



Editorial

In this issue of the Nuclear Monitor we are pleased to present Peter Diehl's annual review of uranium mining issues. The WISE Uranium Project - www.wise-uranium.org - is a unique and remarkable resource. Annual uranium reviews stretching back to 1998 are posted at www.wise-uranium.org/indexu.html

Australian Engineering Lecturer Dr Gavin Mudd writes: "Peter Diehl has been the leader of the WISE Uranium Project for nearly 20 years and his work acts as a strong global amplifier for all concerned about the fuel stages of the nuclear chain. Such is the meticulous detail of the website that it is used not only by the anti-nuclear movement, but by independent researchers, mining companies, governments and the nuclear industry itself. The WISE Uranium Project deserves all the credit it receives."

1. Uranium price

During the course of the year 2013, the uranium price decreased further in the aftermath of the Fukushima disaster: In the first half of the year, UxC's weekly spot price declined from US\$43.50 to US\$39.50 per lb U₃O₈. In the second half of the year, it fell to US\$35.00 per lb U₃O₈ and then showed only slight fluctuations around this level.

The monthly industry average price for long-term contracts, as published by Cameco, declined from US\$56.50 at year end 2012 to US\$50.00 at year end 2013.

So, once again, the uranium price remained below the lower bound of approx. US\$60-70 per lb U₃O₈ required for the profitability of many of the mine projects currently

Monitored this issue:

Uranium Mining Issues: 2013 Review

1. Uranium price
2. Uranium exploration projects
3. Uranium mine development projects
4. Alternate uranium recovery projects
5. Issues at operating uranium mines
6. Abandoned mines issues
7. Decommissioning issues
8. Legal and regulatory issues
9. Uranium trade and foreign investment issues
10. This and that

under consideration or under development, increasing the uncertainty among companies and investors further.

Consequently, the second half of the year saw an unprecedented series of announcements postponing or abandoning mining projects. And, like in the previous year, more companies (six, this time, if we counted correctly) deleted the term "uranium" from their names - apparently the most reliable indicator of the state of affairs in the uranium industry. Last year's startling anticyclical exception, a U.S.-based company changing its name to "Cyclone Uranium Corporation", could not stand up to the expectations raised by the audacious choice of name, as the company produced almost no news at all.

2. Uranium exploration projects

Moratoria/Bans

(establishing/extending/keeping):

- In March, Canada's Province of Québec imposed a moratorium on uranium development, until an impact study on the exploration and development of uranium in the province is completed. As the moratorium in particular blocks Strateco Resources' Matoush exploration project (see below), the company took legal action against it.
- In Canada's Nunavut territory, where Areva wants to develop the Kiggavik uranium mine (see below), uranium watchdog Makita and the hunters' organization called for a territory-wide referendum on uranium mining.
- In the USA, judges upheld in two lawsuits the Interior Department's authority to ban new uranium mining claims near the Grand Canyon (Arizona), as exercised in 2012.

Moratoria/Bans (lifting/weakening):

- In the USA, the attempts by interested circles to lift the uranium moratorium in Virginia suffered two major blows in 2013: first, in January, legislation to lift the ban was withdrawn by its sponsor amid almost certain defeat in a Senate committee; then, in December, Virginia Uranium Inc., the proponent of the Coles Hill uranium mine project (see below), suspended its campaign to lift the moratorium, citing Governor-elect Terry McAuliffe's opposition.
- In Greenland, parliament Inatsisartut lifted the country's 25-year old zero-tolerance uranium policy in a 15-14 vote on October 24 after fierce protests, enabling the proposed development of the Kvanefjeld rare earths and uranium deposit (see below).

Exploration issues:

- Canada's province of Québec refused a permit for the Matoush uranium exploration project, which had obtained a license from the Canadian Nuclear Safety Commission already in 2012.
- In Saskatchewan, a drilling company was fined for the death of an employee at the Cree East project uranium exploration site.
- Environment Saskatchewan announced the preparation of an Environmental Impact Assessment for the proposed underground exploration at the Roughrider deposit.
- Egypt announced uranium discoveries in five main areas, including Abu Zenima in Sinai, Abu Rashid on the Red Sea, Sila in Upper Egypt, and the Gtar area.
- Tanzania announced the discovery of uranium at Lake Jipe in Mwanga, Kilimanjaro, in northern Tanzania.
- East Africa Resources announced another uranium exploration project in the World Heritage Selous Game Reserve in Tanzania, named Madaba.

- Paladin Energy has halted uranium exploration in Niger after the bomb attacks in Agadez and Arlit (see below).
- Iran announced the discovery of new uranium resources in the country.
- Uranium exploration in an area between Arad and Sedom in the Judaeen Desert in Israel was halted for the findings being "not economically worthwhile".
- More uranium deposits were found near the existing Jaduguda mine in Jharkhand (India).
- Areva resumed uranium exploration in Mongolia after a temporary halt due to local residents' opposition.
- Cameco's uranium discovery in the Wellington Range (Northern Territory, Australia) threatens ancient indigenous cave art.
- South Korea began uranium exploration in South Australia.

Environmental opposition against uranium exploration:

- In Jämtland county, Sweden, municipalities and environmentalists continued their opposition to uranium mining projects in the area; a demonstration was held in Oviken in April, and the Jämtland County Council said no to uranium mining in December.

