Technology Innovation News Survey

Entries for May 16-31, 2018

Market/Commercialization Information

DOE ENVIRONMENTAL MANAGEMENT BUSINESS OPPORTUNITIES FORUM U.S. Department of Energy, Office of Environmental Management, Washington, DC. Federal Business Opportunities, FBO-594, Solicitation EM, BUSINESS_FORUM_7-2018

The next Business Opportunities Forum by DDE's Office of Environmental Management (EM) has been scheduled for July 31, 2018, from 10:15 AM - 12:00 PM, in the large auditorium, ground floor in the Forrestal Building, 1000 Independence Ave. SW, Washington, DC. Topics will include a discussion of the status of origoing and upcoming procurement opportunities and the latest news on foring business with DOE EM. There is no charge to attend, but pre-registration by July 25, Jults: //www.bm.out/sout/DDI/E/AMM/DI/EM. BISINESS. EMBILY. 72/018/Builton html.

IDIQ CONTRACT FOR SMALL BUSINESS A/E ENVIRONMENTAL SERVICES U.S. Army Corps of Engineers, USACE District, Louisville, KY, Federal Business Opportunities, FBO-5956, Solicitation W912QR18R0026, 2018

This announcement constitutes a request for submittal of SF330 packages and is open only to small businesses under NAICS code 541330. Up to two firms will be selected. The proposed services, which will be obtained by negotiated firm-fixed-price contracts, are for a variety of A/E services for military and civil environmental programs support projects primarily within the Great Lakes and Ohio River Division mission boundaries. The maximum cumulative contract such as 59M, for a total of 51BM between the two contracts, which will be administed by the USACE Louisville District during the 5-year contract period. Projects and Unividual tasks of devices to the services for military of devices to the services of the maximum cumulative contract value for each contract is the service of 51BM between the two contracts, which are during the 5-year contract period. Projects and Unividual tasks of devices to the services of th

IDIQ CONTRACT FOR SDVOSB A/E ENVIRONMENTAL SERVICES U.S. Army Corps of Engineers, USACE District, Louisville, KY. Federal Business Opportunities, FBO-5960, Solicitation W912QR18R0028, 2018

This announcement constitutes, root biological and the first contract, and the next-ranked firm will be awarded the first contract, and the next-ranked firm will be awarded the second contract. The proposed services, which will be obtained by negotiated firm-fixed-price contracts, are for A/E services for environmental support projects primarily within the forest Lakes and holo River Division insiston boundaries, Froidest will be awarded by individual tasks, designs, and other A/E services under this contract, are anticipated to range from approximately 010,000 to strate dates and holo River Division foundaries, Froidest will be awarded by individual tasks, designs, and other A/E services under this contract are anticipated to range from approximately 010,000 to strate dates and the spable of proming works of the service output of the service out

NATIONAL PESTICIDE INFORMATION CENTER U.S. Environmental Protection Agency, Funding Opportunity EPA-HQ-OPP-2018-001, 2018

U.S. EPA is soliciting applications from eligible organizations to support a National Pesticide Information Center (NPIC), a program that provides the public with objective, science-based information on pesticide-related subjects through a website, foil-free telephone service, and outreach. Trained experts respond to questions on the risks associated with pesticide use, who to contact for regulatory enforcement, how to report information on the risks associated with pesticide use, who to contact for regulatory enforcement, how to report information on the risks associated with pesticide use, the to contact for regulatory enforcement, how to report information of the risks associated with pesticide use, the to contact for equilatory enforcement, how to report information of the risks associated with pesticide use, the to contact for equilatory enforcement, how to report information of the risks associated with pesticide use, the contact for equilatory enforcement. Total funding is estimated at \$5M. http://www.contacts.ou/esticide.contact/use/contacts.associated/science/contactscience/contactscience/contac

INCREASED TRANSPARENCY AND CONTROL OF MERCURY IN PERU Department of State, Bureau of Oceans International Environmental-Scientific, Funding Opportunity SFOP0005231, 2018

The project goal is to support Peru's relevant government agencies to increase transparency, traceability, and control over the elemental mercury handling system in Peru through the development of practical policies, regulations, and implementation tools for handling, tracking, and securing mercury. August 1, 2018, is the closing date for applications. Eligibility is limited to U.S. non-profit/nongovernmental organizations subject to section 501(c)(3) of the U.S. tax code, foreign not for-profit/nongovernmental organizations, and public international organizations. A single award is anticipated with an estimated award celling of \$450,000.

