

SOSS3002

GcWJU``GWJYbWY`DfcYWh

HYfa 'C bY''##'&\$&\$

7ci fgY^{*}Cj Yfj]Yk

[']GhJZ'7cbhJWh'8YhJ]`g'

'7cbj Ybcfg'

B Ua Y	9a U]`	5j U]`UV]`]lm	@cWJhjcb	D\cbY
<uny``6`i bxyb<="" td=""><td>\"V`i bXYb4 i bgk "YXi "Ui</td><td>A cb!H\i fg</td><td>F cca</td><td></td></uny``6`i>	\"V`i bXYb4 i bgk "YXi "Ui	A cb!H\i fg	F cca	

'Hi hcfg'

BUa Y	9a U]`	5j U]`UV]`] m	@cWUhjcb	D∖cbY
AY[UbFcgY		7 cbHJWhh hcfj]U Ya U]`hc'UffUb[Y		
BUfiJa U'7Uf]b	- ÿ	7 cbHJWhh hcfij]U Ya U]`hciUffUb[Y		

GWXcc``7cbHJWhʻ±bZcfa Uh]cb

GWXcc``cZGcWJU``GWJYbWYg

Fcca '%) -

A cfj Yb 6fck b 7 &\$

Ya U]`. 'gcgg4 i bgk "YXi "Ui

d\cbY. '\$&'-',) '% \$+

7ci fgY 8YHJ] g

7 fYX]hDc]bhg *

Gi a a UfmcZh\Y 7ci fgY

GI VYWh5fYU. EaU[S^EU[W]UW

7 ci fgY @YUfb]b[Ci hWca Yg

- %" I bXYfftU_Y`UbX`a UbU[Y`Ub`Udd`]YX`gcW]U``fYgYUfW\`dfcYWfz`]bX]j]Xi U``m`UbX`Ug`dUfhcZU`hYUa &" 8Yj Y`cd`UbX`dfYdUfY`U`fYgYUfW\`dfcdcgU`ž`fYgYUfW\`fYdcfhz`UbX`dfYgYbhih\Y`fYgYUfW\`Z]bX]b[g`hc U`k]XYf`Ui X]YbW
- ' "D`UbžWcbXi WiUbX`a UbU[Y`Ub`Udd`]YX`fYgYUfW\`dfcYWiUg`dUfficZU`k cf_]b[`fYgYUfW\`hYUa(" +bhYfdfYh'UbX`Wcaai b]WUhY`fYgYUfW\`Z|bX]b[g`hc`X]ZZYfYbh'Ui X]YbW'g"
-) "8 Yj Y`cd`h\Y`g_]`g`hc`YZZYWfj Y`mdfYgYbhUbX`Wcaaib]WUhY`h\Y]f`fYgYUfW\`Z[bX]b[g`hc`U`[fcid

HYUWX]b[GhfUhY[]Yg

±0.1h\]g`Wci fgYzmci 'k]```VY`Yb[U[YX`]b``YUfb]b['fh\fci [\ 'ghfi Whi fYX`\UbXg!cb`fYgYUfW\`'UWhj]h]Yg"`H\Y UggYgga YbhhUg_g`hc`XYj Y`cdz`WcbXi WhUbX`dfYgYbhcb`U`fYgYUfW\`dfc`YWhUfY`XYg][bYX`Zcf`mci 'hc`fYZYWh cb`mci f`i bXYfghUbX]b['cZh\Y`gi V'YWhUbX`XYj Y`cd`g_]``g`]b`fYgYUfW\`UbX`Wca a i b]WUh]cbz`Vch\`k f]hhYb`UbX j YfVU`"`H\Y`Wci fgY`]g`XYg][bYX`hc`Vi]`X`cb`df]cf`Yl dYf]YbWY`UbX`_bck`YX[Y`[U]bYX`]b`dfYj]ci g`ghi Xmz`hc YbWci fU[Y`]bXYdYbXYbhk cf`UbX`hc`dfci]XY`a YUb]b[Z\`UbX`ha Y`mZYXVUW'"

5 hm/b XUb VW F Yei]fYa Ybhg

 $\hbox{Ghi XYbhg'UfY'ghfcb[`mYbWci fU[YX'hc'UhhYbX'U```WUggYg'UbX'fYj]Yk ``YWhi fY'fYWcfX]b[g''] }$