Positive preliminary economic assessments:

Positive preliminary economic assessments, preliminary feasibility studies, or scoping studies were announced for the following uranium mine projects - however, often assuming uranium selling prices far beyond current market prices:

- Buckton polymetallic deposit (Alberta)
- Eco Ridge mine rare earth and uranium project (Ontario)
- Lance uranium in situ leach project (Wyoming)
- Macusani Yellowcake Inc.'s uranium deposits in Peru
- Karoo uranium / molybdenum mine projects (South Africa)
- Salamanca uranium mine project (Spain)
- Häggån uranium mine project (Sweden)
- Temrezli in situ leach uranium project (Turkey)
- Carley Bore uranium deposit (Western Australia)



3. Uranium mine development projects

License applications:

- according to our records, no license applications for new uranium mines were filed in 2013.

Uranium mining/milling licenses were issued for:

- for the operation of Cameco's Cigar Lake uranium mine in Saskatchewan, Canada,
- for the processing of ore from the new Cigar Lake mine at Areva's existing McClean Lake mill in Saskatchewan, Canada,
- for the operation of Cameco's North Butte in situ leach uranium mine in Wyoming, USA; production began in May,
- for the commencement of operation of Uranerz Energy's Nichols Ranch uranium in situ leach mine in Wyoming, USA,
- for underground mining at INB's Caetité uranium mine in Brazil,
- for Atomredmetzoloto's Mkuju River uranium mine project in Tanzania; however, ARMZ disputes a \$206 million tax claim, and the start of development of the project is still open due to "some pending issues".
- for the operation of Anatolia Energy's Temrezli in situ leach uranium project in Turkey - even before the submission of an Environmental Impact Assessment (!).

Several uranium mine development projects were temporarily suspended and/or abandoned, due to the unfavourable market situation (and other issues):

- Ucore Rare Metals' Bokan Mountain - Dotson Ridge deposit in Alaska, USA, is now to be mined solely for rare earths.
- Energy Fuels' Piñon Ridge uranium mill project in Colorado, USA: a few months after the state approved the construction license, project owner Energy Fuels announced that the mill will not be built, unless there is an unexpected turnaround in the price of uranium.
- Strathmore's Peña Ranch uranium mill project in New Mexico, USA, was abandoned, after the company was taken over by Energy Fuels Inc.
- Uranium Energy's Grants Ridge uranium mine project in New Mexico, USA: the license application was withdrawn due to "market conditions and lack of funding".
- Strathmore's Lower Gas Hills open pit / heap leach uranium mine project in Wyoming, USA: the license application was indefinitely delayed "until such time that uranium prices justify licensing and construction of the facility".
- Energy Fuels' Canyon mine in Arizona, USA: the shaft-sinking was placed on standby "due to market conditions, and to simplify and lessen the expense of current litigation at the mine" (the Havasupai tribe and

three conservation groups sued the U.S. Forest Service over its decision to allow operation of the mine).

- Areva's huge Imouraren uranium project in Niger was delayed further to the end of 2015; Areva pays an EUR 35 million compensation for the delay.
- Forsys Metals' Valencia uranium mine project in Namibia: most workers were dismissed due to the weak uranium market.
- Rio Tinto's Rössing mine in Namibia: the preparation of the Social and Environmental Impact Assessment for the proposed mining of the Z20 deposit was halted.

Projects currently under development, or being prepared for development:

In Canada:

- The environmental review process for the Kiggavik uranium mine project in Nunavut continued with Areva supplying responses to information requests and technical comments. The Saskatchewan Dene worried about flying uranium from the proposed Kiggavik mine over their traditional territory.
- The English River First Nation in Saskatchewan signed a deal with Cameco and Areva providing an estimated CDN\$600 million in economic benefit over the next 10 years through industry employment, sustainable business development and community investment; some band members opposed the deal.
- Legal action was started challenging a similar Cameco/Areva deal with the northern community of Pinehouse in Saskatchewan.
- The Federation of Saskatchewan Indian Nations chief demanded a revenue sharing deal with First Nations for new mining projects.
- Further delays were announced for the start of mining operations at Cigar Lake and for the processing of Cigar Lake ore at the McClean Lake mill in Saskatchewan; mining at Cigar Lake actually began on December 16.
- Cameco's Millennium underground uranium mine project in Saskatchewan obtained environmental approval.

In the USA:

- Powertech's Centennial uranium in situ leach mine project in Colorado: the company quit the legal fight against the Colorado mining regulations; a Hong Kong company acquired a majority interest in the mothballed project.
- Powertech's Dewey-Burdock uranium in situ leach mine project in South Dakota: while the state Department of Environment and Natural Resources recommended that a mining permit be granted for the project, two state panels postponed further action until the federal Nuclear Regulatory Commission (NRC) and Environmental Protection Agency (EPA) have made their rulings on the project; an U.S. NRC board admitted several contentions of intervenors against the project. Post-restoration uranium concentrations in

down-gradient groundwater at the site may be much higher than previously thought, modeling suggests.