Cleanup News

CLEANUP AND CLOSURE OF THE 2009 JET FUEL PIPELINE LEAK Travis Air Force Base Fact Sheet, 2 pp, 2017

Fuel releases were detected in 2009 from a pipeline formerly used to deliver kerosene-based JP-8 git fuel to Travis AFB. After Travis AFB stopped the leak and finished initial responses to protect human health and the environment, the field team used solveral leanup fitchnologies to private the additional set affecting of the solution of the environment of the field team used solveral leanup fitchnologies to private the addition of the solution as affecting of the solution of the solution

SOIL VAPOR EXTRACTION SYSTEM CONSTRUCTION COMPLETION REPORT, CASPER PCE PLUMES ORPHAN SITE, CASPER, WYOMING Wyoming Department of Environmental Quality, Cheyenne. 169 pp, 2017

The Casper PCE Plume Orphan Site occupies -150 acres in an area that comprises residential, commercial, and industrial neighborhoods. Environmental testing in the late 1980s revealed the presence of PCE in groundwater in downtown and north Casper, as well as in the indoor air of some homes. Groundwater PCE concentrations less than one mile downgradient are increasing over time, indicating that the Casper Dry Cleaner and/or residual subsurface solvent mass in the surrounding vicinity is acting as a source zone to sustain the plume. Active soil vapor extraction (SVE) was selected as a means to prevent soil gas to groundwater particinoning, limits oil migration to groundwater impacts, and control vapor intrusion in the vicinity of the dry Cleaner. This report documents the SVE system installation; system strutup, initial monitoring, and operation and maintenance; performance monitoring of the SVE remedy and evaluation and reporting requirements; and references. and references. mining now/medialatarchments/Solid%20%26%20Hazardous%20Waste/Active%20Sites/Casper%20PCF%20Plume/Casper%20PCF%20Plumes%20Orphan%20Site%20Site%20SCF%20Final%20T-10-17.pdf. See also the MNA mentation work plan and EISB construction completion report for this site at <u>http://den.wwoming.gov/Shw/Jachwe-Sites/resources/casper-pre-plume/</u>

UJIMA VILLAGE APARTMENTS/FORMER ATHENS TANK FARM California Regional Water Quality Control Board, Los Angeles Region, GeoTracker Website, 2018

The 122-acre former Athens Tark Farm located in Willowhork was a petroleum product storage and distribution facility owned and operated by Excon Mebil Oil Corporation from the 1920s to mid 1940s. The site once is accurated primarily by the period of the storage and distribution facility owned and operated by Excon Mebil Oil Corporation from the 1920s to mid 1940s. The site once is accurated primarily by the period of the storage and distribution facility owned and operated by Excon Mebil Oil Corporation from the 1920s to mid 1940s. The site once is accurated primarily by the period of the storage and distribution facility owned and operated by Excon Mebil Oil Corporation from the 1920s to mid 1940s. The site once is corpared primarily by the site of the first operator of 2018 relates the total state of the Site of the first operator of 2018 relates the total state is accurated primarily by the site of the site operator of 2018 relates the total state is accurated primarily by the site of the site operator of 2018 relates the total state is accurated primarily by the site of the site operator of 2018 relates the total state is the total state of the site operator of 2018 relates the total state is accurated primarily by the site of the site operator of 2018 relates the total state is accurated primarily by the site of the site operator of 2018 relates the total state is accurated primarily by the site of the site operator of 2018 relates the total state is accurated primarily by the site of the site operator of 2018 relates the total state is accurated primarily by the site of the site of the site operator of 2018 relates the total state of the site operator of 2018 relates the total state of the site operator of the site operator of 2018 relates the total state operator of 2018 relates the total state of the site operator of 2018 relates the total state operator of 2018 relates the total st

