Eye/face protection"ó"Y gct"r tqvgevkqp"r tguetkdgf "kp"**Table A16-3**0"F kuectf "y j gp"r tqvgevkqp"ku'uetcvej gf " qt"y qtp"ko r cevkpi "xkukdktkv{0"Ki'hceg"uj kgrf u"ctg"y qtp"hqt"ej go kecn'ur nuj ."cnq"y gct"ur nuj "i qi i ngu" wpf gtpgcvj 0"'Uchgv{"i ncuugu"y kn'dg"y qtp"wpf gt"hceg"uj kgrf u"hqt"ko r cev'r tqvgevkqp"cpf "wpf gt"y grf kpi " j gro gvu0"'Ngpu"uj cf g"y kn'dg"ugrgevgf "dcugf "qp"j c| ctf ."hqmqy kpi "UQR"Gpxktqpo gpv."Uchgv{ "cpf "S wchv{" *GUS +/803"*VcuniKputwevkqp"803024+"

Hearing Protection"ó"Y gct"j gctkpi "r tqvgevkxg"f gxkegu"kp"ceeqtf cpeg"y kj "o cpwhcewstgtuø'kpustwevkqpu." kpenwf kpi "hkvkpi "cpf "kpugtvkqp0""Wug"qh"ur gekhe"f gxkegu"y km'dg"nko kgf "vq"gzr quvstgu"y kj kp"yj g"pqkug" tgf wevkqp'tcvkpi u0'

Fall Protection "ó"Hqt "y g"cevkxkkgu"eqxgtgf "d{ "y ku"UUJ R. "hcml" tqvgevkqp"ku"pqv"cpvkekr cvgf = j qy gxgt. "kh"kv" dgeqo gu"pgeguuct {. 'y g"Uchgv{ "cpf "J gcnj "O cpci gt "*UJ O +"y kml" tgr ctg"c"ukvg/ur gekhe "hcml" tqvgevkqp" r. ncp" cpf "uvdo kv'kv'vq' y g"Eqpvtcevkpi "Qhhlegtøu"Tgr tgugpvcvkxg"*EQT+'hqt"ceegr vcpeg"dghqtg"r tqeggf kpi 0"

5.3 Work Mission Duration

Y qtmlo kuukqp"f wtcvkqpu"y kmldg"ho ksgf "vq"ceeqo o qf cvg"ceegr vcdrg"ugtxkeg"hhg"qh'vj g"RRG0"

Y j gtg'RRG'o c{ "ecwug"c'j c| ctf."uwej "cu'j gcv'uvtguu."y qtm'o kuukqp'f wtcvkqp'y km'dg'f gvgto kpgf 'kp'vj g'CJ C" d{ "vj g"UUJ Q"y kj "vj g"cuukuvcpeg"qh'vj g"UJ O 0"'Go r nq{ggu'o wuv"gzkv'vj g"gzenwukqp"| qpg"*G\ +"hqt"tguv'qt" o qpkqtkpi "kp"ceqtf cpeg'y kj "vj g"guvcdrkuj gf 'uej gf wg0'

5.4 **PPE Maintenance and Storage**

K/ku'lo r qtvcpv'vj cv'cm'RRG'dg''ngr v'engcp''cpf ''r tqr gtn{ 'o ckpvckpgf 0"Engcpkpi ''ku''r ctvlewnctn{ ''ko r qtvcpv''hqt'' g{g'cpf ''hceg''r tqvgevkqp''y j gtg''f ktv{ ''qt''hqi i gf ''ngpugu''eqwrf ''ko r ckt ''xkukqp0''Go r nq{ggu'o wuv'kpur gev.''engcp.'' cpf 'o ckpvckp''y gkt'RRG''ceeqtf kpi ''vq''y g'o cpwhcewntgtuø'kpurtwevkqpu''dghqtg''cpf ''chgt''gcej ''wug0''Uwr gtxkuqtu'' ctg'tgur qpukdng'hqt''gpuwtkpi ''y cv'wugtu''r tqr gtn{ 'o ckpvckp''y gkt''RRG'kp''i qqf ''eqpf kkqp0' ''

Rgtuqpcn'r tqvgevkxg"gs wkr o gpv'o wuv'pqv'dg"uj ctgf "dgw ggp"go r m { ggu"wpvkn'kv'j cu"dggp"r tqr gtn{"engcpgf" cpf "ucpkkl gf 0""RRG"y km'dg"f kuvtkdwef "hqt"kpf kxkf wcn'wug"y j gpgxgt"r quukdng0""Y j gtg"go r m { ggu"r tqxkf g" y gkt " qy p" r tqvgevkxg" gs wkr o gpv." GEE " y km' dg" tgur qpukdng" vq" cuuwtg" ku" cf gs wce { ." kpenwf kpi " r tqr gt" o ckpvgpcpeg."cpf "ucpkxvqp"qh'uwej "gs wkr o gpv0'

5.5 **PPE Decontamination and Disposal**

K/ku'cpvkekr cvgf 'ý cv'o quv'qh'ý g'RRG'wkrk gf 'qp'ý g'r tqlgev.'dg{qpf 'ý g'dcuke'RRG'grgo gpul*j ctf 'j cv.'uchgv{" i rcuugu.''uvggn/vqgf "dqqu.''rgcy gt''i rqxgu+.''y kn'dg"qh'c''f kur qucdrg"pcwtg"*pktkrg"qt"qy gt ''ej go kecn'i rqxgu.'' gct''r nvi u.''dqqv'eqxgtu.''cpf ''V{xgm®+0'Eqpvco kpcvgf ''RRG''y kn'dg"eqngevgf ''kp''c''f gf kecvgf ''eqpvchgt''cpf '' f kur qugf ''qh'cr r tqr tkcvgn{''cv'c'uvkkcdrg'hcekrk{0'Dcugf ''qp''y g''eqpvco kpcpu''r tgugpv'cpf ''y gkt'eqpegpvtcvkqpu'' kv'ku'cpvkekr cvgf ''y cv'f kur qucdrg''RRG''y kn'dg''f kur qugf ''qh'cu''pqp/j c| ctf qwu'y cuvg0'