- Strathmore's Roca Honda uranium mine project in the Cibola National Forest, New Mexico: the U.S. Forest Service released a Draft Environmental Impact Statement for the project; opponents held protests in Albuquerque against it.
- Hydro Resources' Church Rock/Crownpoint uranium in situ leach mine project in New Mexico: the U.S. NRC released an Environmental Report for the license renewal of the project.
- Rio Grande Resources' idle Mount Taylor uranium mine near Grants, New Mexico: a court ordered a new hearing over the proposed reactivation of the mine after 23 years of inactivity.
- Virginia Uranium's Coles Hill uranium mine project in Virginia: opponents released a report raising questions on the ability of Virginia Uranium Inc. and its regulator to follow best practices in the development of the project.
- Bayswater Uranium's Reno Creek in situ leach uranium mine project in Wyoming: the licensing process continued with NRC issuing the opportunity to request a hearing and to petition for leave to intervene and a notice of intent to prepare a Supplemental Environmental Impact Statement (SEIS).
- Peninsula Energy's Ross uranium in situ leach project in Wyoming: the licensing process continued with the U.S. NRC issuing a Draft Supplemental EIS for comment and the U.S. EPA approving an aquifer exemption; construction work commenced in October.
- Ur-Energy's Lost Creek uranium in situ leach mine project in Wyoming: the mine started operation in August; in December, however, the state ordered the halt of operation for failure to maintain the mandatory bleed (a fundamental requirement for in situ leach mining: the pumped volume must be slightly higher than the injected volume to prevent solution excursions beyond the mining zone).
- Cameco's Gas Hills uranium in situ leach project in Wyoming: the licensing process continued with the U.S. BLM announcing the availability of the final EIS and the state inviting comment on the draft permit for the deep disposal wells.
- Denison's EZ uranium mine in Arizona: the proposed listing of endangered cacti may have impacts on the mine.
- Waste Mining's Waste uranium mine project in Arizona: the Navajo Nation plans to block access for uranium transport off site.
- Uranium Energy's Goliad in situ leach uranium mine project in Texas: in March, the U.S. EPA issued an aquifer exemption after intervention of a powerful lobbyist; residents appealed the aquifer exemption; and, Goliad County Commissioners appealed the TCEQ ruling allowing mining at the site.

In Central/South America:

- Santa Quitéria Consortium's Itataia uranium/phosphate mine project in Ceará, Brazil: the Environmental Impact Assessment report was filed in September.

In Africa:

- Zhonghe's uranium mine project in Namibia: public involvement did not take place according to the EIA regulation, The Earth Organization Namibia complained. Subsequently, the Environmental Impact Assessment for the project was finally made available - two years after completion and four months after the license was issued. Worse still, the document does not contain any assessment at all, it could just pass as a scoping document, if anything. Miraculously, though, it must somehow have passed the Namibian licensing process.
- China Guangdong's Husab uranium mine project in the Namib Naukluft National Park in Namibia: a last-minute change brought a switch from dry to wet tailings disposal, increasing the mine footprint by 400 hectares; construction began, while the comment period for the EIS amendment was still open.
- Deep Yellow's Ongolo and Tumas uranium mine projects in Namibia: draft Environmental Scoping Reports were lodged.
- Areva's mothballed Trekkopje uranium mine project in Namibia: a second shipment of uranium left the site in July.
- A-Cap Resources' Letlhakane uranium project in Botswana: "favourable economics" were announced from the scoping study, provided the uranium price rises significantly...
- Kanyemba uranium project in Zimbabwe: the government was criticised for many 'secretive' mining deals.
- Rockgate Capital's Faléa uranium mine project in Mali: Rockgate Capital Corp. was acquired by Denison Mines Corp.

In Europe:

- Greenland Minerals and Energy's Kvanefjeld rare earth - uranium project in Greenland: as the parliament decision on the lifting of the zero-tolerance uranium policy approached, the company - in an attempt to appease critics on the environmental impact of the project - proposed to locate the project's refinery overseas, for example in Denmark. But, as soon as parliament had lifted the ban, the company switched back to a refinery in Greenland. Environmental concerns were also raised on the planned dumping of millions of tonnes of tailings in a nearby Lake.
- Aura Energy's Häggån uranium mine project in Sweden: in February, Areva was selected as a preferred strategic partner for the project, but, in July already, Areva refrained from the partnership.
- European Uranium Resources' Kurisková uranium mine project in Slovakia: in February and March, protests were held against the project; in April, the Kosice city council confirmed its opposition to the proposed mine, and the Kosice Region incorporated a uranium mining ban in the zoning plan for the project site; in August, the Minister of Environment cancelled the renewal of the exploration licence, but the company filed an appeal. Interestingly, European Uranium Resources Ltd. is one of the companies that

have announced to delete the term “uranium” from their name; after the merger with a base metal explorer holding properties in Portugal and Spain, the new name will be European Minerals Inc.

- CNU’s Tulghes-Grinties uranium mine project in Romania: according to the Ministry of Economy, “the chances are very high to find financing for the development of the Tulghes-Grinties deposit”.
- CNU’s Uzina TG uranium mill project in Romania: in September, public comment was invited on the project that is to replace the existing Uzina R plant at Feldioara.
- Berkeley’s Retortillo uranium mine project in Salamanca, Spain: in October, the environmental licence was granted for mining of the deposit; in November, environmentalists slammed the Environmental Impact Assessment for failure to assess the radiological impacts; in December, the Ministry of Industry postponed the decision on the mining project and demanded an assessment of its radiological impacts(!); on Dec. 28, protests were held in Retortillo against the mine project.

In Asia:

- UCIL’s Gogi uranium mine project in Karnataka, India: the state resumed land acquisition for the mine in spite of a Union government order to scrap the project.
- Saghand uranium mines and Ardakan uranium mill in Iran: operation started in April.
- Navoi’s Alendy, Aulbek and North Kanimekh uranium in situ leach mines in the Central Kyzylkum Desert, Uzbekistan: construction of the three mines was to be completed by year end.
- Areva’s Dulaan Uul and Zoovch Ovoo uranium in situ leach mine projects in the Dornogobi province of Mongolia: Areva formed a joint venture to develop uranium mines in Mongolia.