IN SITU, LOW TEMPERATURE THERMAL REMEDIATION OF LNAPL WITH PESTICIDES AND OTHER RECALCITRANT COMPOUNDS Dablow, J., J. Baldock, J. Dinham, and K. Johnson. RemTech 2017. Remediation technologies Symposium. Presentation 33, 23 slides, 2017

Namice 2017. Reinciduon reclinicityes symposium: Fresenation 53, 23 andes, 2017 Stei investigation activities at a former pesticide manufacturing plant in the lik lidentified impacts from kerosene and dieldrin to saturated gravels that overlie the regional chalk bedrock. LNAPL was encountered in site wells and a contaminant mass of ~7,000 kg was estimated in the target source zone. To mitigate the risks presented by the LNAPL and high levels of dieldrin to a nearby river and the groundwater in the chalk aquifer, a source zone remediation strategy was evaluated and implemented. A high-temperature strategy using in situ thermal destruction was modeled and evaluated initially, but attaining the target temperature was problematic, which led to the development of an innovative strategy of steam-enhanced extraction to mobilize rather than volatilize the LNAPL at lower temperature strategies in April 2017. The target source zone was brought up to temperature strategies in April 2017. The target source zone was brought up to temperatures following a bench-scale treatability study, a full-scale system was designed and constructed at the ste. Steam injection together with simultaneous was removed as NAPL at average soil temperatures between 70-80°C. Isolated hot species were addressed in June 2017 with in situ chemical oxidation using persulfate activation via sodium hydroxide. Longer abstract: www.esaa ror/wm-content/junads/2017/104.brstract-33. udf

2018 REPORT ON ESTIMATED DIRECT SITE REMEDIATION COSTS FOR NATIONAL PRIORITIES LIST AND STATE ORPHAN SITES California Department of Toxic Substances Control (DTSC), Sacramento. 30 pp, 2018

One of DTSC's core functions is cleaning up contaminated properties throughout the State of California. Funding for this responsibility comes from an annual Budget Act item that transfers funds into the Site Remediation Account (SRA) and appropriates resources for this purpose. The SRA is used exclusively to fund the direct site remediation of both federal Superfund and state orphan sites. This report provides DTSC's cost estimates to the State Legislature for budget year 2016/19 and the two following budget years. The SRA is used exclusively to fund the direct site remediation of both federal Superfund and state orphan sites. This report provides DTSC's cost estimates to the State Legislature for budget year 2016/19 and the two following budget years.

Demonstrations / Feasibility Studies

1.4-DIOXANE REMEDIATION BY EXTREME SOIL VAPOR EXTRACTION (XSVE) Hinchee, R., P. Johnson, P. Dahlen, D. Burris, and D. Becker. ESTCP Project ER-201326, 233 pp, 2018

Although 1,4-dioxane's vapor pressure is in the range of TCE or benzene, 1,4-dioxane is totally water soluble and hence becomes sequestered in vadose zone pore water, which serves as a long-term source of groundwater contamination. Conventional soil vapor extraction (SVE) is able remove some 1,4-dioxane, but a substantial residual source can remain. Extreme soil vapor extraction (SVE) specifically addresses 1,4-dioxane-contaminated soil by increport extraction, and injection of heated air. The former McClellan APB hear Sacramento provided an SVE demonstration is easily according to the substantial residual source can remain. Extreme soil vapor extraction, SVE) is able remove some 1,4-dioxane-contaminated soil by increport extraction, and injection of heated air. The former McClellan APB hear Sacramento provided an SVE demonstration is easily according to the substantial residual source can remain. Extreme soil vapor extraction, and substantial residual source can remain. Extreme soil vapor extraction, and injection of heated air. The former McClellan APB hear Sacramento provided an SVE demonstration is easily according to the substantiane to an extreme the cased extraction well (38-68 ft bgs screened interval each). The system operated for ~13 months with about 98% uptime at injection temperatures maintained the 100-130°C range (md-screen). Post-demonstration, treatment zone decreases of -94% 1,4-dioxane and 45% soil mostare were observed. Downward migration of 1,4-dioxane due to condensation was not observed. A screening-level mass and energy balance model, hypeVent XSVE, was developed to simulate the remediation of 1,4-dioxane due by XSVE. This screen extraction multipation of 1,4-dioxane due to condensation well (376.410/SME). The system operated for ~13 Mediated and the streen extraction extreme and the streen and the streen extraction and the streen extreen extraction and the st