Geto whu. 'uchgv{ 'i muugu. 'cpf 'qyj gt'pqp/f kur quedng'hqto u'qh'RRG'y knidg'tqwkpgn{ 'y kr gf 'engep'qh'cp{ 'xkukdng'' eqpveo kpevkqp''chygt ''geej ''wug0''

5.6 **PPE Training and Proper Fitting**

Wugtu'y knidg'\tckpgf 'qp'\y g'\uggevkqp.'\wug'cpf 'ko kxc\kqpu'qh'RRG0'Gcej 'chhge\gf 'go r m{gg'y knif go qpu\tckg' cp'\wpf gtu\cpf kpi ''qh'\y g'\tckpkpi '\ur gekhgf 'kp'\y ku'\uge\kqp.''cpf '\y g''cdkkk{ '\q'\wug''RRG''r tqr gtn{.''dghqtg''dgkpi '' cmqy gf '\q'r gthqto 'y qtnitgs \ktkpi '\y g'\\uge'\qh''RRG0''

Uj qwrf 'GEE'j cxg'tgcuqp'\q'dgrkgxg'\j cv'cp{ 'chhgevgf 'go r m{gg'y j q'j cu'cntgcf {'dggp'\tckpgf 'f qgu'pqv'j cxg'' y g'\wpf gtuvcpf kpi 'cpf 'unkm'tgs wtgf 'qh'\j ku'ugevkqp.'\j g''go r m{gt'y km'tgvtckp''j cv'go r m{gg0'''

I mxgu."j gcf "i gct."eqxgtcmu."cpf "hqqy gct"o wuv"hkv"r tqr gtn{ "vq"cxqkf "vtkr r kpi "cpf "upci i kpi "j c| ctf u."qt" eqpuvtlevkqp"cpf "vgctkpi 0"J gctkpi "r tqvgevkqp"y knidg"ej gengf "d{ 'vj g"wugt"cpf "UUJ Q'hqt"r tqr gt"hkv"cpf "o wuv" dg"kpugtvgf ly qtp"kp"ceeqtf cpeg"y kj "o cpwhcewtgt kpuvtwevkqpu0""

5.7 **PPE Donning and Doffing Procedures**

Vjg"UUJQ'y km'\tckp"qp"cpf"fgoqputcvg"rtqrgt"fqppkpi"cpf"fqhhkpi"rtqegfwtgu"hqt"RRG"gpugodngu'yqtp" kp'G\u'fwtkpi"ukg"qtkgpvcvkqp0'

5.8 **PPE Inspection Procedures**

Gcej 'r gtuqp''y j q'ku'tgs wktgf ''q''y gct'RRG''y kmlkpur gevl'y gkt ''gs wkr o gpv'r tkqt''q. 'f wtkpi .''cpf ''chvgt ''gcej ''wug0'' F ghgevkxg''qt'f co ci gf ''gs wkr o gpv'y kml'pqv'dg''wugf 0''J gcxkn{ ''eqpvco kpcvgf ''RRG''y cv''ecppqv'dg''cf gs wcvgn{ '' engcpgf 'y kmldg'f kuectf gf 0'Uqtgf ''RRG''y kmldg'kpur gevgf ''gxgt { 'o qpy ''q'gpuvtg''y cv'kv'j cu''pqv'dggp'f co ci gf '' cpf 'ku'uwkscdng'hqt ''wug0''Y qtngtu''y j q''y gct ''RRG'kp''y g''hkgrf ''y kml'cng''pqvg''qh''y g''eqpf kkqp''qh'y g''RRG'y qtp'' d{ ''y gkt ''eq/y qtngtu''cpf ''kphqto ''y go ''qh''cp{ ''cr r ctgpv''r tqdngo u.''uwej ''cu''o kuukpi ''gs wkr o gpv.'' vgctu''kp'' r tqvgevkxg''eqny kpi .''gzeguukxg''eqpvco kpcvkqp.''ko r tqr gt ''wug''qh''RRG.''kpcf gs wcvg''RRG.''gve0'

5.9 Evaluation of Effectiveness of PPE Program

Vj g"UUJ Q"y km^{*}kpur gev^{*}vj g"lqduksg"gcej "f c{"cpf "cu"htgs wgpvn{"cu"pgeguuct{"vq"gpuwtg"vj cv'RRG"j cu"dggp" r tqr gtn{'ugrgevgf "cpf 'ku'dgkpi 'wugf 'cu'f guki pgf 0'Vj g'UUJ Q'y km'cmq'kpur gev^{*}RRG'uqtgf 'hqt'go gti gpe{'wug" gxgt{"o qpvj 0"'Uko krct"RRG"kpur gevkqpu"y km'dg"eqpf wevgf "d{"GEEøu"UJ O "f wtkpi "uej gf wrgf "xkuku"qh'vj g" r tqlgev^{*}ukg0'