In Australia:

- Areva’s Koongarra uranium deposit in Kakadu National Park, Northern Territory, Australia: on March 14, the Australian Senate passed a bill reversing the exclusion of the Koongarra uranium deposit from Kakadu National Park, thus protecting it from mining.
- Cameco’s Kintyre uranium mine project in Western Australia: in November, Cameco released the Environmental Review and Management Programme for comment; conservationists say, the project threatens the Karlamilyi National Park.
- Toro Energy’s Wiluna uranium mine project in Western Australia: in April, the project obtained approval of the federal environment minister; in May, the viability of the project was questioned by an economist; in July, the native title covering the project was officially acknowledged.
- The World Heritage Committee considers placing the Great Barrier Reef on its “in danger” list over proposals to export Queensland’s uranium across it.
- Marmota Energy’s Junction Dam uranium in situ leach mine project in South Australia: positive test results pave the way for uranium field leach trials
- Alliance Resources’ and Quasar Resources’ Beverley Four Mile uranium in situ leach mine project in South Australia: after obtaining final state and federal environmental approvals, construction commenced in December.
- Marathon Resources withdraws from the uranium exploration business: “Both the political and regulatory regimes have deterred us permanently from the uranium industry,” chairman Peter Williams told the company’s annual meeting. The company had been exploring the Mt Gee site in South Australia’s Flinders Ranges. However, it fell foul of the South Australian government over the illegal disposal of waste, while the government eventually banned all mining in the environmentally-sensitive area anyway.

4. Alternate uranium recovery projects

By-product recovery of uranium from mining primarily for other ores:

- Uranium Equities Ltd announced a positive Pre-Feasibility Study (PFS) has supported the viability and low-cost nature of the PhosEnergy Process for extracting uranium as a by-product from phosphate fertiliser production.
- Talvivaara’s Sotkamo mine in Finland, where uranium recovery is planned as a by-product from nickel mining: the mine struggled in the aftermath of the major gypsum pond leak that had occurred in 2012: in February, the mine obtained permission to discharge excess waters; in March, high uranium levels were found in a nearby pond; in April, a new leak occurred at the gypsum pond and the mine sought permission to discharge more excess waters; in May, the mine resumed ore production and soon after stained a river orange; in October, a court ordered the mine to limit waste water discharges; in November, it became clear that the company faces

bankruptcy, and experts pondered the responsibility for the mine clean-up in such case; on Nov. 15, operation halted at the mine; in December, the Supreme Administrative Court revoked Talvivaara’s uranium production license. Environmentalists held protests at the general meetings of the company in March and May.

The recovery of residual uranium from wastes and tailings:

- AngloGold’s Mine Waste Solutions tailings recovery plant in Stilfontein, South Africa: AngloGold commissioned the completion of the uranium recovery plant (so far, the project only recovers gold from the tailings); a list compiled by the National Nuclear Regulator documents an outrageous history of spills at the site: between 2009 and August 2013, a total of 30 incidents - mostly major spills - was recorded, caused by various technical failures and heavy rainfalls.

5. Issues at operating uranium mines

Delayed mine expansion projects:

- In June, Uranium One halted the development of new well fields at its Willow Creek in situ leach uranium mine in Wyoming, owing to the low uranium price.
- In November, Kazatomprom scrapped expansion projects at its uranium in situ leach mines in Kazakhstan.

Planned expansion of existing uranium mines and mills, with licensing processes at various stages:

- Uranium One's Willow Creek (formerly Christensen Ranch) uranium in situ leach mine in Wyoming: in March, the U.S. NRC issued a license renewal for the site with a more than doubled flow rate.
- Uranerz Energy's Nichols Ranch uranium in situ leach mine in Wyoming: the U.S. BLM issued an Environmental Assessment on the Hank Unit of the project for public review.
- Cameco's Crow Butte in situ leach uranium mine in Nebraska: the NRC licensing process for the Marsland and North Trend Expansion Areas continued with the release of various reports.
- UCIL's Jadugoda and Narwapahar uranium mines in Jharkhand, India: UCIL has decided to extend both mines.
- UCIL's Tummalapalle uranium mine and mill in Andhra Pradesh, India: in January, the final product packaging plant was commissioned; in May and June, protests were held against the planned expansion of the mill.
- ERA's Ranger mine in the Northern Territory, Australia: the licensing process for the Ranger 3 Deeps Underground Mine continued with the release of the draft EIS guidelines. Protests against the project were held at ERA's AGM in April.

Natural forces affecting operating uranium mines and mills:

- in February, several uranium in situ leach mines in South Kazakhstan were hit by a storm: power supply for the mines and the surrounding villages was interrupted, as 56 pylons of a transmission line collapsed.

Environmental issues at operating uranium mines and mills:

- Cameco's Smith Ranch/Highland in situ leach mine in Wyoming: in March, the state regulator issued a Notice of Violation for deficiencies resulting in an excursion; in May, Cameco applied for relaxed groundwater restoration standards at Mine Unit B; in July, the U.S. NRC issued a Notice of Violation for deficiencies leading to an excessive uranium intake by two sub-contractors.
- Cameco's Crow Butte in situ leach uranium mine in Nebraska: in April, Cameco requested further exemption

from the groundwater restoration schedule at Mine Unit 3.

