S -GGF+5!q) !O+&H1' , HP!%Q!T+1H?@!) 44&+K'1H' , N!S -E1 , !) , 'E1F?%2Lr! \$) !H?+('5!>'F%(%4?P5!6O . 5!
#: : 8L!AO \$ C!

[+KcP!S -GGF+5!q) , ! / H?'K!%Q! / EG%2'E+ , HLr! \$ h . !4&%X+KH! , ! . %K'1F! / H?'K(5!6O . 5!#: : DLo!

O?&'(!) FF+&(5!qR1c' , N!S1 , , 1?!) &+ , 2H!H%O?-&K?Lr! \$) !H?+('5!>'F%(%4?P5!6O . 5!#: : YL!AO \$ C!

[+ , X1E' , !O&%+ , +U%F25!q] ' , NQ'(?+&(!1 , 2!O&'H+&'1@!) ! ` +U!) 44&%1K?!H%!H?+! / , N' , ++&' , N!T+('N , !
\$ +H?%2Lr! \$) !H?+('5!>'F%(%4?P5!6O . 5!#: : ;Lo!

] &'(H' , 1!Z- , N5!q3%(1!b-e+EG-&N@!V'&(H! . %K'1F'(H!V+E' , '(HLr! \$) !H?+('5!>'F%(%4?P5!6O . 5!#: : ;Lo!
R&'K'1!M1 , !TPc5!q ` 1H1F'HP!Q&&E!O?1%(@!S1 , , 1?!

#: : "< : 7!
#: : "< : 7!

O+, H& 1F!R+eH(!, !), 1FPH'K! / 4'(H+E%F%NP!A6O . 5! . #: : 7C!
] 1, H^(!O%, K+4H'% , !%Q! 3+QF+KH'*+!Z-2NE+, H!A6O . 5!

+0,8' --), /%9%*/&*+5;9)\$*C'01)\$*H4%0.)%9*9)-.I!

!

W,N%' ,N! [%%c!E1, -(K&'4H!&+Q+&+!Q%&! [F%%E(G-&P!>-GF'(?',N5!O1EG&'2N+!=, '*+&('HP!
>&+((5!O%,H', -E!>-GF'(?',N5! \$KO'FF<g-+ , ^(!=, '*+&('HP!>&+((5!R?+! \$6R!>&+((5!
`%&H?U+(H+&, !=, '*+&('HP!>&+((5!WeQ%&2!=, '*+&('HP!>&+((5!>1FN&1*+! \$1KE'FF1,5!
1,2!3%UE1,! t !b'HHF+Q'+F2!

W,N%' ,N! 3+Q+&+!Q%&!*1&'%-(!K12+E'K!X%-&,1F(!

W,N%' ,N! \$+EG+&5!)2*'(%&P! [%1&25! !A(' ,K+!#:B7C!

W,N%' ,N! \$+EG+&5! / 2'H%&'1F! [%1&25! !(+&' +(5!3%UE1,! t !b'HHF+Q'+F2!

A(' ,K+!#:B7C!

W,N%' ,N! \$+EG+&5!)2*'(%&P! [%1&25!

A(' ,K+!#:B# !

W,N%' ,N! \$+EG+&1%Q!H?+!O+, H&+!%Q!R?+%F%NP!1,2!>?'F%(%4?P5!`%HH',N?1E5! =]!

#:B#<##! \$+EG+&5! / 2'H%&'1F!)2*'(%&P! [%1&25! !X%-&,1F!

#:#! ! 0&1,H!144&1'(+&5!6(&1+F! .K'+,K+!V%- ,21H'%,!

###<! ! \$+EG+&5!O?%&1F!O%, ,+KH'% ,5!0&1,2!3 14'2(!

#:BD<! ! \$+EG+&5!V%- ,H1',!. H&+H!O?-&K?!W&1H%&'!O?%'&5!0&1,2!3 14'2(!

#:BY<! ! \$+EG+&5!O?1EG+&!O?%'&!%Q!0&1,2!3 14'2(!

#:BY<# :! /F2+&!Q%&! \$ -('K5! h +(HE', (H+&!>&+(GPH+&'1,!O?-&K?5!0&1,2!3 14'2(!

