

# CVEN4503

7 ci fgY`Cj Yfj ]Yk

GHJZZ 7 cbHJW`8YHU]`g

7 cbj Ybcfg

B Ua Y	9a U]`	5j U]`UV]`]m	@cWU]cb	D\cbY
A Uf]b`5bXYfgYb	<a href="#">a "UbXYfgYb4 i bgk "YXi "Ui</a>		K F @žA Ub`m J U`Y	

@YW`i fYfg

B Ua Y	9a U]`	5j U]`UV]`]m	@cWU]cb	D\cbY
K ]`"; `Ua cfY	<a href="#">k "[ `Ua cfY4 i bgk "YXi "Ui</a>		K F @žA Ub`m J U`Y	
8fA U\`a ccX GUXUH`Bccf]	<a href="#">a "gUXUH`bccf]4 i bgk "YXi "Ui</a>		K F @žA Ub`m J U`Y	

GWX`cc``7 cbHJW`i`bZcfa U]cb

[9b\[ \]bYYf\]b\[ `Gh XYbhGi ddcfhGYfj \]Wg](#) -`H`Y`Bi WYi g`!`Ybfc`a`Ybř`dfc[ fYgg]cb`WX`YW`gž`WUg\`fYei`Ygřž`W`i`fgY`]ggi`Yg`cf`dfc[ fUa`!fY`UH`X`ei`Yf]Yg`

[9b\[ \]bYYf\]b\[ `bXi gřf\]U`HfU\]b\]b\[ \]`-`bXi`gřf\]U`HfU\]b\]b\[ `ei`Ygř\]cbg`](#)

[I`BGK`Gh`Xm5VfcUX](#) -`gh`XmUVfcUX`gh`XYbhYbei`]f]Yg`fZc`f]bVci`bX`gh`XYbřgk`

[I`BGK`9I`WXUb\[Y](#) -`gh`XYbhYI`WXUb[`Y`Ybei`]f]Yg`fZc`f]bVci`bX`gh`XYbřgk`

[I`BGK`:\]`h`fY`Gh`XYbřg](#) -`dch`Y`bř]U`gh`XYbhYbei`]f]Yg`Y["`UXa`]gg]cbgž`ZYgž`dfc[ fUa`gž`WYX]hřfUbgZYf`

D\cbY`

fZ`\*%&Ł`-`'` ,` )` ;` )` \$\$` -`Bi`WYi`g`Gh`XYbh<i`V`

fZ`\*%&Ł`-`'` ,` )` `+`\*`\*`%`-`9b[ ]bYYf]b[ `bXi gřf]U`HfU]b]b[ ]`

fZ`\*%&Ł`-`'` ,` )` ``%+`-`-`I`BGK`Gh`Xm5VfcUX`UbX`I`BGK`9I`WXUb[`Y`fZc`f]bVci`bX`gh`XYbřgk`

7ci fgY'8YHJ]`g

I b]hg'cZ7fYX]h\*`

Gi a a Uf `cZ\hY'7ci fgY

F Yj ]Yk `cZ[ fci bXk UHYf'cVWw ffYbWw ]b'5i ghfU' ]U''D\mg]WU'`dfcdYfh]Yg'cZ[ fci bXk UHYf'UbX' [ fci bXk UHYf' cVWw ffYbWw''Df]bW]d`Yg'cZ[ fci bXk UHYf'Zck "GrcfU[ Y'UbX'hfUbgga ]ggj ]hm! ]a dUW]g'cZ[ fci bXk UHYf' UVghfUW]cb"; fci bXk UHYf']b'hY'\nXfc`c[ ]WU'`WwWY. Zck `bYhg/gi fZUWw`k UHYf' [ fci bXk UHYf' ]bhfVwbbYW]j ]hm!; fci bXk UHYf'a cXY``b[ "; fci bXk UHYf'fYWXUf[ Y'a YWXUb]ga g'UbX'k UHYf'VU'UbWw WU'W' U]cbg"8f]`b[ 'a Yh.cXg'Zcf' [ fci bXk UHYf'UVghfUW]cb/[ Ycd\mg]WU'`c[ [ ]b[ /k Y``XYg][ b'UbX Wca d`Y]cb`Zcf'k UHYf'dfcXi W]cb`VcfYg''Gc'i h]cbg'hc'hY'fUX]U'`Zck `Yei U]cb/di a d]b[ 'hYgh]bhfYdfYU]cb/ U'dfc[ fUa `cZZY'X'k cf\_`UbX'XU]U'UbU'mg]g'k ]``VY'i bXYfhU\_Yb'UhihY'I B GK : Ufa `]b'K Y``b[ hcb"

