

Cov Khes mis Radionuclides (Radium) hauv cov dej haus

Cov khoom hu ua Radioactive, kuj muaj lub npe hu ua radionuclides tshwm sim yam thas mab xaj thiab yeej muaj ntau yam es yog tib neeg tsim tawm. Radionuclides tshwm sim yam thas mab xaj yeej nkag tau rau hauv cov dej hauv av thiab saum npoo dej hauv lub xeev Minnesota. Thaum cov Radionuclides tawg ua tej daim me me (lwj), lawv tsim ib co fai fab radiation. Radionuclides yog ib yam nyob nrog thas mab xaj ib puag ncig ntawm peb, thiab yeej muaj cov fai fab radiation tsawg heev nyob saum tej huab cua, hauv dej, thiab nyob ntawm cov av ib puag ncig ntawm peb. Yog tias kov raug cov fai fab radiation nov ntau heev yeej ua tau rau koj muaj mob.

Kev phom sij rau kev noj qab haus huv

Nyob ze thiab raug cov fai fab radiation yeej ua tau rau muaj mob ntau hom rau lub cev nyob ntawm seb hom fai fab radioactivity ntawd los qhov twg los, koj ho raug cov fai fab radiation ntau npaum cas (tag nrho yog npaum cas), thiab koj twb raug cov fai fab radiation no ntev npaum cas los lawm. Haus cov dej es muaj cov radionuclide ze rau qhov tsoom fww tus qauv tau teev tseg rau cov dej haus yuav ua rau koj tau me me ntawm cov fai fab radiation nov txhua txhua hnuv. Qhov es koj raug nov, thaum nrog rau qhov es raug ntxiv rau lwm cov fai fab radiation, yuav ua rau muaj kev phom sij ntxiv rau koj lub neej es nyab tsam ho muaj kab mob khees xaws los yog mob raum.

Yuav tiv thaiv koj tus kheej thiab koj tsev neeg lis cas

Lub chaw U.S. Environmental Protection Agency's (EPA) *Radionuclides Rule* (saib *ntu Muaj Cov Ntaub Ntawv Qhia*) muaj plaub tug qauv ntawm tsoom fww rau qhov muaj radionuclides nyob hauv cov dej haus. Tsab cai ntawm EPA Radionuclides Rule tshab txhais cov dej haus puaj phais es muaj ntau npaum li los yog tsawg dua

- 15 picocuries ntawm cov alpha particles tauj ib liter dej (pCi/L)
- 5 pCi/L ntawm cov combined radium 226/228
- 20 pCi/L ntawm cov hmoov uranium
- 4 millirem ntawm cov beta/photon emitters tauj ib xyoos (mrem/yr)

Yog tias koj muaj ib lub qhov dej khawb rau tus kheej

Cov xwm txheej uas ua rau muaj radionuclides hauv Minnesota cov dej zoo tsis tau nkag siab tag nrho

ntawm lub sijhawm no. Yog tias koj txhawj xeeb txog radionuclides hauv koj lub qhov dej ntiag tug, koj tuaj yeem them nyiaj kom kuaj nws. Minnesota Lub Tsev Haujlwm Saib Xyuas Kev Noj Qab Haus Huv (MDH) pom zoo kom siv lub chaw kuaj mob uas tau lees paub los kuaj koj cov dej hauv qhov dej (saib *Kev Tshawb Fawb Kev Tshawb Fawb*). Hu rau lub chaw kuaj mob kom tau txais cov ntim cov qauv thiab cov lus qhia, lossis nug koj lub nroog ib puag ncig lossis kev pabcuam kev noj qab haus huv rau pej xeem yog tias lawv muab cov kev pabcuam kuaj dej zoo.

Koj yeej siv tau cov qauv ntawm tsab cai Radionuclides Rule rau koj lub qhov dej khawb. Cov cuab yeej siv tua kab mob hauv cov dej hauv tsev, xws li ion exchange, water softeners, thiab reverse osmosis systems, yeej txo tau qhov es muaj cov radionuclides no kom qis. (saib *Tua Kab Mob hauv cov dej hauv tsev*).