LONG-TERM PERFORMANCE ASSESSMENT AT A HIGHLY CHARACTERIZED AND INSTRUMENTED DNAPL SOURCE AREA FOLLOWING BIOAUGMENTATION Schaefer, C., G. Lavorqna, M. Annable, and A. Haluska. ESTCP Project Re. 201428, 167 pp. 2018

In a study of one period in chlorinated ethene DNAPL source areas following in situ bioaugmentation in heterogeneous media, monitoring was performed up to 3.7 years following active TCE bioremediation using a high-density monitoring network. Soil sampling, passive flux meters, and push-pull tracer testing was performed. Results showed that biogeochemical conditions remained favorable for reductive dechlorination of chlorinated ethenes despite the absence of factate, lactate formation transformation products, CSIA showed that the extent of complete dechlorination was much greater than indicated by ethene generation. Results of push-pull tracer testing confirmed that DNAPL remained in a proton of the source area, consistent with soil and groundwater data. Overall study results suggest biological processes have the potential significantly underestimated the extent of complete dechlorination, as CSIA analysis, provide a more reliable esign and performance monitoring. Humer resolution characterization and monitoring in facilitating improved design and performance monitoring. Humer resolution characterization and monitoring in facilitating improved design and performance monitoring. Humer resolution characterization and monitoring in facilitating improved design and performance monitoring.

Research

FIELD STUDY OF HIGH-DENSITY PASSIVE SAMPLER AND LARGE-VOLUME PURGE METHODS TO CHARACTERIZE SUBSLAB VAPOR PLUMES, FORMER AL PHILLIPS CLEANERS, 515 LAGOON DRIVE, HONOLULU, OAHU, HAWAII Hawaii Department of Healthy, Pear City, HI. 291 pp, 2017

A sampling method study was conducted at a former dry cleaner site. Previous investigations based on traditional passive and active soil vapor sampling methods that identified PCE vapors beneath the building slab provided inconsistent results in terms of the magnitude and extent of the vapor plume. This inconsistency was attributed in part to andom, small scale variability of PCE concentrations within the vapor plume and the small volume of vapor represented by single discrete acknowledge and address this heterogeneity and provide more reliable data for assessment of vapor intrusion risks at sites where existing buildings overle VOC-contaminated soil or groundwater. Two approaches were lessibated in the saber plume provide discrete state in the saber plume and address this heterogeneity and provide more reliable data for assessment of vapor intrusion risks at sites where existing buildings overle VOC-contaminated soil or groundwater. Two approaches were lessibated in the saber plume and so the samples representative of very large, risk-based volumes of vapor intrusion risks. <u>http://less.based.hoh havail.gov/have.mat/Novelabet.terfor/Novelabet.</u>

THE CONTAMINATION LEGACY OF A DECOMMISSIONED IRON SMELTER IN THE ITALIAN ALPS Gallini, L., F. Ajmone-Marsan, and R. Scalenghe. Journal of Geochemical Exploration 186:121-128(2018)