#:B;! ! /eH+&,1F!>&%N&1E!3+*'+U+&5!>?'F%(%4?P!>&%N&1E5! [+F%'H!O%FF+N+

#: : ; < : D! T'&+KH%&!%Q!3+(+1&K?1, 2! . K?%F1&(? '45!6O . !
#: : 9< : Y! >F1K+E+ , H!WQQ'K+&5!6O . !
#: : 9< : Y! V1K-FHP!&+4&+(+ , H1H'*+5!6O . ! [% 1&2!%Q!R&- (H++(!
#: : 9< : ; ! O?1'&5!6O . !>&%Q+(('% , 1F! . H1H- (!O% E E 'HH++!
#: : 9! ! / eH+& , 1F!>&%N&1E!3+*' +U+&5!>?'F% (%4?P!T+41&HE+ , H5!R&' , 'HP!O?&'(H'1 , !O%FF+N+!
#: : "< : ; ! V1K-FHP!3+4&+(+ , H1H'*+5!6O . ! . + , 1H+!A1K12+E 'K!N%*+& , ' , N!G%1&2C!
#: : "< : 7! O?1'&5!6O . ! / 2-K1H'% , 1F!>%F'KP!O% E E 'HH++!
#: : #< : " ! O?1'&5!6O . !) K12+E 'K!O%- , K'F!
#: : B< : # ! O%<2'&+KH%&5!N&1 , H<Q- , 2+2!&+(+1&K?!N&% -4!% , !
5!O1F*' , !O%FF+N+!
#: : B< : # ! V1K-FHP! \$ + , H%&5!T'*' ('% , !%Q!O% , H+eH- 1F!T' (K'4F' , +(5!O1F*' , !O%FF+N+!
#: : B! ! / eH+& , 1F!) 44&1'(+&5!V% , 2(14% - &!F1!V%&E1H'% , !2+!O?+&K?+-&(!+H!F^) '2+!†!F1!
3+K?+&K?+5! g -yG+K!
#: : : ! ! T'&+KH%&5!(+E' , 1&!Q%&!Q1K-FHP!1 , 2!N&12- 1H+!(H-2+ , H(!% , !
5!R%&% , H%!
B888<# : : : ! O?1'&5!b% , N<31 , N+!>F1 , , ' , N!O% E E 'HH++5! =&G1 , !6 , (H'H-H+!Q%&!O% , H+E4%&1&P!) &H(! !
B88D<# : : B! >&+('2+ , H5! [% 1&2!%Q!T'&+KH%&(5!R?+!] ' , N^(!O%FF+N+!V%- , 21H'% , !< ! =L . L!
B88Y<# : : : ! O?1'&5!O-&&'K-F-E! t !>+21N!NP!O% E E 'HH++5!T+41&HE+ , H!%Q!>?'F% (%4?P5!O1F*' , !OL!
B88Y<88!! O?1'&5!V1K-FHP!T+*+F%4E+ , H!O% E E 'HH++5!O1F*' , !O%FF+N+!
B88Y<88!! \$ +EG+&5! ` / S<Q- , 2+2!M'(- 1F!3 ?+H%&'K!O% E E 'HH++5!O1F*' , !O%FF+N+!
B88Y<8D! V%- , 2' , N! . +K&+H1&P<R&+1(-&+&5!O1F*' , !O%FF+N+!O?14H+&!%Q!H?+!) E+&'K1 , !
) ((%K'1H'% , !%Q! = , '*+&('HP!>&%Q+((%&(!A)) =>C!
B88Y! ! Z-&%&5!) , - 1F! . H-2+ , H!) &H! / e?'G'H'% , 5!0&1 , 2!M1FF+P! . H1H+! = , '*+&('HP!
B88 ; <88! V%- , 2' , N!K% E E 'HH++!K?1'&!Q%&!H?+!q) &H!R1Fc(r!(+&' +(5!R%&% , H%!
B88 ; 5!B88Y!! \$ +EG+&5!) 2*'(%&P! [%%c! . +F+KH'% , !O% E E 'HH++5! . %K'+HP!Q%&!>?+ , % E+ , %F%NP!1 , 2!
/ e'(H+ , H'1F!>?'F% (%4?P! !
B889!! ! O% , Q+&+ , K+!T'&+KH%&5!' , H+& , 1H'% , 1F!1 , 2!' , H+&2'(K'4F' , 1&P!K% , Q+&+ , K+!% , !
5!) -N- (H!B ; <B85!1H!O1F*' , !O%FF+N+!
B887<89!! \$ +EG+&5!>&%N&1E!O% E E 'HH++! t ! / e+K-H'*+!>F1 , , ' , N!O% E E 'HH++5!' , H+&2'(K'4F' , 1&P!
K% , Q+&+ , K+!% , ! 5!>'HH(G-&N?5!Z- , +!#<75!B889!
B887<# : : : ! \$ +EG+&!%Q!2'(K-(('% , !N&% -4!Q%&!K'* 'K!F+12+&(!% , !H?+!q4F'H'K(!%Q!E+1 , ' , N5r!O&1 , 2!
314'2(!