7ci fgY GWX YXi `Y

J]Yk 'WUgg'hja YhUV'Y

H]a YtUV`Y

8UhY	HmdY	7 cbhYbh

		cffYgYUfW. U]a XYW]XYX'i dcb'Vmh\Y'[fci d"H\Y'gYa]bUf"YUXYf'k]``dfcj]XY'kf]hhYb'ZYYXVUW_cb'h\Y'ei Ygh]cb'UbX'h\Y'X]fYWf]cb'h\Y'[fci d\Ug'W\cgYb"' H\Uhei Ygh]cb'g\ci `X'VY'Ya U]`YX'hc'mci fgYa]bUf"YUXYf'Vm) da 'cb': f]XUmcZ'K YY_'&'f&,: YVfi UfmŁ"
K_YY'' .	GYa]bUf	A YYh]b['mci f'Yh\]WU`'fYei]fYa Ybhg'
A UfWX		±ork YY_'' imcirik]``Wcbg]XYfih\YrYh\]WU`]ggiYgrUggcW]UhYXik]h\imcififYgYUfVXrU[YbXU"
		±oʻh∖]gʻgYa]bUfʻmciʻk]``VYʻ]bHcXiVWX'hc WcbWYdhgʻgiVXʻUg.
		%"'K\Uh]g'Yh\]Wg']b'fYgYUfW\3
		&"'K\Uh'UfY'h\Y'Yh\]WU``X]aYbg]cbg'cZh\Y'fYgYUfW\ mci'dfcdcgY'hc'ibXYfhU_Y3
		' "'K \Yb'XcYg']bghjhi hjcbU`'Yh\]Wg'Uddfcj U`'bYYX'hc VY'cVhU]bYX3
		("'H\Y'I BGK 'FYgYUfW\'7cXY'cZ7cbXi Wf
K YY_'(.'-'A UfVX'!'%' A UfVX	GYa]bUf	FYj]Yk]b['h\Y`]hYfUh fY
		±oʻK YY_ʻ(ʻmciʻk]```a U_YʻghfUhY[]WXYW]g]cbg UVci hh\Y``]hYfUhi fYʻmci ʻbYYXʻhcʻWcbgi `hVYZcfY VY[]bb]b[ʻh\Y`XUhUʻWc``YWnJcbʻUbXʻUbU`mg]gʻd\UgYg"
		±oʻh∖]gʻgYa]bUf'mciʻk]``VY`]bHcXiVWX`hc WcbWYdhgʻgiVX`Ug.
		%"K\m]h]g'bYWggUfmhc'WcbXiWhU^]hYfUhifY'fYj]Yk
		&"":]bX]b['h\Y``]hYfUh fYfgŁmci 'bYYX
		' "DifdcgYZ `fYUX]b[cZh\Y`]hYfUhffY
		("`7 fYUh]b['Ub'UbbchJhY'V]V`]c[fUd\m
) "`±bWig]cb`UbX`YIWig]cb`Wf]hYf]U`Zcf`mcif``]hYfUhifY fYj]Yk"
		5 ggYgga Ybh% F YgYUfW\ dfcdcgU`g`UfY`Xi Y %%) - da ž: f]XUm% `A UfW\"``
K YY_^).^%*^A UfvX^!^&\$ A UfvX	GYa]bUf	K cf_]b['k]h\ '8UhU
		±b′K YY_') 'mci 'k]``ghUfhik cf_]b['X]fYWhmik]h\'XUhU"

		#D'fh\]g'gYa]bUf'mci'k]``VY']bffcXiVWX'fc WcbWYdfg'giW\'Ug. %''K\Uh]g'XUfU3 &''' <ck'xc'mci'aufw\'u'fygyufw\'ayfh\cx'fc U'fYgYUfW\'eiYgf]cb3</ck'xc'mci'aufw\'u'fygyufw\'ayfh\cx'fc
IZ VVV :* : OL : A LIFAW:L: O	CV- 1-16	' "'K \YfY'Xc'mci ZJbX'XUHJ3 ("' <ck'xc'mci a="" f'xuhj3<="" td="" ubu[y'ubx'dfchywhmci=""></ck'xc'mci>
K YY_'*.'&' 'A UfWX'!'&+ A UfWX	GYa]bUf	8 UHJ 5 bU`mg]gʻUbX F YgYUfWX :]bX]b[g ⇒ K YY_'* mci ʻgHJfhihcʻXfUk ʻWcbWi g]cbgʻZfca mci fʻXUHJ"
		#5 'h\]g'gYa]bUfmimci 'k]``VY']bHcXi WYX'hc'WcbWYdhg gi W\'Ug
		%'' <ck'hc'ubu'mgy'xuhu &"'<ck'hc'dfygybh']bx]b[g< td=""></ck'hc'dfygybh']bx]b[g<></ck'hc'ubu'mgy'xuhu
		'"' <ck'hc'xygwf]vy'mcif'z bx]b[g< td=""></ck'hc'xygwf]vy'mcif'z bx]b[g<>
		("' <ck'hc'xyw]xy'k\uhhc']bwixy'ubx'k\uh hc'YIWiXY"</ck'hc'xyw]xy'k\uhhc']bwixy'ubx'k\uh