Four decades after cessation of 150 years of ore processing, researchers investigated an area downwind from a decommissioned iron smelter for signs of metals contamination and if any were found to evaluate the options for intervention. Samples taken from topsoils over an area of 15 km² near the pollution source showed total concentrations of 101 mg Cr, 8 mg Co, 41 mg Ni, 70 mg Cu, 143 mg Zn, 6 mg As, 1.3 mg Cd, 0.5 mg Sb, 92 mg Pb, and 1.3 mg Bi Kg/Soil, with standard enrors exceeding 50%. Results indicate that it is unlikely soils in the vicinity of the former smelter area source of dispropriotionate human metals intake. Considering a minimum area of 1 km² and a minimum dept of 10 cm, the total cost of soil removal with subsequent reclamation would be about one quarter of the local municipality's annual budget. Economically feasible options for reducing any risks would likely rely on optimization of risk assessment factors by adopting soil conservation practices. <u>Hint'/metalinessmint altervista cond</u>, <u>Condendore 2018 And</u>.

IPC2017 FIELD TOUR 14th International Phytotechnologies Conference, September 25-29, Montreal, Canada. 17 pp, 2017

This brochure contains descriptions of four sites visited during the 2017 phytotechnologies conference field tour of September 29. The tour included the following projects: Stop 1. Constructed wetlands planted with willow for treatment of municipal wastewater in small municipalities with a population of less than 5,000 inhabitants; Stop 2. Short-rotation willow coppice land application system for treatment of small municipality wastewater in northern regions; Stop 3. Constructed wetland for the treatment of underground contaminated water (C10-C50 HP, HAP, BTEX, isopropylbearcen) from a petrochemical site; and Stop 4. Phytoremediation of moderately contaminated soils in a peri-urban brownfield on Montreal Island using willows, poplars, and herbaceous species. <u>http://doc.bl.org/kipsel/notl.2017.or</u>

USING FIRE TO REMEDIATE CONTAMINATED SOILS Torero, J.L., J.I. Gerhard, L.L. Kinsman, and L. Yerman. Underground Coal Gasification and Combustion, Elsevier, NY, IS

Gerhard, L.L. Kinsman, and L. Yerman. Jal Gasification and Combustion. Elsevier, NY, ISBN: 978-0-08-100313-8. 601-625(2017)

Combustion of an organic phase contained within a porous medium involves an exothermic reaction, during which heat is transmitted from the burning to the pore space and the solid matrix. Contaminant destruction in such applications is largely dominated by smoldering (as opposed to flaming) combustion. The results described in this paper indicate that smoldering remediation is viable across a considerable range of porous media types and subsurface conditions. See additional information on the smoldering technology in a paper attribute science across a considerable range of porous media types and subsurface conditions. See

ORGANIC LIQUID MOBILITY INDUCED BY SMOLDERING REMEDIATION Kinsman, L., J.L. Torero, and J.L. Gerhard. Journal of Hazardous Materials 325:101-112(2017)

Smoldering is a relatively new, energy-efficient thermal treatment for organic liquid waste. Lab column experiments plus analytical and numerical modeling together suggested that for organic liquids mixed with inert sand, downward organi liquid mobilization can occur and affect smoldering behavior under certain conditions. The observed effects included increased peak temperatures (by up to 35%) and increased treatment times (by up to 30%). Downward organic liquid migration occurred when (i) injected Darry air flux was < 3 and 15%). The operating the organic liquid waste temperatures set up to a start set to the main service is an 15%. The observed effects included increased peak temperatures set up to 35%) and (iii) the companic liquid waste temperatures and the observed effect in cluster and effect and the observed effect in cluster and effect and the observed effect in cluster and effect and the observed effect in cluster and the observed effect in cluster and effect and the observed effect and the observed effect in cluster and effect and the observed effect in cluster and effect and the observed effect and the o

METAL SYSTEMS AS TOOLS FOR SOIL REMEDIATION Floris, B., P. Galloni, F. Sabuzi, and V. Conte. Inorganica Chimica Acta 455(pt 2):429-445(2017)

Review of research aimed at soli remediation with metal systems (as found in literature to the end of 2015) is presented with consideration of both inorganic and organic contaminants. The following technologies are reviewed: minerals and bulk metals systems as adsorbent materials in abiotic soil; metal nanoparticles; metal porphyrins-catal porphyrins-catal value with a tennical oxidation; metal-modified Fenton systems; and metal-enhanced electrokinetic methods. Both heterogeneous and homogeneous systems are subjection.