Yog tias koj siv cov dej es tsoom fww tso tuaj rau koj

Cov dej es tsoom fww tso tuaj rau koj (qhov chaw tso dej rau koj ntawm thaj chaw koj nyob) kuaj seb puas muaj redionuclides thiab kom paub tseeb tias qhov es muaj nov yuav tsum nyob rau tus qauv ntawm EPA. Koj yeej nrhiav pom tias kuaj pom tias muaj radionuclides siab npaum cas rau cov dej tsoom fww tso tuaj ntawm thaj chaw koj nyob es yog nyeem daim ntawv qhia tawm txog cov dej es huv npaum cas (ib lub npe ntawm daim ntawv qhia tawm hu ua Consumer Confidence Report [CCR]). Hu rau koj lub chaw tso dej tuaj rau koj siv kom tau daim qauv ntawm daim ntawv qhia tawm hu ua CCR los yog nrhiav hauv online (saib *daim ntawv Consumer Confidence Report*).

Txo Lwm qhov kom tsis txhob raug

Radionuclides

Kuaj koj lub tsev seb puas muaj pa nkev radon (ib hom radionuclide es yog pa nkev) thiab raus tes ua kom txo tau cov pa nkev radon qhov qis yog ib qho tseem ceeb heev es koj ua tau kom txo tau qhov es raug tag nrho rau cov fai fab radiation. Saib *Pa Nkev Radon hauv Minnesota cov tsev kom paub ntau dua.*

Qhia txog qhov keeb kwm

Cov fai fab radiation es tsim tawm los ntawm thas mab xaj los yog los ntawm tib neeg yeej nyob ib puag ncig ntawm koj txhua txhua hnuv. Ntau npaum li ib nrab ntawm cov fai fab radiation es koj raug ntawm ib xyos twg yog los ntawm thas mab xaj, xws li lub hnuv, cov av, thiab cov pob zeb. Ib nrab yog los ntawm tej yam es tib neeg tsim tawm xws li, kuaj mob (xoo fai fab) thiab kho mob thiab los ntawm cov khoom tsim vaj tse thiab kev tsheb. Ib qho chaw es tsim tau cov fai fab radiation nov ua tau rau koj raug cov fai fab radiation txawv. Piv txwv, siv fai fab radiation kho mob mas yog ib qho es raug cov fai fab radiation nov ntau heev piv rau qhov es raug cov fab radiation nov los ntawm cov dej haus es muaj cov radionuclides. Koj lub neej es koj nyiam ua kuj muaj kev cuam tshuam raug cov fai fab radiation nov es nyob ntawm seb koj raug ntau npaum cas. Ya saum dav hlau, nyob saum tej qhov chaw siab siab, nyob ze rau thaj chaw hlawv thee, thiab tej txoj hauj lwm (khawb kub hauv qhov av) ua rau koj raug cov fai fab radiation nov ntau dua. Kawm kom paub txog fai fab radiation ntawm qhov raug ntau npaum cas hauv peb lub neej hu ua *Doses in Our Daily Lives.*

Cov khes mis Radionuclides hauv Minnesota cov dej

Radionuclides, xws li pa nkev radium, polonium, radon, thiab uranium, tshwm sim yam thas mab xaj hauv lub xeev Minnesota thiab yeej nrhiav tau tsawg tsawg nyob rau hauv Minnesota cov dej hauv av. Feem ntau, saum npoo dej tsis muaj radionuclides kom siab tshaj tus qauv ntawm EPA.

Ntawm xyoo 2014, cuaj (1.2 percent) ntawm Minnesota cov dej tso rau ib zej tsoom siv (cov dej es tso rau cov tsev hauv zos thiab nroog siv) muaj cov radium nyob rau hauv cov dej es twb xuas tshuaj

tua lawm siab tshaj li tus qauv ntawm EPA. MDH kev tshawb fawb kawm pom tias qhov chaw ua muaj cov radionuclides siab tshaj plaws ntawm cov dej tshwm sim nyob rau Mount Simon-Hinckley thiab Jordan Aquifers hauv qab teb sab hnuv tuaj ntawm lub xeev Minnesota.

Tsawg tsawg ntawm Minnesota lub qhov dej ntiag tug tau raug sim rau radionuclides.

Cov ntaub ntawv qhia tawm hauv qab nov piav ntxiv txog radionuclides nyob hauv Minnesota cov dej:

- *Daim ntawv qhia txhua xyoo txog tiv thaiv dej haus hu ua Drinking Water Protection Annual Reports*
- *Cov hmoov Uranium ntawm qhov chaw tso dej los rau lub zej zog siv hu ua Uranium in community water systems*
- *Cov radium ntawm qhov chaw tso dej los rau lub zej zog siv hu ua Radium in community water systems*

Yam dabtsi es MDH ua

MDH tswj xyuas cov dej tso rau ib zej tsoom siv es yog:

- Pom zoo rau tsim cov chaw tso dej mus rau ib zej tsoom siv thiab cov tswv yim tua kab mob rau cov dej.
- Tswj tsab cai kom muaj dej hauv yuam puaj phais hu ua Safe Drinking Water Act.
- Kuaj cov chaw muab dej rau ib zej tsoom siv.