FYgci fWfg

DfYgWf]VYX F Ygci fWYg

Ghi XYbhg'k]``VY'[]j Yb'UWWgg'hc'U'Z\```fUb[Y'cZfYgci fWg'j]U'h\Y'A ccX'Y'k YVg]hY'Zcf'h\]g'Wci fgY"

FYWca a YbXYX FYgci fWYg

7 ci fgY '9j U`i Uh]cb 'UbX '8Yj Y`cda Ybh

Gh XYbhZYXVUW_k]```VY`gci [\hUbX`UWhXX`i dcb`hc`]a dfcj Y`h\Y`gh XYbh`YUfb]b['Yl dYf]YbWY"`

Gi Va]gg]cb cZ5ggYgga YbhHUg_g

Gi Va]gg]cb cZ5ggYgga YbhHUg_g

Hi fb]h]b Gi Va]gg]cb

#mci YbWci bhYf'U'dfcV'Ya 'k \Yb'UthYa dr]b['rc'gi Va]hmci f'Ugg][ba Ybht\fci [\'Hi fb]r]bž'd'YUgY
hY'Yd\cbY'9I hYfbU''Gi ddcfhcb'-',) '''' %cf'Ya U]''h\Ya 'cb'YI hYfbU'hY'hgi ddcfh4 i bgk "YXi "Ui '"'Gi ddcfh
\ci fg'UfY', .\$\$Ua '-'%\$.\$\$da 'cb'k YY_XUmg'UbX'-.\$\$Ua '-').\$\$da 'cb'k YY_YbXg'fl *) 'XUmg'U'mYUft\"'=\maintention
UfY'i bUV'Y 'rc'gi Va]hmci f'Ugg][ba YbhXi Y'rc'U'ZJi 'hk]h\'Hi fb]r]b'mci 'a Um'Udd'm\Zcf'Ub'YI hYbg]cb\ZVi hmci
a i ghfYhJ]b'mci f'r]\W_Yhbi a VYf'\Zfca '9I hYfbU''Gi ddcfhfU'cb['k]h\'Ubmch\Yf'fY'Yj UbhXcW a Ybfg\L'rc
]bWi XY'Ug'Yj]XYbW' 'rc'gi ddcfhmci f'YI hYbg]cb'Udd']\WJh]cb'''=\maintention
UfY'' bUYY''mfYWY']j Y'U'r]\W_Yhbi a VYf\Zfvi h]Zmci 'hY'Yd\cbY'mci 'k]'''bYYX'rc'gdYW]\ZfwJ''mUg_'Zcf'cbY''
Hi fb]h]b'U'gc'dfcj]XYg'i dXUhYg'cb'h\Y]f'gmghYa 'gfUh' g'cb'Hk]hYf"

; YbYfU``mž'UggYgga YbhiHug_g'a i ghVY'gi Va]hhYX'Y`YVWfcb]\W)``mj]U'Y]h\Yf'Hi fb]hjb'cf'U'A ccX`Y Ugg][ba Ybh'' =b']bgHJb\W'g'k \YfY'h\]g']g'bchdcgg]V`Yž']hk]``'VY'gHJhYX'cb'mci f'\\circ i fgY'g'A ccX`Y'g]hY'k]h\ U`hYfbUhj Y'gi Va]gg]cb'XYHJ]`g''

cfi]bZcfa Uh]cbicbi\ckihcigi Va]hUgg][ba Ybhgicbi]bYij]UiA ccXiY.i\hdg.#gh XYbh'i bgk "YXi "Ui #\ck! qi Va]hUgq][ba Ybha ccXiY

5 WUXYa | W < cbYqlmUbX D`U[]Uf]qa

D`U[]Uf]ga `]g`i g]b['h\Y`k cfXg`cf`]XYUg`cZch\Yfg`UbX`dfYgYbh]b['h\Ya `Ug`mci f`ck b"'=hWJb'hU_Y`a Ubm Zcfa gžZfca `XY`]VYfUhY`W\YUh]b['hc`UWW]XYbhU`mWcdm]b['Zfca `U`gci fWY'k]h\ci hUW_bck `YX[Ya Ybh'

IBGK [fcidg'd'U[]Uf]ga]bhc'h\Y'Zc``ck]b[WUhY[cf]Yg.