PHYTO-MYCOREMEDIATION OF BENZO[A]PYRENE IN SOIL BY COMBINING THE ROLE OF YEAST CONSORTIUM AND SUNFLOWER PLANT Mandal, S.K. and N. Das. Journal of Environmental Biology 39:261-268(2018)

Biostimulation of soil with a yeast consortium enhanced the total activity of yeasts in the soil. Faster and maximum BaP degradation was obtained using the yeast consortium immobilized on rice husk combined with sunflower plant phytoremediation. <u>http://www.iet.com/active</u>

POLYCYCLIC AROMATIC HYDROCARBONS: A REVIEW Lawal, A.T. and P. Fantke. Cogent Environmental Science 3(1):1339841(2017)

The authors present a review of recent literature that addresses PAHs toxicity and biomonitoring in air, water, soil, sediment, and waste sludge. Sample preparation, such as PAHs extraction, and analytical methods used, are also reviewed with commentary on developments in direct measurement techniques, such as UV absorption spectrometry and synchronous luminescence. In addition, biological and physico-chemical factors that influence PAHs degradation and remediation are discussed https://www.tandfine.com/du/ful/101108/07/332041

A REVIEW ON THE EFFICIENCY OF LANDFARMING INTEGRATED WITH COMPOSTING AS A SOIL REMEDIATION TREATMENT Lukic, B., A. Panico, D. Huguenot, M. Fabbricino, E.D. van Hullebusch, and G. Esposito. Environmental Technology Reviews 6(1):94-116(2017)

This paper reviews the efficiency and application conditions of landfarming as a suitable bioremediation treatment for soils contaminated with PAHs and discusses the feasibility of improving bioremediation performance by combining landfarming with biostimulation and bioguamentation as promosting of granic waste.

DECHLORINATION OF HEXACHLOROBENZENE IN CONTAMINATED SOILS USING A NANOMETALLIC AL/CAO DISPERSION MIXTURE: OPTIMIZATION THROUGH RESPONSE SURFACE METHODOLOGY Jiang, Y., Y. Shang, S. Yu, and J. Liu. International Journal of Environmental Research and Public Health 15(5):872(2018)

A nanometallic AI/CaO (n-AI/CaO) dispersion mixture was developed utilizing ball-milling technology to evaluate the reductive stabilization technique's effect on dechlorination of hexachlorobenzene (HCB) in contaminated soils. The optimal soil moisture content, n-AI/CaO dosage, and grinding time were found to be 7% (m/m), and 24 h, respectively, in the experimental ranges and levels. Under optimal conditions, dechlorination efficiency was 80%. Intermediate product analysis indicated that dechlorination was the process by stepsive loss of chloride atoms. The main pathway observed within 24 h was HCB > pentachlorobenzene > 1,2,3,4-tetrachlorobenzene (TeCB) and 1,2,4,5-TeCB. Results indicated that moderate soil moisture content was crucial for HCB hydrodechlorination. <u>http://www.mdpi.com/1660-4601/15/5/872/htm</u>

MECHANOCHEMICAL MECHANISM OF RAPID DECHLORINATION OF HEXACHLOROBENZENE Deng, S., S. Kang, N., Feng, J. Zhu, B. Yu, X. Xie, and J. Chen. Journal of Hazardous Materinals 333:116-127(2017)

In a study of mechanochemical (MC) dechlorination treatment, hexachlorobenzene (HCB) was chosen as a model pollutant with aluminum and alumina (AI+AI2O3) powders as the co-milling regents. Both intermediate analysis and quantum chemical calculations were adopted to elucidate the free radical dechlorination of HCB. The researchers found that the intermediates and radical-related reactions in the mechanochemical dechlorination of HCB were quite different from what happens in a typical photocatalytic dechlorination process. Impacto different radical reactions on HCB dechlorination were also compared.