6.0 MEDICAL SURVEILLANCE

Gorm {ggu'qp''y ku'r tqlgev'y j qug'y qtmkpxqnxgu'r qvgpvkcn'gzr quwtg'vq'uksg'eqpvco kpcpvu'y km'dg'kpenwf gf'kp'' y g'o gf kecn'uwtxgkmcpeg'r tqi tco 0'

Rgtuqppgn'y kn'j cxg"c"ewttgpv'o gf lecn'gzco "engctcpeg"*r j {ukekcpøu"y tkwgp"qr lpkqp+"lp"ceeqtf cpeg"y kj " Qeewr cvkqpcn'Uchgv{"cpf "J gcnj "Cf o lpknvtcvkqp"*QUJ C+"uvcpf ctf u"r tkqt"vq"gpvgtlpi "tgi wrcvgf "y qtn"ctgcu" lp"ceeqtf cpeg"y kj "4; "Eqf g"qh"Hgf gtcn'T gi wrcvkqpu'*EHT+"3; 3208420"GEE "wugu'y g'ugtxlegu'qh"Y qtnEctg." y j qug"Rtlpekr cn'ku'F t0'Rgvgt"I tgcpg{."c"Dqctf/Egtvkhgf "Qeewr cvkqpcn'Rj {ukekcp"vq"tgxkgy "cm'gzco u"cpf" r tqxkf g'y g'engctcpegu."y j kej 'lpenwf g'cp"cuuguuo gpv'qh'go r m{gg"cdktk{"vq"y gct"tgur ktcvqt {"r tqvgevkqp"cpf" RRG"uchgn{0"Eqo r myg"tguvnu"qh"gcej "lpf kxkf wcnøu"o gf lecn'gzco lpcvkqp"tguvnu"ctg"o clpvckpgf "d{" vj g" o gf lecni'tqxkf gt 'cpf 'y knipqv'q'dg'ngr v'qp/ukg0'Vj g'UUJ Q'y knigpuwtg'cr r tqr tkcvg'uvdeqpvtcevqtøu'o gf lecn' uetggpkpi u'ctg"eqo r myg"."f qewo gpvgf."cpf "vj g"r j {ukekcpøu'y tkvgp"qr kpkqpu'ctg"cxckrcdm"cv'vj g'y qtmiukg0'

7.0 EXPOSURE MONITORING AND AIR SAMPLING

Dcugf "qp" j kuqtkech' uco r nkpi "cpcn{ uku" f cvc" *nqy /ngxgn' eqpegpvt cvkqpu" qh' xqncvkrg" qti cpke" eqo r qwpf u"]XQEu_+:"gngxcvgf "ngxgnu"qh'XQEu"kp' j g"dtgcvj kpi "| qpg"ctg"pqv'cpvkekr cvgf."ckt"o qpkqtkpi "ku"pqv'tgs wktgf" f wt kpi "kpvt wukxg"cevkxkkgu="j qy gxgt."ckt"o qpkqtkpi "y km'dg"r gthqto gf "kp" y g"i gpgtcn'y qtm'ctgc"cpf "y g" dtgcvj kpi "| qpg"r tkqt" vq" uvctvkpi "kpvt wukxg" cevkxkkgu" vq" guvcdrkuj "dcemi tqwpf "eqpegpvt cvkqpu0" "Rgtuqppgn" r gthqto kpi "vguvkpi "cpf" o qpkqtkpi "y km'dg" vtckpgf "kp" yguvkpi "cpf" o qpkqtkpi "r tqegf wtgu" cpf "j c| ctf u0" O qpkqtkpi "gs wkr o gpv'y km'dg" wugf. "kpur gevgf."o ckpvckpgf."cpf "r tqr gtn{ "ecnkdtcvgf" kp"ceeqtf cpeg"y kj 'y g" o cpwhcewtguø/kpuvt wevkqpu"cpf "uvcpf ctf "kpf wurkch"j {i kpgg"r tcevkeg0'

Table A16-4"dgny "kuwi'y g"o qpkqtkpi "tgs wktgo gpwi'cpf "tgur qpug"cevkqpu'hqt "y ku'r tqlgev0"Cml'f ktgev'cpf " kpvgi tcvgf "ckt"o qpkqtkpi "gs wkr o gpv"y kni'dg"r tqr gtn{"ecrkdtcvgf "dghqtg"cpf "chvgt"gcej "r gtkqf "qh"wug"kp" ceeqtf cpeg"y kj "y g"o cpwhcewstguø'kpustwevkqpu"cpf "uvcpf ctf "kpf wustkcn'j {i kgpg"r tcevkeg0""