- Energy Fuels' White Mesa mill in Utah: in June, radon emission exceeded the standard at Tailings Cell 2.
- Energy Fuels' Rim mine in Utah: the Utah Division of Water Quality announced a settlement agreement resolving alleged violations at the mine.
- Areva's Arlit and Akouta uranium mines in Niger: 1,600 tonnes of scrap metal from the mines entered the public domain - with some lots radioactive.
- INB's Caetité uranium mill in Bahia, Brazil: the Miners' Union denounced two leaks at the mill.
- Rio Tinto's Rössing uranium mine in Namibia: in December, a "catastrophic structural failure" of a leach tank caused a major spill of acidic ore slurry; moreover, acidic seepage from the Rössing uranium mill tailings dam - visible from space - raised public concern.
- Paladin's Kayelekera uranium mine in Malawi: a church group called for an assessment of the alleged impact of the mine on water quality.
- Atomredmetzoloto's Krasnokamensk uranium mine in Russia: extensive environmental contamination was identified near the mine; the groundwater contaminant plume from the mine reached drinking water wells.
- UCIL's uranium mines in Jharkhand, India: independent researchers prepared a report on the environmental impacts of the new uranium mines in the area.
- in China, six uranium mines were selected as 'National Green Mines' (!).
- ERA's Ranger uranium mine, Northern Territory, Australia: in September, an A\$220 million brine concentrator opened at the mine to improve waste water treatment; in December, a bursting leach tank caused a major spill of acidic ore slurry - spitting image of the accident at Rio Tinto's Rössing mine in Namibia four days earlier (Rio Tinto is also majority shareholder of ERA).

Miners' health issues at operating uranium mines and mills:

- Reliance Resources' Pandora mine in Utah: the U.S. Mine Safety and Health Administration (MSHA) settled with Reliance Resources on penalties for the fatal accident in 2010.
- CNU's Crucea uranium mine in Romania: a miner was injured in an rockfall accident.
- Diamo's Rožná uranium mine in the Czech Republic: 16 out of 442 underground workers received an excessive radiation dose in 2012.
- Areva's Akouta uranium mine in Niger: Areva won an appeal against the condemnation for the lung cancer death of a former employee.
- Paladin's Kayelekera mine, Malawi: in July, an employee died in an accident in the mine's engineering

workshop; the Malawi government showed to be unable to verify allegations of radiation-induced diseases among the mine workers, due to a lack of equipment and expertise.

- Paladin's Langer Heinrich mine in Namibia: in October, a worker died from injuries suffered in an electrical incident.
- UCIL's Jaduguda uranium mine in Jharkhand, India: the tailings backfill practiced in the mine significantly increases the radon emanation into the mine atmosphere.

Supplies issues at operating uranium mines and mills:

- The Rössing uranium mine in Namibia entered into a supply agreement for sulfuric acid from a domestic source to replace imports.
- The Rössing and Langer Heinrich uranium mines in Namibia faced a water shortage in November, as a drought curbed supply to the operations and three coastal towns.
- Kazatomprom acquired a 40% share in a caustic soda plant in Kazakhstan.

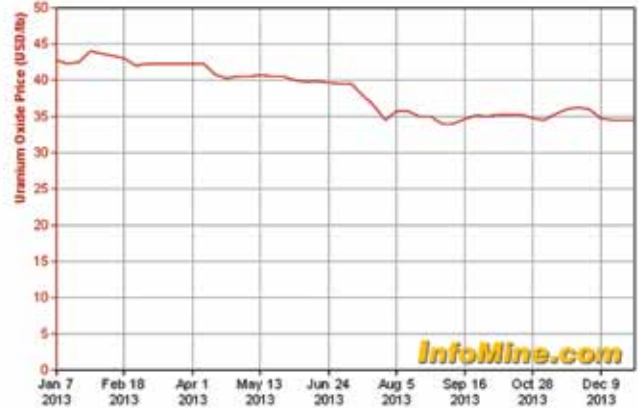
Shutdown, downsizing, etc. of operating mines and mills due to poor economics:

- Energy Fuels' Pinenut mine in Arizona is to be placed on care and maintenance due to market conditions.
- Energy Fuels' Arizona 1 mine is to cease operations due to depletion of resources.
- Energy Fuels' White Mesa mill in Utah is to be mothballed in August 2014 until the latter half of 2015 due to market conditions.
- Uranium Energy's Palangana in situ leach mine in Texas is to reduce production in response to the low uranium prices.
- Paladin's Kayelekera uranium mine in Malawi is to retrench 110 workers in "response to economic pressures".
- Rio Tinto's Rössing uranium mine in Namibia is to cut up to 276 jobs.
- BHP's Olympic Dam copper/uranium mine in South Australia announced job cuts.
- Uranium One's Honeymoon uranium in situ leach mine in South Australia is to be mothballed.

Other issues at operating uranium mines and mills:

- Canadian Nuclear Safety Commission approved the license renewal for the Key Lake, McArthur River and Rabbit lake uranium mines in Saskatchewan, without following Sierra Club Canada's demand to prepare environmental assessments first.

Uranium spot price, Jan-Dec 2013.