7ci fgY'5]a g

H\Y'U]a `cZ\h]g`Wci fgY ]g`hc'XYj Y`cd'U'gh XYbhf]i bXYfghUbX]b[ `cZ\hY'cVWw ffYbWw `cZ[ fci bXk UHYf'UbX


Wcbgc`XUhr`hY`i bXYfgHbX]b[ `UWk]Yj YX`]b`hY`(`k YY\_g`cZ`YWh fYg`H\Y`Zj`X`Wci fgY`k`j`Wca a YbW`cb  
A cbXUm%(h`cZA UfWk`UbX`WcbWl XY`cb:: f]XUm% h`cZA UfWk`fl`XUmg`]b`hY`Zj`XE`5`Vi`g`k`j`VY`\]fYX`Zcf  
hY`fUbgdcfhc`UbX`Zca`K`Y`]b[ hcb`C`b`hY`A`cbXUmYj Yb]b[ `k`Y`k`j`\c`X`U`66E`]bZc`gYgg]cb`Uh`hY`Zj`X`  
Wci fgY`UW`Wca a cXU]cb`cb`Uff]j`U`"

7CJ`8%`fYei`]fYa`Ybtg.

Mci`k`j`bYXX`hc`dfcj`]XY`dfccZcZmci`fj`UW]bY`W`fh]Zj`W]h`f]k`c`a`UXUhc`fmj`UW]bU]h]cbglz`UbX`dfY`ZfUV`m  
U`gc`dfccZcZU`h`]fX`VccghY`f`g`ch]b`h]a`Y`Zcf`hY`K`Y`]b[ hcb`Zj`X`h]d`":`cf`A`cbXUm`hY`%(h`cZA UfWk`mci  
k`j`bYXX`hc`dfcj`]XY`U`bY[`Uhj`Y`D7F`hYghfbc`a`cfY`h`Ub`(`,`lci`fg`c`XE`cf`U`bY[`Uhj`Y`F`5H`hYghZcf`hY  
gUa`Y`A`cbXUma`cfb]b[ "`D`Y`UgY`Vf]b[ `mci`f`ck`b`gi`dd`mcZ`Zj`W`a`Ug\_g`Zcf`hY`k`YY`\_`"

Zmci`l`Uj`Y`WcbW`fbg`]b`fY[`UfXg`hc`hY`Zj`X`h]d`cf`Wcj`]Xzd`Y`UgY`WcbU`W]h`Wci`fgY`WcbfX]bU`hcf`8f`A`Ufh]b  
5bXYfgYb`"

# 5ggYgga Ybh

H\]g'Wci fgY'k ]''VY'UggYggYX'Vmik c'Ugg][ ba Ybtg'UbX'cbY'ZbU'fYdcfhiBchY. 'H\YfY']g'bc'Y, Ua 'UhihY YbX'cZh\]g'Wci fgY'k' H\Y'k c'Ugg][ ba Ybtg'Zk \]W'hcU'g') \$i 'cZhY'Wci fgY'a Uf\_žUfY'a YUbhlc'fYghhUh hY'ghi XYbtg'i bXYfghUbX'hY'WcbfYbhcZ\_YmVWUdHf'g:]b'hY'Wci fgY'bcH'g'UbX'hYghhY]f'Wca dYHbVWYg:]b i g]b[ ' [ fci bXk UHf']bj Ygh[ UH]cb'a YhcXg" H\Ymk ]''U'gc'dfcj ]XY'hY'ghi XYbtg'k ]h'YUfmiZ'YXVUW'cb'\ck hYmUfY'dfc[ fYgg]b[ 'k ]h'hY'Wci fgY" H\Y'ZbU'fYdcfhi) \$i 'cZhY'Wci fgY'a Uf\_ž]g'U[ fci d'Ugg][ ba Ybhf] ghi XYbtg'hc'U[ fci d'k' H\Y'fYdcfhi' ]''Wcbg]ghcZ%&'U'gi a a UfmcZhY'Z'Y'X'UW]j ]hYg'UhihY'K'Y''b[ hc'b': ]Y'X F YgYUfW'GhU]cb/&E'dfYgYbH]cb'cZhY'fYgi 'hg/UbX'' E'Ub' ]bH[ fUH'X'gmbhYg]g'cZhY'[ fci bXk UHf' dfcW'ggYg'Uh'hY'Z'Y'X'gH]cb'VUgYX'cb'U''fYgi 'hg" 9UW'ghi XYbhk ]''\Uj Y'hc'Xc'U'gdYW]Z'WdUfhcZhY fYdcfhiZc'f']bX]j ]Xi U''UggYgga Ybtž'Vi h]h]g]j Yfma i W'U'Wc''UVcfU]j Y'YZc'fh"