Table A16-4. Exposure Monitoring

Real Time (air, noise, heat, radiation, light)			
Instrument / Contaminant	Frequency	Action Levels	Actions/Upgrade and Rationale
O wnk/TCG'Rnvu''qt'' gs wkxcngpv''I'XQEu''	Fwtkpi"cp{"kpvtwukxg" cevkxkkkgu"	Yqtm"Ctgc<"Uwuwckpgf" tgcfkpi"qh'7"rro"kp" yjg"dtgcyjkpi" qpg0""	Uqr "cevkxkkgu."uwur gpf "y qtni" cevkxkkgu"hqt "37"vq "52"o kpw.gu="kh" tgcf kpi u"ctg"uwuvckpgf "y gp"eqpvcev" UFO *c+0
QUJ C IP IQUJ " J GCV"Iføf gz "Crr" - "Dqf { "Vgo r "I" J gctv"Tcvg" O qpkqtkpi "	F ckn{ "f wtkpi 'y qtmlkp" j qv'eqpf kkqpu'**@: 7ÅH' NgxgnF ."@92ÅH'y j gp" ko r gtxkqwu'eqxgtcmu" y qtp+"	Xctkcdrg''f gr gpf kpi "qp" yj g'kpf kxkf wcn'cpf " y qtm'cevkxkv{ "	Hqmqy "Rtgecwkqpu'tgeqo o gpf gf "d{" y g"J GC V"Kpf gz "cr r 0"" Ko r ngo gpv'r j {ukqmi kecn'o qpkqtkpi " y j gp"J gcv'Kpf gz "kpf kecvgu'O qf gtcvg" Tkmlhqt "go r m{ggu"kp'r tqygevkxg" emyi kpi 'y qtmbi 'kp'uwpnki j v=cpf 'hqt" qý gt 'y qtngtu'y j gp"J gcv'Kpf gz" kpf kecvgu'J ki j "Tkm=cpf 'hqt"cp{" y qtngtu'kpf kecvkpi 'uki pu'cpf " u{o r vqo u'qh'j gcv'uvtgut0'

Notes:

*c+ Eqpvcev'y kj "vj g'UIO "o wuv'dg"o cf g'r tkqt 'vq"eqpvkpwcpeg"qh'y qtm0"Vj g'UIO "o c{ 'vj gp'kpkxkcvg'r gtko gvgt lkpvgi tcvgf "ckt" uco r nkpi "cnqpi "y kj "cf f kkqpcn'gpi kpggtkpi "eqpvtqnu0"

ÅH'ó'f gi tggu'Hcj tgpj gkv'

@ó'i tgcvgt'y cp"

RKF "6' "Rj qvq kqpk cvkqp"f gvgevqt"

rro "ó"rctwi"rgt"okmkqp"

PKQUJ '6'Pcvkqpcn'Kpuvkwwg'hqt'Qeewrcvkqpcn'Uchgv{ "cpf 'Jgcyj"

QUJ C''
ö' Qeewr cvkqpcn' Uchgv
{ "cpf "J \mbox{gcnj} "Cfo $\mbox{kpkuvtcvkqp"}$

XQE''ó''Xqn:vkng''qti cpke''eqo r qwpf u''

Tgeqtf u" y km"kpenvf g" y g"f cvg." vko g." uvduvcpegu"qt" j c| ctf u" o qpkqtgf ."r gtuqp" eqpf vevkpi "o qpkqtkpi ." ecrkdtcvkqp"f cvg"cpf "o gy qf ."qr gtcvkqpu"cpf "necvkqp"qh"o qpkqtkpi ."cpf "tguvnu0" Tgeqtf u"ctg"cxckrcdng"vq" go r m{ggu."y gkt"tgr tgugpvcvkxgu."cpf "vq"y g'Cto {0'

8.0 HEAT STRESS/COLD STRESS

Ugg'Cwcej o gpwl'34C"cpf '34D'lp'y g'CRR0'

9.0 STANDARD OPERATING PROCEDURES

Vjg'hqmqy kpi 'r tqegf wtgu'y km'dg'gor mq{gf ''qp''y ku'r tqlgev'y jgtg''crrtqrtkcwg0'

9.1 Site Rules/Prohibitions

Vjg'hqmqykpi 'ukvg'twngu''ctg''crrnkecdng''vq''cm'GEE''rtqlgevu<"

- Gcv.'ftkpm'wug'i wo ''qt''ydceeq'rtqfwevu.''qt''crrn{ "equo gvkeu'kp'fguki pcvgf''ctgcu''qpn{0'
- F q 'pqv'uo qmg'y kj kp'ukg'ctgcu'qt 'pgct'hrco o cdng''qt 'eqo dwuxkdng'o cvgtkcn="ctgcu'uj cm'dg'o ctngf " y j gtg'uo qmkpi 'ku'r gto kwgf 0'
- Wug''y g'dwff { 'u{uvgo 'y j gp'y qtmkpi 'kp'G\ 0Mpqy 'y j q"{qwt'dwff { 'ku.'eqo o wpkecvg'tgi wnctn{ 'y ky " gcej 'qy gt.'cpf 'dg'cngtv'vq'uki pu'qh'f kuvtguu'kp''{ qwt 'dwff { 0'
- Y cuj 'j cpf u.'hceg."cpf ''cp{ ''gzr qugf ''unhp''f wthpi ''f geqpvco kpcvkqp."dghqtg''gcvkpi .''f thpnhpi ''qt''wuhpi '' vqdceeq''r tqf wevu.''cpf ''cv'y g''gpf ''qh''gcej ''uj kh0'
- Rct vkekr cvg'kp'F ckn{ 'Uchgv{ 'Vckri cvg'O ggvkpi u0'
- Eqpvkpwcm{ "qdugtxg"y qtniinqecvkqp"cpf "dg"cngtv'vq"ej cpi gu'vj cv'o c{ "chhgev'uchgv{0"