B887

? '8'0' /\$' -*

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"#\$%&' '\$#(\$)*!+, #&!

`%1?!>%&H+&!>&%Q+((%&!%Q!>?'F%(%4?'K1F!R?+%F%NP!

f 1F+!T'*', 'HP!. K?%%F!

`+U!S 1*+, 5!OR!.; 9#: <D" : ;!

WQQ'K+@!A#: "C!7"#<9"7"!

/<E 1'F@!X%?, L?1&+ J P1F+L+2-!

!

-#.! / , #0!*!(, 2!

/ ?&E 1, !>&%Q+((%&!%Q! / -&%4+1, !S'(H%&P5! / E+&'H-(!

T+41&HE+, Hm / T5. 80 08- 31Tm / TT211T f (!) Tj ETQq(20 0 0 . 2418589 . 92cm(%&H) 0 . 28#24ETQq@04q3 -50 02

, , \$ - *) . ' # J ' + (# /) 0 ' + % \$ 1 \$ - & ! &) 2 - 1 ' 2 - ' D 3 \$ ' # % & 1 !
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q

q[-'F2',N!O% EE -, 'HP!',!H?+!) &H(Lr!R1Fc!H%!K%FF+N+!1&H!(H-2+,H(5!=6O) 5!WKH%G+&!"5!B88YL!
!

qb+1*' ,N!H?+! \$ 1&N' ,(@!>-GF'K!V- ,2' ,N!Q%&!O% ,H+E4%&1&P!) &H(Lr!W4+ , ' ,N!&+E1&c(!G+Q%&+!1!
(4+K'1F!(K&+ , ' ,N!%Q!
!1H!H?+!M1 ,!) ,2+F! \$ -(+-E!O+ ,H+&! ,!O&1 ,2!
314'2(5! \$ 65!) 4&'F!75!B88YL!) F(%5!1QH+&!H?+!(K&+ , ' ,N5!E%2+&1H%&!%Q!1!41 ,+F!2'(K-(('% ,!% ,!
H?+!Q'FE!1 ,2!% ,!'((-+(!%Q!4-GF'K!Q- ,2' ,N!Q%&!H?+!1&H(L!
!

q [&-K+!O%KcG-&, @! \$ -('K!% , !H?+!b' , +Lr!b+KH-&+!' , !1!] ' , N^(! = , '*+&('HP!O%FF+N+!+eH+ , ('% , !K% -&(+5!
M1 , K% - *+&!1 , 2!M'KH%&' 15! \$ 1&K?!7<95!B8D#! =421H+2!*+&('% , (!N'*+ , !' , !/ 2E% , H% , !
AB#d#dD#C5! ^ ++&F1 , 2' 1!ABBd#DdD" C5!1 , 2!1H! O -FF!b 1c+!A8d#<"dD7CL!
L!) 2 -FH! / 2 -K1H' % , !O% -&(+5!R%&% , H%5!
V+G&- 1&P!B; !<! \$ 1P!75!B8YYL!R+ , !HU%<?%-&!+(('% , (!% , !T+G- ((P5! [1&H~c5! . H&1* ' , (cP5!
. K?%+ , G+&N5! h +G+& , 5!6*+(5!M1&‡(+!1 , 2!O1N+5! . +(('% , (!1 , 2!O1&H+&5! \$ +(('1+ , !1 , 2!
. H%Kc?1 - (+ , L!