5ggYgga Ybh' . K Y`]b[ hcb : ]Y`X`5gg][ ba Ybh

GhUfhXUHY . %( # \$ ' # & \$ & & % & . \$ \$ ' 5 A

5ggYgga Ybh`Yb[ h . B #

8i Y`XUHY . & ) # \$ ( # & \$ & \$ ) . \$ \$ ' D A

H\]g`Ugg][ ba Ybhk ]`UggYgg`hY`ghi XYbht`i bXYfghUbX]b[ `cZ`hY`a Y`h`cXg`XYa cbghfUHYX`]b`hY`Z`Y`X`Z`UV`]m  
h`d`fYgYbhUbX`W`h`W`miUggYgg`hY`ei U`]micZ[ fci bXk UHYf`Z`Y`X`XUHU`c`V`H]bYX`VmU`fUb[ Y`c`Za Y`h`cXg`UbX  
Z`bU`mi`h`Y`f`UV`]mih`]bhYfdYh`h`Y`Z`bX]b[ g`]b`fY`U`h`cb`h`c`[ fci bXk UHYf`d`f`c`W`ggYg`"K`c`f`\_]g`V`c`a`d`Y`h`X`U`g`U  
[ fci d`Vi`h]bX]j`]Xi U`g`bca`]bUHY`k` \]V`g`Y`W`h`cb`h`Y`mk`f`c`h`U`b`X`U`f`Y`a`U`f`\_`Y`X`U`V`W`c`f`X]b[ `m`

# 5hYbXUbW'F Yei ]fYa Ybhg

: cf'h.]g'Wci fgY'h\Y'K Y''b[ hcb': ]Y'X'Wca dcbYbhi]g'a UbXUhc'fm') \$i 'cZHY'Wci fgY'a Uf\_]g'VUgYX'cb'h\Y


		Yei Uhjcbg'cZ[ fci bXk UHYf'Zck 5#DfcZK ]"; 'Ua cfY
	K cf_g\cd	K YXbYgXUm%%\$!% .\$\$'f7 9+\$\$%UbX'Cb'j]U A ccX'YŁ  H\]g'k cf_g\cd'&'jg'cb'a UHYf]U''Zcf'5gg][ ba Ybh% fUggYggUV'YŁ  D\mg]WU'dfcdYfh]Yg'cZk UHYf'UbX'WU'W'Uh]cb cZ[ fci bXk UHYf'Zck
K YY_" . '& , : YVfi Ufm! ( 'A UfWx	GYa ]bUf	K YXbYgXUm- .\$\$!%%\$\$'fC b'j]bY'cb'mj ]U'A ccX'YŁ  ; YcWxYa ]WU''bj Ygh[ Uh]cbg  5#DfcZA Ufh]b'5bXYfgYb
	K cf_g\cd	K YXbYgXUm%%\$!% .\$\$'fC b'j]bY'cb'mj ]U'A ccX'YŁ  H\]g'jg'k cf_g\cd" 'UbX'jg'cb'a UHYf]U''Zcf 5gg][ ba Ybh&'fUggYggUV'YŁ"
K YY_( . '+A UfWx ! '% A UfWx	GYa ]bUf	K YXbYgXUm- .\$\$!%%\$\$'fC b'j]bY'cb'mj ]U'A ccX'YŁ  Gi fZUW'k UHYf' [ fci bXk UHYf' ]bh'fUW]cbg  8f'A U\ a ccX'GUXUH Bccf]'
	K cf_g\cd	K YXbYgXUm%%\$!% .\$\$'fC b'j]bY'cb'mj ]U'A ccX'YŁ  H\]g'jg'k cf_g\cd( 'UbX'jg'cb'Gi fZUW'k UHYf' [ fci bXk UHYf' ]bh'fUW]cbg'fbc b!UggYggUV'YŁ
K YY_) . '%( 'A UfWx ! '% A UfWx	: ]Y'Xk cf_	H\]g'jg'hY'K Y''j]b[ hcb': ]Y'X'7 ci fgY'k YY_"K Y k ]''VY''YUj ]b[ 'GmXbYmicb'A cbXUmihY'%( h\Uh %&.\$\$.fYI UWh]ja Y'UbX'd'UW' 'H65Ł"K Y'k ]''ghUmUh hY'K Y''j]b[ hcb'7Uj Yg'7Ua d[ fci bX''H\Y'fYh'fb'hc GmXbYmk ]''VY'cb': f]XUmihY'% h\]b'hY'YUfm UZfYfbccb''''
K YY_*. '&%A UfWx ! '&) A UfWx	<ca Yk cf_	: @9L -6 @+HMK 99?  Bc'gWYXi 'YX'WUgg''7cb]bi Y'k cf_]b[ 'cb K Y''j]b[ hcb'Z]Y'X'hf]d'Z'ck'li d.; fci dk cf_ZXUfU ei U']mUggYgga Ybh'XUfU'dfcW'gg]b[ ž'fci VY g\cch]b[ 'UbX'E/ 5"
K YY_+. '& , 'A UfWx ! '% 5df]	; fci d'K cf_	K YXbYgUm- .\$\$!% .\$\$"F cca '7 9+\$\$%  K Y''j]b[ hcb'Z]Y'X'hf]d'Z'ck'li d.; fci dk cf_ZXUfU ei U']mUggYgga Ybh'XUfU'dfcW'gg]b[ ž'fci VY