- Cxqkf "f ktgev"eqpvcev"y kj "eqpvco kpcvkqp"d{ "pqv"r wtr qughwm{ "y cmkpi ."vqwej kpi ."qt "eqpvcevkpi "cp{" qdxkqwun{ "eqpvco kpcvgf "uwthcegu0""
- Ko o gf kevgn{ 'tgr qt v'cp{ 'o kuj cr u. 'kpenwf kpi 'pgct 'o kuugu. 'qt 'wpwuwcn'ukwecvkqpu'vq''UUJ Q0'
- Wug'RRG'r tqxkf gf 'cpf 'cu'kpuxt wevgf 'd{ 'vj g'UUJ Q0'
- Cxqkf 'j cpf/vq/o qwj ''qt 'j cpf/vq/hceg''cevkxkkgu0'
- Vguvlpi "cpf "o qpkqtkpi 'kpuvt wo gpvu. 'uchgv{ "gs wkr o gpv.'tki i kpi .'j cpf "cpf "r qy gt "vqqnu.'xgj kengu"cpf "
 o qdkrg"eqpuvt we vkqp "gs wkr o gpv'uj cm'dg' kpur ge vgf "r tkqt "vq"wug0'
- O kpko kł g'y g'pwo dgt "qh'r gtuqppgn'kp"c'y qtnictgc'vq't gf weg'r qvgpvkcnigzr quwtgu0'
- Y qtmly ký kp'r j {ukecn'cpf 'o gpvcn'ho ku0'
- Vcng"cf gs wcvg"t guv'dt gcmu"cpf "t gr nceg"dqf { "hnvkf u"*y cvgt "cpf "grgevtqn{ vg+"eqp vkp wqwun{ 0'
- Cv'cm'vko gu'hqmqy 'vj g'kpuvt wevkqpu'qh'vj g''UUI Q''qt 'f guki pgg0'
- F q "pqv'f gxkcvg'htqo "ý g'CRR"qt "ý g"kpuvt vevkqp"qh'ý g"UUJ Q0'
- Cxqkf 'twuj kpi 'cpf lqt '\cmkpi 'uj qt v'eww0'
- J cpf ng" cpf "fkur qug" cm' y cuvg" i gpgtcvgf "htqo "fgeqpvco kpcvkqp" r tqegf wtgu" r gt "eqpvtcev" tgs vktgo gpvu0"
- Eqpf wev'x kuwcn'ej gemu''qp'o cej kpgt { "cpf "gs wkr o gpv'r t kqt '\q'wug. "cpf "eqo r ngvg''yj g'f ckn{ 'kpur gevkqp" hqto 0'
- Vcng'r tgecwkqpu'\q'r tgxgpv'ur knci g"cpf 'ur ncuj kpi ="eqpvckp'ur kngf 'hs wkf 'kh'r quukdng0'
- Crgtv"{qvt"ugpugu"vq"r qvgpvkcm{"f cpi gtqvu"ukvvcvkqpu"*g0 0"uvtqpi ."kttkscvkpi ."qt"pcvugcvkpi "qf qtu+0"
- Hco krkctk g"{qwtugrh'y kj 'y g'r j {ukecn'ej ctcevgtkurkeu'qh'y g'ukgu0'
- F kur qug"qh"cm'y cuvgu'i gpgtcvgf "f wt kpi "cevkx kkgu"cu'f ktgevgf "d{"yj g"Uwr gtxkuqt."UU Q"qt "f guki pgg0"

Eqphqto cpeg'y kj ''y gug'ukg'twgu'ku'o cpf cvqt { 'hqt "eqpvkpwgf 'r tqlgev'r ctvkekr cvkqp0'

9.2 Work Permit Requirements

Excavation/Digging Permit <"Y j gtg"tgs vktgf."GEE"y kn"qdvckp"c"f ki "r gto ks"htqo "y g"cwj qtkx{"j cxkpi" lwtkuf kevkqp0"Vj g'f ki "r gto ks'y kn'dg"wr f cvgf "r tkqt"vq"gzr ktcvkqp0"Y qtm'y kn'uvc{"y kj kp'y g"r ctco gygtu"qp" y g"r gto ks0"Ku'gzecxcvkqp'ku'gzvgpf gf 'kp'vgto u'qh'ctgc"qt'vko g."c"pgy ltgxkugf "r gto ks'y kn'dg"qdvckpgf 0'

Control of Hazardous Energy Permits "Y j gtg"gs wkr o gpv'qt"u{uvgo u'o wuv'dg"f g/gpgti k gf "\q"uchgn{ 'y qtm' qp"y go ."cpf "c"ur gekhe "y tkwgp"r tqegf wtg"f qgu"pqv"gz kuv'hqt "y g"gs wkr o gpv."c"NqenqwvIVci qw'r gto kv'y km' dg"eqo r ngvgf "kp"ceeqtf cpeg"y kj "GEE "UQR'GUS '9050'

9.3 Material Handling Procedures

 $\label{eq:constraint} Eqpvco~kpcvgf~"i~tqwpf~y~cvgt"cpf~"uqkd"htqo~"uco~r~kpi~"cevkxkkgu"y~km"dg"eqpvckpgf."rcdgrgf~"cpf~"f~kur~qugf~"qh"~r~tqr~gtn(~"kp"ceeqtf~cpeg"y~kj~"cr~r~tqr~tkcvg"ej~ctcevgtkt~cvkqp0'$

9.4 Drum/Container/Tank Handling Procedures

Kpxguvki cvkqp"F gtl&gf "Y cuvg"*KF Y +"i gpgtcvgf "f wtlpi "vj g"hkgrf "cevkxkkkgu"y km'eqpukuv"qh"uqkn "ugf ko gpv." uwthceg'y cvgt."cpf "i tqwpf y cvgt0"Hkgrf "uco r nkpi "vgco "y km'gpuwtg"vj cv'vj g"eqpvckpgtu"ctg"rcdgrgf."j cpf rgf." uvqtgf."cpf "ugewtgf "kp"ceeqtf cpeg"y kj "cr r nkecdrg"tgi wrcvkqpu0"KF Y "y km'dg"ej ctcevgtk gf "cpf "f kur qugf "qh" cv'vj g"r tqr gt "hcektkv{0"