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: '&)%*#44'%0%/\$' -!

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B: <# "<BB@! q6 , H+&*'+U!U'H?!b1EG+&H!n - '2+&*11&H!1G% -H!S'(! [%%c! Lr!6 , H+&*'+U+2!
GP!R?+X1(!Z1N1 , , 1H?!' , !H?+! [&'H'(?!% , F' , +!X% -& , 1F! 5!4%(H+2!WKH%G+&!
#"5!#: B7@! ?HH4(@dd- &G1 , H' E+(LK%d#: B7dB: d' , H+&*'+U<U'H'?<F1EG+&H<I - '2+&*11&H<% , <
?'(<G% %c<1&H<' , <4 -GF'Kd!

D<#Y<BB@!! 6 , H+&*'+U+2!1 , 2!s -%H+2!GP!RX+&c!2+!3+- (!' , !1!HU%<41N+!Q+1H-&+!H'HF+2!q] - , (H@!

8<;<8;@!! R+F+*('%,5!O?1,,+F!DL!6,H+&*'+U+2!1G%-H!=6O)^(!4&%N&1E(!1,2!4F1,(L!
B:<#B<89@! 312'%5!h WWT!) \$ L!6,H+&*'+U+2!1G%-H!=6O)L!
Y<#9<8"@! 312'%5!h WWT!) \$ L!6,H+&*'+U+2!1G%-H!q>-GF'K!V-,2',N!Q%&!H?+!)&H(Lr!

qR1Fc',N!U'H?>E% E+H?+- (Lr!O1F*',!O%FF+N+! !#: 5!,%L!#!AT+K+EG+&!B8DYC@!B :<###!O&% -4!
' ,H+&*'+U!U'H?! [&-K+!O%KcG-&,5!%&N1 , 'I+2!1 ,2!+2'H+2!U'H?H?+!1((H1 ,K+!%Q!(H-2+ ,H(!
T+ , , '(/ 44F+HH!1 ,2!3 1K?+F!M+&G-&NL!

!

q) G%1&2!1!0 -FF<O?1(+2! . ?'4Lr!3+*' +U!%Q! [&-K+!O%KcG-&,5! 5!) 4&'!#D5!B8D;5!4L!BDL!

!

qO-FH-&1F!>+(('E' (ELr!>14+&!4&+(+ ,H+2!H% !H?+!O1F*',!O%FF+N+!Q1K-FHP!H+1K?' ,N!O?&'(H'1 ,!
>+&(4+KH'*(!% ,!b+1& , ' ,N5!Z1 , -1&P!B"5!B8D;L!

!

!Ab+KH-&dT'(K-(('% ,! . +&' + (C5!1 ,2!
!AV'FEdT'(K-(('% ,! . +&' + (CL!O% ,H' , - ,N! / 2-K1H' % ,!K% - &+(!%QQ+&+2!1H!R?+!
] ' ,N^(!= , '*+&('HP!O%FF+N+5!V1FF! . +E+(H+&!B8D7L!

!

qO1&&P' ,N! / 1K?!WH?+&^(! [-&2+ , (@!R?+!O? -&K?11 ,2!O?&'(H'1 ,!) &H'(H(Lr!] +P , %H+!F+KH-&+5!O?&'(H'1 ,!
) &H(!O% ,Q+&+ ,K+5!] ' ,N^(!V%F25!O%K?&1 ,+5!) FG+&H15!Z-FP!#8<"B5!B8D"L!

!

qR?+! . H-2P!%Q!) &H(!Q%&! . +&* 'K+1GF+!6 , ('N?HLr! !BB5! ,%L!"!A \$ 1&K?!B8D"C@!#: <#7L!

!

q) &H@! \$ %&1F'HP5! \$ 1 , '4-F1H' % ,5!%&! O'QH!%Q!O%2zr!b+KH-&+!' ,!H?+!6((-+(! ,!O?&'(H'1 ,!b' *' ,N!
+eH+ , ('% ,!K% -&(+5! . HL! . H+4?+ , ^(!O%FF+N+5! / 2E % ,H% ,5!V+G&-1&P!"5!B8D"L!