DIOXINS DEGRADATION AND REFORMATION DURING MECHANOCHEMICAL TREATMENT Chen, Z., Q. Mao, S. Lu, A. Buekens, S. Xu, X. Wang, and J. Yan. Chemosphere 180:130-140(2017)

Mechanochemical dechiorination and destruction of polychlorinated dioxins and furans (PCDD/F) on fly ash from municipal solid waste incineration was tested with and without addition of CaO and CaO/aluminium powder. Initially, obvious PCDD/F reformation occurred, and a second test series was conducted after removing soluble salts (e.g., NaCl, KCl) by thorough two-stage water washing. The second test series demonstrated good destruction results, especially with addition of CaO/aluminium powder. ninium powder

FORMATION OF BROMINATED AND CHLORINATED DIOXINS AND ITS PREVENTION DURING A PILOT TEST OF MECHANOCHEMICAL TREATMENT OF PCB AND PBDE CONTAMINATED SOIL Lu, M., T. Lv, Y. Li, Z. Peng, G. Caguetta, S. Sheng, J. Huang, G. Yu, and R. Weber. Environmental Science and Pollution Research 24(24):2007-20081(2017)

During a pilot study of mechanochemical (MC) destruction technology conducted for PCBs and polybrominated diphenyl ethers (PBDEs) in contaminated soil, actual applied conditions of the pilot-scale MC destruction process indicated that the temperature increase inside the ball mills had the potential to form high levels of toxic polybrominated and polychlorinated dibenzo-p-dioxins and dibenzofurans (PXDD/FS) in the presence of dioxin precursors. The MC technology therefore was modified for treatment of PCB- and PBDE-contaminated soil include a cooling system to prevent PXDD/F formation during PCB/PBDE destruction. This heat-related issue might be relevant to any contaminated soils containing dioxin precursors during soil treatment with MC and perhaps other non-combustion technology. [Erratum - Correction to Figure 4: Environ Sci Pollut Res Apr 18.]

General News

AVAILABILITY OF DRAFT TOXICOLOGICAL PROFILE: PERFLUOROALKYLS Agency for Toxic Substances and Disease Registry (ATSDR). Federal Registre 83(120):28849(2018)

ATSDR recently announced the release of the Toxicological Profile for Perfluoroalkyls: Draft for Public Comment. The profile characterizes the toxicology and adverse health effects information for perfluoroalkyls. Each ATSDR peer-reviewed profile identifies and reviews the key ilterature that describes a substance's toxicological properties. Visit <u>https://www.atsdr.cdc.gov/toxmm/files/th_asn2/di=11178tid=232</u> for a copy of the draft profile. Comments can be submitted through Regulations.gov at <u>https://www.regulations.gov/tocument70_aTSDR-1015_011104_208</u> (b) and b) an

ADDRESSING VAPOR INTRUSION AT REMEDIATION AND REDEVELOPMENT SITES IN WISCONSIN Wisconsin Department of Natural Resources, 105 pp, 2018

This guide identifies the conditions where assessment of the vapor intrusion pathway is necessary at contaminated sites; sets out the criteria for evaluating health risk; identifies appropriate responses; explains long-term stewardship; and carries when sites with a complete or potential vapor migration pathway may achieve closure. The guide is applicable to contaminated sites where volatilization of subsurface contaminants has migrated or has the potential to migrate to migrate or potential control frame for field of the potential of the set of the potential of the set of the potential of the

ENVIRONMENTAL SAMPLING & ANALYTICAL METHODS (ESAM) PROGRAM U.S. EPA, Homeland Security Research Website, 2018

EPA's Environmental Sampling and Analytical Methods (ESAM) website is a tool that supports the entire environmental characterization process for chemical, biological, radiochemical, and biotoxin contaminants from collection of samples all the way to their analyses. Collectively, ESAM's tools help local, state, and federal emergency response personnel and labs respond more efficiently to incidents, enabling smooth transitions of samples and data from field to lab to public health decision-makers, <u>https://www.ena.onv/homeal-sampling-analytical-methode-seam-norma-home</u>.