- "
- "

10.0 CONTAMINATION CONTROL, SANITATION AND WASTE MANAGEMENT

Vj g'hqmqy kpi 'ugevkqpu'f guetkdg''y g'eqpvco kpcvkqp''eqpvtqn'f wtkpi ''y g'hgnf ''cevkxkkgu0''

10.1 Work Zones

 $Ceeguu'' vq'' y g'' ukgu'' ctg'' no kgf'' vq'' cwj qtk gf'' r tqlgev'' r gtuqppgn'' cr r tqxgf'' uwdeqpvtcevqtu'' cpf'' y gkt'' go r nq {ggu."cpf ''nqecnUvcvg1Hgf gtcrl'ci gpe {''uxchh''gueqtvgf'' d {''ukg''r gtuqppgn''''$

Hqt''y g'r wtr qugu''qh'Y qtm\ qpg'F grkpgcvkqp.''y g''uksg'r gtko gvgtu'y km'gpeqor cuu'cp''ctgc''urki j vn{ 'hcti gt''y cp'' y g'r qtvkqp''qh'y g''uksg'kf gpvkhlsgf 'hqt''cevkxkkgu0''Vj g'r gtko gvgt''qh'y g''uksgu'y km'dg'r tqr gtn{ 'f grkpgcvgf '*ecwklqp'' vcr g''qt''j ki j ''xkuklkkk{ 'hgpekpi +0''

10.1.1 Support Zone

 $\begin{array}{l} Vj g"Uwrrqtv' \mid qpg"*U \mid +"ku"nqecvgf "qwukfg"vj g"Eqpvco kpcvkqp"Tgf wevkqp" \mid qpg"*ET \mid +"cpf "y kj kp"vj g"ukg" rgtko gvgt0""Vj g"uwrrqtv' \mid qpg"ku"cp"wpeqpvco kpcvgf "*engcp+"ctgc" y j gtg"rgtuqppgn'y kn"pqv'dg"gzrqugf "vq" j c | ctfqwu"o cvgtkcnu"qt "eqpvco kpcvu0" \\ \end{array}$

10.1.2 Contamination Reduction Zone

Vj g"ET\ 'ku'hqecvgf 'kp"dgw ggp"cpf 'ugtxgu"cu"c"dwhigt"dgw ggp"y g"U\ "cpf 'y g'G\ 0"Vj g'ET\ 'ku'kpvgpf gf 'vq" r tgxgpv'y g"ur tgcf "qh"eqpvco kpcvkqp"cpf 'ku'wkrkt gf 'hqt"dqy 'r gtuqppgn'cpf "gs vkr o gpv'f geqpvco kpcvkqp0'

10.1.3 Exclusion Zone

Vj g''G\ 'ku''y g'y qtm'ctgc''y j gtg."dcugf "qp"r ncppgf "cevkxkkgu."y gtg"ku'r qvgpvkcn'hqt'y qtngt"gzr quvtg''q''ukg" eqpvco kpcpu0"'Vj g''G\ 'ku''dqwpf gf "d{"y g''ET\ "cpf "ceeguugf "qpn{"y tqwi j "y g''Eqpvco kpcvkqp''Tgf wevkqp" Eqttlf qt'*ETE+0"Vj g''G\ 'r gtko gvgt''y kn'dg''f grkpgcvgf ''y ky "ecwkqp''cr g''qt'j ki j "xkukdkkk{ 'hppekpi 0'

10.2 Access Controls

Vj g"UUJ Q"cpf "Ukg"Uvr gt pvgpf gpv'y kn"guvcdrkuj "vj g"r j {ukecn'dqwpf ct kgu"qh"gcej "| qpg"cpf "kpuvt wev'cm' y qt ngtu"cpf "xkukqtu"qp"vj g"ko ku"qh"vj g"tguvt kevgf "ct gcu0"P q"qpg"y kn"dg"cmqy gf "vq"gpvgt "vj g"tguvt kevgf "ct gc" y kj qwv"vj g"tgs wkt gf "RRG"hqt "vj cv"ct gc0"Vj g"Ukg"Uvr gt kpvgpf gpv'y kn"gpuvt g"eqo r ncpeg"y kj "cm"tguvt kevgf " ct gc"gpvt { "cpf "gz kv"r tqegf wtgu0""Vj g"Ukg"Uvr gt kpvgpf gpv'y kn"cnq"f guki pcvg"c"f geqpvco kpcvkqp"r qkpv"hqt" r gt uqppgn"vq"gz kv"vj g"eqpvco kpcvgf "ct gc"cpf "vq"gpvgt "vj g"engcp"ct gc."y j kej "ku"y j gt g"r gt uqppgn"o c { "gcv"cpf " tguv0'

 $Cm'ukg'rgtuqppgn'cpf lqt'xkukqtu'gpvgtkpi "cpf"gzkkpi 'vj g'G \ "qt'vj g'ET \ 'y km'dg'tgs wktgf 'vq'mi /lp lmi /qw' htqo 'vj g'ukg''qp'c'f ckn{ "dcuku0" Vj g'mi 'y km'dg'o ckpvckpgf "cv' y g'gpvtcpeg0'$