		g\cch]b[ 'UbX'E / 5"
K YY_ ; '( '5df]'! ; '5df]' ; fci d'K cf_		K YXbYgUm- .\$\$!% .\$\$" F cca '7 9+\$\$% K Y`]b[ hcb`Z]Y`X'hf]d`Z`ck !i d.`; fci dk cf_žXUfU ei U`]m]UggYgga YbžXUfU'dfcVWgg]b[ ž]fci V`Y g\cch]b[ 'UbX'E / 5"
K YY_ '- .%%'5df]'! %) 5df]' ; fci d'K cf_		K YXbYgUm- .\$\$!% .\$\$" F cca '7 9+\$\$% K Y`]b[ hcb`Z]Y`X'hf]d`Z`ck !i d.`; fci dk cf_žXUfU ei U`]m]UggYgga YbžXUfU'dfcVWgg]b[ ž]fci V`Y g\cch]b[ 'UbX'E / 5"
K YY_ '%\$. '% '5df]'! '&& 5df]' ; fci d'K cf_		hX] ]Xi U`k cf_]b`fYdcfh]b[ '[ fci dg`UbX`fYdcfh gi Va ]gg]cb`cb`hY`A cbXUm]hY`&) hžVYžfY` ) `da "

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

H\]g`Wci gY`k ]`a U]b`mfY`micb`h\Y`YW`i fY`bchYg`"H\Y`UW`i U`Y`YW`i fYg`UbX`h\Y`dck Yfdc]bhg`k ]`U`gc`VY  
Uj U]UV`Y`cb`]bY`cb`A ccX`Y`UbX`fYW`fX]b[ `cb`9W`c' \* \$"

F YWca a YbXYX`F Ygci fWg

F YWca a YbXYX`[ YbYfU`h\I hcc\_g`UfY.

- 5dd`]YX`<mXfc[ Yc`c[ m!`!` : ci f\`9X]j]cb`f&\$\$%&Vmi7`"K`" : YhYf/di V`]g\YX`VmiDfYbh]VW`<U`!`!` : cf`U  
VUg]W]bhfX`i W]cb"

## Gi Va ]gg]cb'cZ'5ggYgga YbhiHUg\_g

D`YUgY'fYZf'hc'hAY'A ccXY'dU[ Y'cZHAY'Wci fgY'Zcf'Z fHAYf'[ i ]XUbW'cb'UggYgga Ybhgi Va ]gg]cb"

I BGK `Ug'U'ghUbXUfX`UH'gi Va ]gg]cb'dYbU'h'cZ

- )i `dYf'XUmz'Zcf'U`UggYgga Ybhg'k`YfY'U'dYbU'hmUdd'YgZ'WUddYX'UhZj Y'XUmg'f%&\$`ci fglZ'UZfYf'k`JW'U'gh'XYbhWUbbchgi Va ]hUb'UggYgga YbZ'UbX'bc'dYfa ]H'X'j'Uf]U'cb"



5 WUXYa ]W=Zcfa Uh]cb

: ]bU`9, Ua ]bUh]cbg.