7 cdm]b[.'i g]b['h\Y'gUa Y'cf'j Yfmg]a]`Uf'k cfXg'hc'h\Y'cf][]bU`hYl h'cf']XYU'k]h\ci h'UW_bck `YX[]b['h\Y gci fW'cf'i g]b['ei chUh]cb'a Uf_g"'H\]g'U`gc'Udd`]Yg'hc']a U[Ygž'Ufh'UbX'XYg][b'dfcYWhgž'Ug'k Y``'Ug dfYgYbhUh]cbg'k \YfY'gca YcbY'dfYgYbhg'Ubch\Yf'g']XYUg'cf'k cfXg'k]h\ci h'WfYX]h'

⇒ Uddfcdf]UhY 'dUfUd\fUg]b[...7\Ub[]b['U'ZYk 'k cfXg'UbX'd\fUgYg'k \]'Y 'a cghmfYhJ]b]b['h\Y'cf][]bU` ghfi Wh fY 'UbX#cf'dfc[fYgg]cb'cZ]XYUg'cZh\Y'cf][]bU'žUbX']bZcfa Uh]cb'k]h\ci hUW_bck `YX[Ya Ybh'H\]g'U`gc Udd`]Yg']b'dfYgYbhUh]cbg'k \YfY'gca YcbY'dUfUd\fUgYg'Ubch\Yf'g']XYUg'cf'k cfXg'k]h\ci hWfYX]hUbX'hc d]YW]b['hc[Yh\Yf'ei chYg'UbX'dUfUd\fUgYg']bhc'U'bYk 'k \c`Yžk]h\ci hUddfcdf]UhY'fYZYfYbW]b["

7 c``i g]cb.'k cf_jb['k]h\ch\Yfg'Vi hdUgg]b['cZZh\Y'k cf_'Ug'U'dYfgcb'g']bX]j]Xi U``k cf_"'7 c``i g]cb'U`gc]bWi XYg'dfcj]X]b['mci f'k cf_'hc'Ubch\Yf'ghi XYbhVYZcfY'h\Y'Xi Y'XUhYžcf'Zcf'h\Y'di fdcgY'cZh\Ya d`U[]Uf]g]b['UhiUbmh]a Yž'dUm]b['Ubch\Yf'dYfgcb'hc'dYfZcfa 'Ub'UWUXYa]WhUg_ž'ghYU']b['cf'UWei]f]b[Ubch\Yf'dYfgcb'g'UWUXYa]Wk cf_'UbX'Wcdm]b[']hz'cZYf]b['hc'Wca d'YhY'Ubch\Yf'dYfgcb'g'k cf_'cf'gYY_]b[dUma YbhZcf'Wca d'Yh]b['UWUXYa]Wk cf_"

±bUddfcdf]UhY`W]hUh]cb.`7]h]b[ˈgci fWYg'k\]WX`\Uj Y`bchVYYb`fYUXžk]h\ci hUW_bck`YX[]b[`h\Y`″gYWcbXUfm″gci fWY`Zfca 'k\]WX`_bck`YX[Y`cZh\Ya`\Ug'VYYb`cVhU]bYX"

8 i d`]\W\n]cb`ffgY`Z\d`U[]\Uf]ga "Ł`gi Va]\n]b[`mci f`ck b`k cf_z`]b`k \c`Y`cf`]b`dUffz`k \YfY`]h\Ug`dfYj]ci g`m VYYb`dfYdUfYX`cf`gi Va]\nYX`Zcf`Ubch\Yf`UggYgga Ybhcf`\\cf\\text{i fgY`UhI_BGK_`cf`Ubch\Yf`i b]j\Yfg]\m'

7 cffYWnfYZYfYbWlb['dfUWnWyg.

- DUfUd\fug]b[ž'gi a a Uf]q]b[ž'YggUmk f]hb['UbX'ha Y'a UbU[Ya Ybh
- 5ddfcdf]UhY'i gY'cZUbX'Uhtf]Vi h]cb'Zcf'U'fUb[Y'cZa UhYf]U`g']bWi X]b['hYl hž']a U[Ygž'Zcfa i `UY'UbX WbWYdhg"