!

qR%U1&2!1! . ?1&+2! = ,2+&(H1 ,2' ,N!%Q!H?+!) &H(Lr! !BB5! ,%L!#!AT+K+EG+&!B8D#C@!BD<#9L!

!

q \$ % -& , ' ,N! ,H%!T1 ,K' ,N@!) !R'E+!%Q! h %&(? '4r!AF'H-&NPC!1 ,2!q \$ -('K!1 ,2!b'H-&NP!' ,!3+Q%&E+2!
h %&(? '4r!A41 ,+F!K% ,H&'G-H' % ,CL! h +(H+& ,!3+N' % ,1F!O% ,Q+&+ ,K+!% ,!b'H-&NP!1 ,2! \$ -('K! ,!
H?+!O?&'(H'1 ,!3+Q%&E+2!O? -&K?5! / 2E % ,H% ,5!WKH%G+&! " :5!B8D#L!

!

q . 1FH!Q%&!S -E1 ,c' ,2@! [F+((' ,N(! ,! / 2-K1H' % ,1F!T'(K'4F+(? '4rAc+P , %H+!122&+((C!1 ,2!qO&'H'K'I' ,N!
1 ,2!R&1 , (Q%&E' ,N@!) ! h %&c(? '4!' ,! / 2-K1H' % ,1F!>?'F%(? '4'Pr!AU%&c(? '4CL!) , , -1F!
O% ,*+ ,H% ,5!O?&'(H'1 ,! / 2-K1H%&(!) ((%K'1H' % ,!%Q!) FG+&H15!WKH%G+&!#B5!B8D#L!

!

q>%(H<O&'H'K1F!3+QF+KH' % ,(!% ,!T%P+U++&2^(!R&1 , (K+ ,2+ ,H1F!O&'H's -+Lr!V1K-FHP!O%FF% s -' -E5!R?+!
] ' ,N^(!= , '*+&('HP!O%FF+N+5!WKH%G+&!B#5!B8D#L!

!

q h ?P!) &Hzr!qO%EE- , '% ,!1 ,2!O%EE- , 'HP!' ,!H?+!) &H(5r!1 ,2!q) &H(!1 ,2! . PEG%F(!1(!V%&E(!%Q!
T'(K'4F+(? '4Lr!] +P , %H+!F+KH-&+(5!O% ,Q+&+ ,K+!% ,!O?&'(H'1 , 'HP!1 ,2!H?+!) &H(5!] ' ,N^(!V%F25!
O%K?&1 ,+5!) FG+&H15!Z-FP!B9<BD5!B8D#L!

!

qb'G+&1H' % ,!1 ,2!T'(KF%(-&+Lr! . +E' ,1&!(4% , (%&+2!GP!H?+!O?&'(H'1 ,!3+Q%&E+2!O?14F1' ,KP5!
= , '*+&('HP!%Q!) FG+&H15!V+G&-1&P!B :5!B8D#L!

!

q [+HU++ ,!RU!% h %&F2(Lr!) 22&+((!H% !H?+!) , , -1F! \$ +EG+&(? '4! \$ ++H' ,N5!R?+!] ' ,N^(!= , '*+&('HP!
O%FF+N+5!WKH%G+&!85!B8DBL!

!

qO?&'(H'1 ,!) &H(!R%21P@! [+P% ,2!T+1H?1 ,2! ['&H?Lr!b+KH-&+5!O1F*' ,!O%FF+N+5!Z1 , -1&P!B75!B8DBL!
WH?+&!*+&('% , (N'*+ ,!1H!R?+!] ' ,N^(!= , '*+&('HP!O%FF+N+5!Z1 , -1&P!#; 5!B8DB5!1 ,2!H?+!+6O .!
W ,H1&' %!O% ,Q+&+ ,K+5!V%&H! / &' +5!) -N- (H!#5!B8DBL!

!

qR?+!b+N1KP!%Q!.K?%F1&FP!3+,+U1FLr!

!#5!,%L!#!