10.3 Hazard Briefing

P q''r gtuqp 'y kn'dg''cmqy gf ''qp 'y g''ukg''f wtkpi ''ukg''qr gtcvkqpu''y kj qw'hktuv'r ctvlekr cvkpi ''kp''c'j c| ctf ''dtkghkpi 0'' Kp''i gpgtcn''y g''dtkghkpi ''y kn'eqpukuv'qh''c'tgxkgy ''qh'y g''UUI R''cpf ''y g''vcki cvg''uchgv{ ''o ggvkpi 0''Cm'r gtuqpu'' qp''y g''ukg.''kpenvf kpi ''xkukqtu.''o wuv'uki p''y g''UUI R''Cenpqy ngf i o gpv''Uj ggv''cpf ''Vckri cvg''Uchgv{ ''O ggvkpi '' Hqto 0''Vckri cvg''uchgv{ ''o ggvkpi u''y kn''dg''j gnf ''f ckn{ ''dghqtg''ukg''cevkxkkgu''dgi kp0'

10.4 Visitor Access

Vj g'hqmqy kpi ''uge kqp''f guetkdgu''j qy ''yq''j cpf ng''xkukqtu''yq''y g''ukg0'

10.4.1 Approach

Ki'wpcppqwpegf "xkukqtu"cttkxg"cv'c"ukg. "GEE"go r nq { ggu"uj qwrf"crrtqcej "vj go ."kpvtqf weg"vj go ugrxgu."cpf" tgur gevhwn{"cum'vj g"xkukqtu"vq"kf gpvkh{"vj go ugrxgu"cpf "uvcvg"vj gkt"dwukpguu0"'Cp"ghqtv'uj qwrf"dg"o cf g"vq" f kukpi wkuj "dgw ggp"GEE"y qtngtu"cpf "uwdeqpvtcevqtu"cpf "r gqr mg"hqt"y j qo "GEE"ku"pqv'tgur qpukdrg"hqt" gphqtekpi "j gcnj "cpf "uchgv{ "twngu"qp"lqd"ukgu."uwej "cu"enkgpv'tgr tgugpvcvkxgu."ci gpe{"tgr tgugpvcvkxgu."cpf" qvj gt"xkukqtu"cwj qtk gf "d{"vj g"enkgpv0"'Hqt"gzco r ng."j ctf j cwl"cpf "uchgv{ "i ncuugu"o c{"dg"c"tgs wktgo gpv"kp" y g"U\ "qt"cp{y j gtg"qp"vj g"uksg"hqt"y qtngtu."dwl"vq"gphqteg"vj ku"tgs wktgo gpv'qp"cmi'xkukqtu"o c{"pqv'dg" pgeguuct {0"C"tgur gevhwn'gzr ncpcvkqp"qh'vj i cv'ctgcu'vq"cxqkf"o c{"dg"cm'vj cv'ku"pgeguuct{0'

10.4.2 Unauthorized Visitors

 $\label{eq:Kixkukqtu'ctg'wpcwjqtk} gf.'GEE'go rm \{ggu'ujqwrf'gzrmckp'vq'vjg'xkukqtu'vjcv'gpvt \{'vq'vjg'ukg'ku'tguvtkevgf'' dgecwug'vjg'ukg'eqpvckpu'jc|ctfu0'Vjg'ukg'dqwpfctkgu'cpf'cp {'qvjgt'tguppcpv'tguvtkevkqpu'ujqwrf'dg'rqkpvgf'' qwv'vq''vjg'xkukqtu0'$

10.4.3 Visitors Authorized to View the Site from the SZ

- Tgxkgy ''y g''ckri cvg''uchgv{ ''o ggvkpi ''hqto ''y ky ''y go ''cpf ''cunt'y go ''vq''uki p''k="
- Rtqxkfg"yjg"xkukqtu"y kj "jctfjcvu."uchgv{"incuugu."cpf"uchgv{"xguvu."kh"crrnkecdrg="cpf."
- Rtqj kdkv'gpvt { '\q'\j g'G $\ 0$ '

10.4.4 Visitors Authorized to Enter the EZ During Ongoing Work Activities

Ka'y g'xkukqtu'ctg'cwj qtk gf "d{ ''y g'enkgpv' q''gpvgt ''y g'G\. 'GEE ''go r m{ggu''uj qwrf ''f q''y g'hqmqy kpi <

- Xgtkh{" y cv' y g{" j cxg" ewttgpv' J c| ctf qwu" Y cuvg" Qr gtcvkqpu" cpf " Go gti gpe{" Tgur qpug"
 *J C\ Y QRGT+'vtckpkpi ="
- Xgtkh{"y cv'y g{"j cf "c"ewtgpv'r j {ukecn'gzco "cwj qtk kpi 'y qtm'qp"j c| ctf qwu'y cuvg"ukgu="
- Tgxkgy " yj g" UUJ R" cpf " yj g" vckri cvg" uchgv{" o ggvkpi " hqto " cpf " j cxg" yj g" xkukvqtu" uki p" yj g" cempqy ngf i go gpv/hqto u'qh'cmif qewo gpvu="
- Rtqxkf g''y g''RRG''tgs wktgf 'hqt ''y g''uksg="cpf."
- Gueqtv'y g'xkukxqt'y j krg'kp''y g'G 0'

10.4.5 Refusal

Ki'xkukqtu'tghwug'\q'eqorn{'y kj 'cp{'qpg'qh'y g'tgs wktgo gpvu'hknyf 'kp'y g'r tgxkqwu'uge\kqpu.'cpf 'y g'client authorizes y g'xkukqt'\q'gpvgt'y g'G\ 'cp{y c{.'GEE'y kn'shut down cp{'r qygp\cm{'j c| ctf qwu'gs wkr o gpv' cpf 'vcng''cmi'r tcevkecdng''uvgr u''vq''gnko kpcvg''qy gt''j c| ctf u''cpf ''gzr quwtgu0'''Vj g''gxgpv''y kni'dg''y qtqwi j n{'' f qewo gpvgf 0'