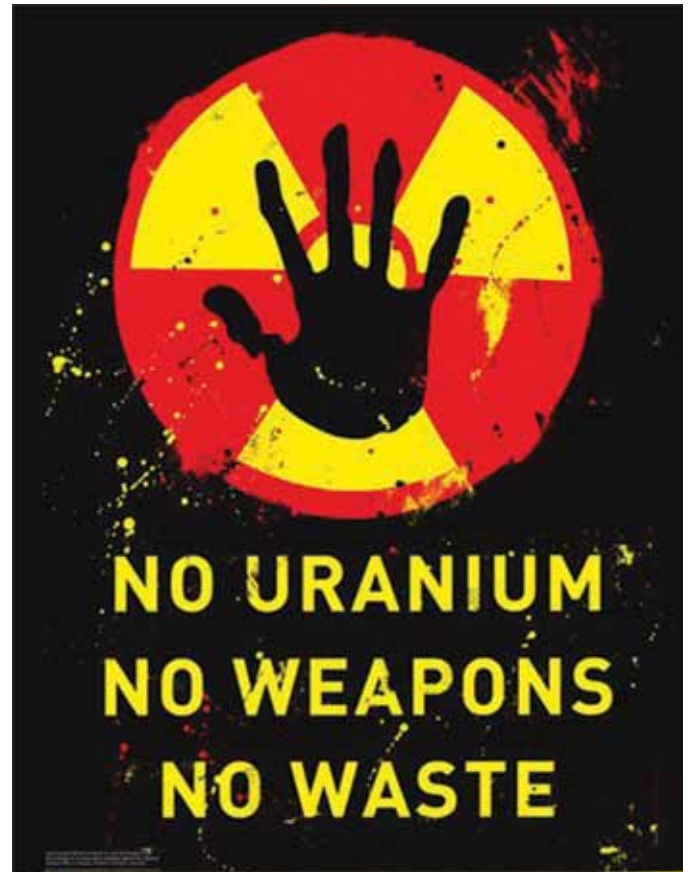
- The Mined Land Reclamation Board allowed several Western Colorado uranium mines to stay idle without need to commence cleanup; the mines have been mostly shuttered since the early 1980s.
- Uranium One proposes to process yellow cake from the mothballed South Australian Honeymoon mine at its Willow Creek site in Wyoming.
- The Utah DEQ invited comment on the proposed processing of residues from the Midnite Mine in Washington as alternate feed at the White Mesa mill in Utah.
- Black Range Minerals is to acquire the idle Shootaring Canyon uranium mill in Utah.
- At the Lagoa Real / Caetité uranium mine in Brazil, a guard fell into a uranium pond.
- Areva's Arlit and Akouta uranium mines in Niger: on May 23, suicide bombers struck the Arlit uranium mine; Areva suspended production after the attacks; production restarted in June and fully resumed in August; demonstrations against Areva were held in Niger's capital Niamey in April and December, and in Arlit in October; negotiations between Areva and the Niger government on a more balanced partnership were still ongoing at year end.
- Paladin Energy's Kayelekera uranium mine in Malawi: in April, the Malawi government finally succumbed to pressure from activists to start re-negotiating with Paladin on the Kayelekera uranium deal; in July, even an UN Special Rapporteur slashed Malawi's deal with Paladin Energy.
- Atomredmetzoloto's Dalmatovkoye uranium in situ leach mine in Russia: a pilot plant for rare earth recovery from productive solutions derived in the production of uranium started operation.
- Atomredmetzoloto's Krasnokamensk uranium mine in Russia: the mine is switching to heap leaching and block in-situ leaching in view of decreasing ore grades.
- Kazakhstan's uranium production (already No. 1 in the world) increased further in 2012.
- ERA's Ranger uranium mine, Northern Territory, Australia: the Traditional Owners and ERA reached a new Ranger mining agreement.

6. Abandoned mines issues

- Old Uranium City mines in Saskatchewan: Canada, rather than the Province, should pay for the decontamination of the mines, analysts said.
- Abandoned uranium mines in the Manti-La Sal National Forest in Utah: the U.S. Forest Service invited comment on the scope of the EIS for the reclamation of the mines.
- Abandoned uranium mines in the Navajo Nation: the U.S. EPA gave the Navajo Nation a US\$3 million grant for the cleanup of uranium-contaminated homes; the U.S. EPA also ordered some risk assessment and decommissioning work at abandoned uranium mines in the Cameron and Smith Lake Chapters in the Navajo Nation.
- Old San Mateo uranium mine in New Mexico: the cleanup is nearing completion.
- Former Jackpile-Paguete uranium mine in New Mexico: the U.S. EPA added the partly reclaimed mine to the National Priorities List of Superfund Sites.
- Further financing was assured for the reclamation of Wismut legacy sites (that are not part of the federal uranium mine cleanup project) in Saxony, Germany.
- Significant DNA damage was found in residents living near an abandoned uranium mining site in Portugal.
- More than one hundred thousand tons of hazardous waste sulfur were found near Aktau in Kazakhstan.
- Elevated radiation dose rates were found near the unsecured Digmai uranium mill tailings in Tajikistan.
- The European Union allocated EUR 2.1 million to Kyrgyzstan to improve the safety of uranium tailings.
- Mary Kathleen, the last uranium mine in Queensland, Australia, is still leaking radioactive water 30

years after production stopped; in June, the State Government announced plans to rehabilitate the former mine.

- More funds were allocated for the cleanup of the former Rum Jungle uranium mine in the Northern Territory, Australia.