Qhov kev es soj ntsuam xyuas ib puag ncig hu ua Environmental Monitoring Program ua kom paub tseeb tias qhov es muaj fai fab radiation kom muaj rau theem es puaj phais nyob rau qhov chaw tsim cov phom tua khes mis/cuaj luaj hauv lub xeev Minnesota es yog kuaj cov dej, cov mis nyuj, thiab cov cua.

MDH tau ua ib qho kev tshawb fawb kawm txog cov pa nkev radium thiab polonium-210 (radionuclide) hauv Minnesota cov dej hauv av thiab muab cov ntaub ntawv qhia txog tsab cai haus cov dej kom puaj phais hu ua Safe Drinking Water Act Standards rau qhov es cov dej tsuas rau radiological contaminants.

- *Kawm txog qhov es muaj cov pa nkev hauv cov dej hauv lub xeev Minnesota hu ua Distribution of Radium in Minnesota Drinking Water Aquifers*

Cov Khes mis Radionuclides (Radium) hauv cov dej haus

- *Cov pa nkev Tshwm sim hauv cov dej hauv Minnesota hu ua Polonium-210 Occurrence in Minnesota's Aquifers: Ib qho kev kawm (A Pilot Study)*
- *Tsab cai muaj dej haus kom puaj phais hu ua Environmental Protection Agency Safe Drinking Water Act Standards: Cov kab mob me me qhov muag saib tsis pom (Microbiological) Siv fai fab kho mob (Radiological), thiab tej yam khes mis es tsuas (Inorganic Contaminants)*
- Pa nkev hauv cov tsev (Radon in Homes) (www.health.state.mn.us/communities/environment/air/radon)
- Cov radium ntawm qhov chaw tso dej los rau lub zej zog siv hu ua Radium in community water systems (data.web.health.state.mn.us/web/mndata/radium-messaging)
- Tshawb nrhiav cov chaw muaj daim ntawv pov thwj kuaj dej Search for Accredited Laboratories (www.health.state.mn.us/labsearch)
- Cov hmoov Uranium ntawm qhov chaw tso dej los rau lub zej zog siv hu ua Uranium in community water systems (data.web.health.state.mn.us/web/mndata/uranium-messaging)

Cov ntaub ntawv qhia

- Daim ntawv qhia tawm hu ua Consumer Confidence Reports (www.health.state.mn.us/ccr)
- Kawm txog qhov es muaj cov pa nkev hauv cov dej hauv lub xeev Minnesota hu ua Distribution of Radium in Minnesota Drinking Cov dej Water Aquifers (PDF) (www.health.state.mn.us/communities/environment/water/docs/swp/rareport.pdf)
- Raug ntau npaum cas hauv peb lub neej (Doses in Our Daily Lives) (www.nrc.gov/about-nrc/radiation/around-us/doses-daily-lives)
- Daim ntawv qhia txhua xyoo txog tiv thaiv dej haus hu ua Drinking Water Protection Annual Reports (www.health.state.mn.us/communities/environment/water/dwar)
- Tsa cai ntawm cov dej haus kom puaj phais hu ua Safe Drinking Water Act Standards (www.health.state.mn.us/communities/environment/water/factsheet/sdwa)
- Soj ntsuam xyuas ib puag ncig hu ua Environmental Monitoring (www.health.state.mn.us/communities/environment/radiation/monitor)
- Tua Kab Mob ntawm Cov Dej Siv Hauv Tsev Home Water Treatment (www.health.state.mn.us/communities/environment/water/factsheet/hometreatment)
- Cov pa nkev Tshwm sim hauv cov dej hauv Minnesota hu ua Polonium-210 Occurrence in Minnesota's Aquifers: A Pilot Study (www.health.state.mn.us/communities/environment/risk/docs/guidance/dwec/polonium210report.pdf)
- Tsab cai hu ua Radionuclides Rule (www.epa.gov/dwreginfo/radionuclides-rule)

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Kom tau cov ntaub ntawv no rau lwm hom format txawv, hu rau: 651-201-4700. Luam tawm rau cov ntawv es rov muab zom tau dua tshiab.