Xkukqtu'y j q"tghwug"vq"eqo r n{ "cpf "ctg"pqv"cwj qtk gf "d{ "vj g"enlgpv'uj qwrf "dg"cungf "vq"ngcxg0" Eqpvcev'vj g" nqecn'r qnleg'kh'r tqdngo u'qeewt 'y kj "xkukqtu'y j q'tghwug"vq"ngcxg0'

10.5 Emergency Entry and Exit

Rgqr ng''y j q''y km'gpygt''y g''ukg''qp''cp''go gti gpe{''dcuku'y km'dg''dtlghgf ''d{ ''y g''Ukg''Uwr gtkpygpf gpv'tgi ctf kpi '' y g'j c| ctf u0''Cm'j c| ctf qwu''cevkxklgu''y km'egcug''kp''y g''gxgpv''qh''cp''go gti gpe{0''Cwcej o gpv'3.'õGo gti gpe{'' Cevkqp''Rncp.ö''r tqxkf gu''o qtg''kphqto cvkqp'hqt''go gti gpe{''r tqegf wtgu0'

10.6 Personal Hygiene and Decontamination Procedures

The importance of good hygiene practices will be emphasized with all site workers. Upon exiting the EZ and CRZ, workers and/or site visitors will enter the CRZ and carefully remove all designated PPE, wash their hands, face, and forearms prior to eating, drinking or smoking. Smoking, eating and drinking will only be allowed in clean work areas (i.e. SZ).

10.7 Equipment Decontamination Procedures

Heavy equipment will be decontaminated using dry methods, a pressure washer, and/or equivalent. Hand tools and smaller equipment will be decontaminated using a non-phosphate detergent scrub, followed by fresh water and distilled or deionized water rinses. Prior to removal from site, decontaminated equipment and material will be inspected and accepted by the SSHO and the Site Superintendent.

11.0 EMERGENCY PLANNING

See the Emergency Action Plan, Attachment 1 to the APP.

12.0 PRE-ENTRY BRIEFING

As discussed in Section 6 of the APP and above, all personnel entering the site will be provided with siteorientation training, and must be present at the daily tailgate meeting.

13.0 EFFECTIVENESS OF PLAN

The effectiveness of this SSHP will be determined by the inspections listed in Section 7 of the APP, as well as from incident investigations and input by site personnel including reports of hazards, safety observations, and suggestions for improvement

Response to ADEM comments on the Draft Corrective Measures Implementation Plan, Revision 0 RSA-306, Steam Heating Plant, Building 7291 Operable Unit 24 Submitted October 17, 2022

ADEM, Ashley Mastin

1. General Comment, Sampling Frequency and Frequency Reduction

According to the CMI Work Plan, the monitored natural attenuation and long-term monitoring schedule suggests following baseline sampling, analytical results will be collected from the nine monitoring wells quarterly (year 1), semiannually (years 2 and 3), and annually (years 4-10). Years 11-30 will be monitored annually with a reduced monitoring network of 6 wells. The proposed light non-aqueous phase liquid (LNAPL) recovery schedule would occur quarterly (year 1), semiannually (years 2 and 3), and annually (years 4 - 10). The Department agrees that LNAPL recovery and monitoring should occur on a quarterly basis upon initial implementation of corrective measures. However, reducing the frequency of LNAPL recovery and monitoring should be resultsbased as opposed to following a set schedule. Data trends should demonstrate the need for less frequent product recovery and/or monitoring. This also applies to changes to the monitoring well network. An individual monitoring well should only be removed from the network when contaminants of concern have not exceeded groundwater protection standards for three consecutive years. The Army may propose to alter the sampling schedule and monitoring well network at any time; however, changes to the sampling frequency and/or monitoring parameters would require Department approval prior to implementation. Please evaluate the proposed schedule changes

Response:

Concur, references to sampling frequency and LNAPL recovery frequency have been revised to quarterly throughout the document. The ADEM permit modification process has been cited and text has been revised to state that sampling frequency will not be reduced without a permit modification and evidence to do so (e.g., cleanup goal attainment, Mann-Kendall, trend charts, etc.).

The following sections have been updated:

- CMIP
 - Executive Summary, pg. ES-2
 - o 3.3.2 Selection of Corrective Measures for RSA-306, pgs. 3-5, 3-6
 - 4.2.5 Monitoring to Evaluate Monitored Natural Attenuation, pgs. 4-4, 4-5
 - 5.1 Monitored Natural Attenuation Contingences, pg. 5-1
- Appendix F Redstone Arsenal RCRA Permit Modification Request • Section 11.0 Selected Corrective Measure, pgs. F-13, F-14
- Appendix G Corrective Measures Implementation Schedule

- Line 1121, CLIN 0021AB through end of schedule
- CLINs 0021AB, 0021AC, 0021AD, 0021AE have been updated to include four quarterly sampling events per year
- Appendix I Groundwater Monitoring Plan
 - 3.5 Light Non-Aqueous Phase Liquid, pg. 3-3
 - 3.6 Constituent List and Sampling Frequency, pg. 3-4
 - 4.1 Data Evaluation and Interpretation, pg. 4-1
 - Table I-4 Worksheet #18 Sample Locations, Analytical, and SOPP Requirements, pgs. I-5 to I-11

Prepared by ECC, 21 April 2023