7. Decommissioning issues

In the USA:

Not all is going well with the current groundwater restoration efforts at uranium mill tailings sites in the USA:

- The uranium concentration in a groundwater monitoring well at the Durango (Colorado) uranium mill tailings disposal site exceeded the standard up to three-fold.
- The uranium concentration in a groundwater monitoring well at the Grand Junction (Colorado) uranium mill tailings disposal site increased further, exceeding the standard three-fold.
- Contaminated alluvial and bedrock groundwater is leaving the former Bluewater uranium mill site in New Mexico.
- The natural flushing of the contaminated aquifer at the former Riverton (Wyoming) uranium mill site was found to perform slower than anticipated.
- The U.S. NRC requested from Western Nuclear a response on the increasing contaminant concentrations in groundwater at the Split Rock (Wyoming) uranium mill tailings site, exceeding even relaxed groundwater standards.
- The elevated radium-226 concentrations in groundwater at the Shirley Basin South (Wyoming) uranium mill tailings disposal site are not caused from seepage, a U.S. DOE report said.
- Significant decreases in contaminant concentrations are still “not apparent” after more than ten years of groundwater remediation at the Tuba City (Arizona) uranium mill tailings site.

Other USA decommissioning issues:

- Cotter's Cañon City uranium mill in Colorado: the state issued a license amendment for decommissioning of the site, but soon withdrew it after a group's criticism of a missing opportunity for public input; removing the Cañon City uranium tailings would cost \$895 million, according to an analysis prepared by Cotter Corp. at the request of the state, but Cotter's current tailings management strategy is the reclamation on site.
- The state ordered the cleanup of several idle uranium mining sites in south-western Colorado, after protests of a watchdog group.
- United Nuclear's Church Rock mill and tailings site in New Mexico: the U.S. NRC approved a five-year extension to the groundwater corrective actions at the site; the U.S. EPA also issued a Record of Decision for the disposal of contaminated soil from the North East Church Rock Mine site on top of the existing Church Rock uranium mill tailings disposal cell.
- Homestake's Grants uranium mill tailings site in New Mexico: the U.S. EPA issued an initial draft Human Health Risk Assessment report for the site; based on the results of the report, residents demanded EPA action over the cancer risk - either move the tailings pile or relocate the owners of about 75 nearby homes; the U.S. NRC released a Decommissioning and Reclamation Plan Update for the site.
- Anadarko's former Bear Creek uranium mill site in Wyoming: the U.S. NRC approved relaxed groundwater standards at the site; the U.S. NRC moreover plans to drop the requirement for groundwater monitoring at the site in preparation of the license transfer to DOE.
- Atlas Moab uranium mill tailings site in Utah: in June, the U.S. DOE announced that 6 million of the 16 million short tons of tailings had been removed from the Moab site; Congress approved more money to continue the relocation project.
- O'Hern, Holiday/El Mesquite and Tex-1 in situ leach uranium mines in Texas: the U.S. NRC concurred with the proposed partial license termination for the sites.
- Lakeview processing site in Oregon: the U.S. NRC approved a "no remediation" groundwater compliance strategy for the site.
- Monument Valley uranium mill tailings site in Arizona: the U.S. DOE completed a pilot study on alternatives to the active pumping and treatment for groundwater remediation at the site.

In Europe:

- Wismut's former Seelingstädt uranium mill site in Thuringia, Germany: the cleanup was to be completed this year.
- Wismut's Culmitzsch uranium mill tailings pile in Thuringia, Germany: the proposed cover for Germany's largest

uranium mill tailings pile needlessly allows for excessive infiltration of precipitation, a local environmental group warned; in June, the installation of an intermediate cover had to be halted again due to heavy rains.

- Wismut's former Königstein uranium mine in Saxony, Germany: the decommissioning of the underground workings was completed.
- Wismut's former Ronneburg uranium mine area in Thuringia, Germany: the heavy metal contents of plants grown on soils in the area exceeds safe levels for incalculable time spans, a study found.
- Residents worried about hazards from the former use of uranium mine waste material for road construction at several places in Saxony, Germany.
- The French activist network Collectif "Mines d'Uranium" pointed at several problems encountered with the cleanup of former uranium mine sites in France. The network looked in particular at the problem posed by the dispersion of waste rock around the mine sites, for use in the construction of roads, platforms, farmyards, and even in the base of buildings and in residential walls. While Areva was ordered in 2009 to elaborate a survey of all sites where waste rock was reused, four years have passed in the meantime and there is still no result. The network further complains about a lack of transparency and a lack of reliability of the works undertaken.
- Areva's tailings deposit in the former Bellezane open pit in the Limousin area in France: Areva plans to dump more contaminated soil on top of the tailings deposit in the pit; a public inquiry resulted in a favourable opinion on the plan.
- The pluralist expert group in charge of assessing the environmental situation at the former uranium mine sites in the Limousin area in France released its second and final report.

In Asia:

- Uranium in situ leach mines in Kazakhstan: scientists are concerned about the lack of groundwater restoration after uranium in situ leaching in the country.



8. Legal and regulatory issues

In Canada:

- Canada's federal regulator, the Canadian Nuclear Safety Commission, introduced a 24 month timeline to "streamline" the review process for nuclear facility and uranium mine and mill applications
- Canada's Minister of the Environment amended the list of activities that warrant preparation of environmental assessments.
- Canada eased the foreign ownership restrictions for uranium mines.
- Canada's province of Saskatchewan seeks to stimulate an expansion of the uranium mining industry with a royalty cut.