ASSESSING THE ECONOMIC AND SOCIETAL BENEFITS OF SRP-FUNDED RESEARCH Suk, W.A., M.L. Heacock, B.A. Trottier, S.M. Amolgebe, M.D. Avakian, H.F. Henry, D.J. Carlin, and L.G. Reed. Environmental Health Perspectives 126(6):5002(2018)

The National Institute of Environmental Health Sciences Superfund Basic Research and Training Program (SRP) funds a wide range of transdisciplinary research projects, supporting and promoting the application of that research to solving real-world problems. Economic and societal benefits of SRP-funded research are illuminated in five cases studies focused on the use of remediation and site monitoring tools: (1) phytoremediation with hybrid poplar and cypres trees (2) vadoes-zone characterization technology; (3) activated carbon to clean up contaminated sediment; (4) steam-enhanced extraction; and (5) biomendiation of MTBE. The analysis identifies added societal benefits of the benefits of the use of remediation and site monitoring tools: (1) phytoremediation added societal benefits of the societal benefits of the societal benefits of the societary, such as creation of small businesses, land and water reuse, sustainable technologies, exposure reduction, and (5) biomediation and societaria endo societaria endot end

THE PATHWAY TO PHYTOTECHNOLOGIES Citv of Montreal Botanical Garden, Space for Life Foundation Website, 2018

Thanks to many years of research and collaboration between scientists at the Montreal Botanical Garden and the *Institut de recherche en biologie vegetale* (IRBV), thousands of live plants will demonstrate their abilities in the Pathway to Phytotechnologies Program in an ambitious project spread over seven stations integrated in the heart of the Botanical Garden. The objective is to use phytotechnologies to treat runoff and wastewater, reduce the heat silonal offect on the banks of ponds, control invsive plants, and demonstrate their impact of city noise and deconstinate soils. Carried out progressively between 2017 and 2023, the seven stations of the project will be financed jointly by the City and the Space for Life Foundation. Th additional amount estimated at \$1.6 million willion, making it possible to develop the Filtering Marshes station, in addition to donations that will invest one dolleration in the space of the Foundation. To date the Foundation has raised over \$1.1 million, making it possible to develop the Filtering Marshes station, in addition to donations that will go the promoting the education aspects of the

ADAPTATION STRATEGIES FOR RESILIENT CLEANUP REMEDIES Asher, C., T. Michelsen, S. Obwdy, and H. Froyland. Washington State Department of Ecology, Toxics Cleanup Program, Olympia. 154 pp, 2017

Ecology conducted a vulnerability assessment for the State's cleanup sites to understand what types of sites are most vulnerable to specific types of environmental impacts: landslide and erosion; wildfire; drought; riverine flooding and extreme rain events; and shoreline changes and coastal inundation. This guide provides a framework and information for a cleanup project manager to (1) assess the risks associated with environmental extremes and with changes to a site's

environment by doing a site-specific vulnerability assessment, and 2) identify adaptation measures that increase resilience across a range of cleanup sites in the phases of site investigations; remedy selection, design, and implementation; and operation and maintenance. Implementing adaptation measures during early stages of the cleanup process may increase the feasible cleanup options, maximize their integrity, and reduce costs in some situations. https://fortress.ag.ou/ce/unbilications/Stummary2ages/12/09572.html

The Technology Innovation News Survey welcomes your comments and suggestions, as well as information about errors for correction. Please contact Michael Adam of the U.S. EPA Office of Superfund Remediation and Technology Innovation at <u>adam michael@epa.gov</u> or (703) 603-9915 with any comments, suggestions, or corrections. Mention of non-EPA documents, presentations, or papers does not constitute a U.S. EPA endorsement of their contents, only an acknowledgment that they exist and may be relevant to the Technology Innovation News Survey audience.