5ddYbX], . '9b[ ]bYYfg'5i ghfU`U'f95E'DfcZYgg]cbU`'9b[ ]bYYf'7ca dYhYbW  
 GHUbXUfX

Dfc[ fUa 'hYbXYX'@YUfb]b[ 'Ci hWta Yg	
? bck `YX[ Y'UbX'g_]`VUgY	
D9%"%7 ca dfY\Ybg]j YzhYcfmVUgYX'i bXYfghUbX]b[ 'cZhY'i bXYfd]bb]b[ 'bUh fU`UbX d\mg]WU`gWYbWg'UbX'hY'Yb[ ]bYYf]b[ 'Z bXUa YbH'g'Udd']WUV'Y'hc'hY'Yb[ ]bYYf]b[ 'X]gWd`]bY	
D9%"&'7 cbWdh U`i bXYfghUbX]b[ 'cZhY'a UhYa Uh]Wg'z'bi a Yf]WU`UbU'mg]g'ghUhgh]Wg'z'UbX Wta di h'f'UbX']bZ'fa Uh]cb'gWYbWg'k \]W' i bXYfd]b'hY'Yb[ ]bYYf]b[ 'X]gWd`]bY	
D9%" " 'h!XYdh'i bXYfghUbX]b[ 'cZgdYWU`]ghVcX]Yg'cZ_bck `YX[ Y'k ]h]b'hY'Yb[ ]bYYf]b[ X]gWd`]bY	
D9%"('8]gWfba YbhcZ_bck `YX[ Y'XYj Y`cda YbhUbX'fYgYUfW'X]fYW]cbg'k ]h]b'hY Yb[ ]bYYf]b[ 'X]gWd`]bY	
D9%" ) ? bck `YX[ Y'cZYb[ ]bYYf]b[ 'XYg][ b'dfUW]W'UbX'WcbhYi h U`ZUW'c'fg]a dUW]b[ 'hY Yb[ ]bYYf]b[ 'X]gWd`]bY	
D9%"* 'i bXYfghUbX]b[ 'cZhY'gWcdYz'df]bWd`Yg'z'bcfa g'z'UW'W'ci bhUV]']h]Yg'UbX'Vci bXg'cZ gi gh]bUV'Y'Yb[ ]bYYf]b[ 'dfUW]W' ]b'hY'gdYW]ZWX]gWd`]bY	
9b[ ]bYYf]b[ 'Udd']WU]h]cb'UV']]m	
D9%"%5dd`]WU]h]cb'cZYghUV]g\YX'Yb[ ]bYYf]b[ 'a Yh'cXg'hc'Wta d'Yi'Yb[ ]bYYf]b[ 'dfcV'Ya gc'] ]b[	
D9%"&'&'i YbhUdd']WU]h]cb'cZYb[ ]bYYf]b[ 'h'W]b]ei Yg'z'hc'g'UbX'fYgci fW'g	
D9%" " '5dd`]WU]h]cb'cZgmg'Ya Uh]WYb[ ]bYYf]b[ 'gmb'hYg]g'UbX'XYg][ b'dfcW'ggYg	
D9%"('5dd`]WU]h]cb'cZgmg'Ya Uh]WUdd'fcUW'Yg'hc'hY'WcbXi W'h]UbX'a UbU[ Ya YbhcZYb[ ]bYYf]b[ dfc'YW'g	
DfcZYgg]cbU`UbX'dYfgcbU`Uhf]Vi h'Yg	
D9' "%9h]WU`WcbXi W'h]UbX'dfcZYgg]cbU`UW'W'ci bhUV']]m	
D9' "&'9ZYW]j Y'cfU`UbX'k f]hYb'Wta a i b]WU]h]cb']b'dfcZYgg]cbU`UbX`UmXca U]bg	
D9' " '7fYUh]j Yz']bbcj Uh]j Y'UbX'dfc!UW]j Y'XYa YUbcif	
D9' "( 'DfcZYgg]cbU`i gY'UbX'a UbU[ Ya YbhcZ]bZ'fa Uh]cb	
D9' ") 'CfXYf'ma UbU[ Ya YbhcZgY'z'UbX'dfcZYgg]cbU`WcbXi W'h	
D9' "*" '9ZYW]j Y'hYUa 'a Ya VYfg\]d'UbX'hYUa ``YUXYfg\]d	