In the USA:

- The U.S. DOE issued a Draft Programmatic Environmental Impact Statement for its Uranium Leasing Program, in which it is again proposing opening up 25,000 acres [101 square kilometres] of land in western Colorado to uranium mining.
- The state South Dakota wants to regain some state regulation of in-situ leach uranium mining from the U.S. NRC.
- The U.S. Nuclear Regulatory Commission (NRC) agreed with NGO Uranium Watch's allegation that the Utah Division of Radiation Control's administrative procedures did not comply with the Atomic Energy Act's public participation requirements for certain licensing actions.
- The Texas Legislature passed a bill, eliminating, among others, several opportunities for a contested case hearing related to groundwater restoration at in situ leach uranium mines.
- The Texas Commission on Environmental Quality (TCEQ) approved the elimination of the uranium soil concentration standard for the release of outdoor areas for unrestricted use at decommissioned uranium mining sites.
- The state Wyoming aims at State regulation of uranium in situ leaching and uranium milling (so far regulated by the U.S. NRC).

- The Natural Resources Defense Council (NRDC) urged the U.S. EPA and U.S. NRC to implement a more protective regulation of uranium in situ leach mining in the U.S. According to a NRDC report, current regulations are not sufficient to protect groundwater in the long term.

In Africa:

- Malawi, home of Paladin's Kayelekera uranium mine, failed to establish a nuclear regulator: according to officials, the Ministry of Mines requested in vain Treasury to release funding for the establishment of the regulation authority.

In Europe:

- The Slovak Ministry of Environment wants to reverse the strengthening of the legal position of local authorities opposing uranium mining projects.

In Asia:

- The EU sought a contractor for the elaboration of a regulatory framework for uranium mining and milling in Mongolia.

In Australia:

- The Queensland (Australia) government released a plan to re-establish uranium mining in the state; protesters demanded an independent inquiry into the revival of uranium mining in Queensland.
- Australia's government plans to delegate uranium mine licensing to the states; the Australian Conservation Foundation (ACF) warned against the weakening of the scrutiny of the uranium industry.

General:

- Scientists raised serious concerns over the latest increase of WHO's drinking-water guideline for uranium to 30 micrograms per litre: "The toxic effects of U in drinking water on laboratory animals and humans justify a re-evaluation by the WHO of its decision to increase its U drinking-water guideline."

9. Uranium trade and foreign investment issues

Uranium trade:

- In October the first shipment of Canadian uranium arrived in China.
- In May, it transpired that Cameco saves taxes by selling its uranium through its Swiss subsidiary; in September, Canada's government accused Cameco of a multi-million dollar tax dodge; Cameco has publicly estimated that it could end up owing CDN\$800-850 million in Canadian corporate taxes for the years 2008 to 2012.
- India is close to importing uranium from Uzbekistan.
- India has to purchase nuclear reactors from Russia and other foreign countries in order to get uranium from these countries, according to the director of the Bhabha Atomic Research Centre.
- In September, Canada's nuclear sales treaty with India came into effect, under which Canadian uranium producers will be able to export to India.
- In November, Russia sent the last shipment of uranium downblended from Russian nuclear weapons material for use in U.S. reactors under the "Megatons to Megawatt" program concluded in 1993.

Proliferation issues and uranium trafficking:

- Australia's agreement to sell uranium to India could include weaker monitoring safeguards than the nuclear deals Australia has with other countries.
- In South Africa, two suspects were arrested for possession of uranium which they tried to sell in Durban.

Foreign exploration and mining investment and cooperation:

- German banks are still financing uranium mining projects, in spite of promises to the contrary: a review commissioned by German NGO Urgewald shows that between March 2011 and January 2013, Deutsche Bank provided financing to Areva and Rio Tinto, while UniCredit/HBV provided financing for Areva and BHP Billiton.
- Deutsche Bank's ailing Uranium Exploration Index Certificate was among the winners of the award for the most dangerous financial products, a competition launched by Member of European Parliament Sven Giegold.
- Japan and Uzbekistan announced to conduct joint uranium exploration in Uzbekistan; Japanese JOGMEC received a uranium exploration license in the Navoi region.
- Uruguay seeks public-private partnerships for the development of uranium mining.
- Egypt invited Russia to join nuclear power plant and uranium mining projects.
- Areva is considering "uranium processing" in Tajikistan, according to the Tajik Main Geological Administration chief.
- Mongolia and Mitsubishi are to take a stake in Areva's Mongolian uranium mining subsidiary.



10. This and that

- Mining tycoon Andrew Forrest, Australia's richest man who made his fortune digging up iron ore, sued to block attempts by Cauldron Energy Ltd to search for uranium on his Munderoo ranch in Western Australia.
- Areva won the defamatory Pinocchio Award for opening a museum glorifying former uranium mining in the Limousin area of France.
- Last year we reported that a US\$1000 donation for the restoration of the Uranium Drive-In movie theatre sign in Naturita (Colorado) earned Energy Fuels Inc. a glider flight over scenic Paradox Valley - the site of its proposed Piñon Ridge Uranium Mill, and we speculated what would happen, if they discovered during the flight that this is a beautiful place that should be protected. Now, that the company actually and against all odds has announced to put the project on the back burner (see above), the question arises: was it the glider flight?

WISE/NIRS Nuclear Monitor

The World Information Service on Energy (WISE) was founded in 1978 and is based in Amsterdam, the Netherlands.

The Nuclear Information & Resource Service (NIRS) was set up in the same year and is based in Washington D.C., US.

WISE and NIRS joined forces in the year 2000, creating a worldwide network of information and resource centers for citizens and environmental organizations concerned about nuclear power, radioactive waste, proliferation, uranium, and sustainable energy issues.

The WISE / NIRS Nuclear Monitor publishes information in English 20 times a year. The magazine can be obtained both on paper and as an email (pdf format) version. Old issues are (after 2 months) available through the WISE homepage: www.wiseinternational.org

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