Mix	Abdul Rida, A. M. 1996. <translated> Concentrations and growth of earthworms and plants in soils contaminated by cadmium, copper, iron, lead and zinc: interactions soil- earthworm. Concentrations et crossance de lombriciens et de plantes dans de sols contamines ou non par cd, cu. Soil Biol Biochem 28[8], 1029-1035</translated>
Mix	Abdul Rida, A. M. M. 1996. <translated> Concentrations and growth of earthworms and plants in soils contaminated by cadmium, copper, iron, lead and zinc: interactions plant-soil-earthworm. Concentrations et croissance de lombriciens et de plantes dans des sols contamines ou non pa. Soil Biol Biochem 28[8], 1037-1044</translated>
Mix	Adeniyi, A. A. 1996. Determination of cadmium, copper, iron, lead, manganese, and zinc in water leaf (talinum triangulare) in dumpsites. Environment International 22[2], 259-262
Media	Ahlberg, J., Ramel, C., and Wachtmeister, C. A. 1972. Organolead Compounds Shown to be Genetically Active. Ambio 1, 29-31
Mix	Alberici, T. M., Sopper, W. E., Storm, G. L., and Yahner, R. H. 1989. Trace Metals in Soil Vegetation and Voles from Mine Land Treated with Sewage Sludge. J Environ Qual 18, 115-120
No Dose	Allinson, D. W. and Dzialo, C. 1981. the Influence of Lead, Cadmium and Nickel on the Growth of Ryegrass and Oats. Plant Soil 62, 81-89
FL	Antonov, G. and Garelkov, D. 1993. On the Concentrations of Lead in the Main Components of a Beech Ecosystem of Low Productivity in the Western Balkan Range. Nauka Gorata /For.Sci. 30[4], 9-15
Rev	Aronson, R. L. 1972. Outbreaks of Plumbism in Animals Associated with Industrial Lead Operations. Clin Toxicol 5[2], 169-173
No Dur	Ash, C. P. J. and Lee, D. L. 1980. Lead, cadmium, copper and iron in earthworms from roadside sites 39264. Environ.Pollut., Ser.A: Ecol.Biol 22[1], 59-67
Media	Ash, C. P. J. and Lee, D. J. 1980. Lead, Cadmium, Copper and Iron in Earthworms from Road Sites 39265. Environ Pollut 22A[1], 59-67

Media	Athalye, V. V. and Mistry, K. B. 1972. Uptake and Distribution of Polonium-210 and Lead-210 in Tobacco Plants. Radiat.Bot. 12, 421-425
No Control	Athalye, V. V., Ramachandran, V., and D'souza, T. J. 1995. Influence of Chelating Agents on Plant Uptake of 51Cr, 210Pb and 210Po. Environmental Pollution 89[1], 47-53
No Dur	Aucejo, A., Ferrer, J., Gabaldon, C., Marzal, P., and Seco, A. 1997. Diagnosis of boron, fluorine, lead, nickel and zinc toxicity in citrus plantations in Villarreal, Spain. Water Air Soil Pollut. 94[3/4], 349-360
No Dose	Ausmus, B. 1972. Study of Lead, Copper, Zinc and Cadmium Contamination of Food Chains of Man. Epa R3-73-034, U.S.Epa, Durham, Nc , 117-223018
FL	Avramenko, P. M., Sheveleva, M. A., and Lukin, S. V. 1998. Characteristics of lead, zinc, and cadmium accumulation in peas. Agrokhim.Vestn. [2], 16-17
Media	Babich, H. and Stotzky, G. 1982. Nickel Toxicity to Fungi: Influence of Environmental Factors. Ecotoxicol Environ Saf 6[6], 577-589
ОМ	Baldwin, N. A. and Bennett, J. R. 1990. Effect Of Calcined, Chelated And Liquid Formulations Containing Iron On Turfgrass Color, Acidity, Disease And Earthworm Casting. Z Vegetationstech 13[4], 140-143
FL	Baluk, Antoni, Kocialkowski, Waclaw Z., and Komisarek, Jolanta. 1990. Effect of lead on yield and lead accumulation in plant organs. Pr.Nauk.Inst.Ochr.Rosl. 30[1/2], 173-182
Media	Barker, W. G. 1972. Toxicity Levels of Mercury, Lead, Copper, and Zinc in Tissue Culture Systems of Cauliflower, Lettuce, Potato, and Carrot. Can.J.Bot. 50, 973-976
No Control	Barman, S. C. and Lal, M. M. 1994. Accumulation of heavy metals (Zn, Cu, Cd and Pb) in soil and cultivated vegetables and weeds grown in industrially polluted fields. Journal Of Environmental Biology, 107-115
No Dur	Bartosova, M., Pavel, J., and Koch, M. 1995. Relations between heavy metal levels in soil, detritophagous and phytophagous invertebrates. Toxicol.Environ.Chem. 52[1-4], 13-23
Mix	Basta, N. T. and Sloan, J. J. 1999. Bioavailability of heavy metals in strongly acidic soils treated with exceptional quality biosolids. Journal of Environmental Quality 28[2], 633-638

Media	Bazzaz, F. A., Carlson, R. W., and Rolfe, G. L. 1974. The Effect of Heavy Metals on Plants: Part 1. Inhibition of Gas Exchange in Sunflower by Pb, Cd, Ni, and Ti. Environ Pollut 7, 241-246
Media	Bazzaz, F. A., Rolfe, G. L., and Windle, P. 1974. Differing Sensitivity of Corn and Soybean Photosynthesis and Transpiration to Lead Contamination. J Environ Qual 3[2], 156-158
Media	Bazzaz, F. A., Carlson, R. W., and Rolfe, G. L. 1975. The Inhibition of Corn and Sunflower Photosynthesis by Lead. Physiol.Plant. 34, 326-329
Media	Bazzaz, M. B. and Govindjee. 1974. Effect of Lead Chloride on Chloroplast Reactions. Environ.Lett. 6[3], 175-191
Species	Beeby, A. and Richmond, L. 1987. Adaptation by an Urban Population of the Snail Helix aspersia to a Diet Contaminated with Lead. Environ Pollut 46, 73-82
Media	Beeby, A. N. 1978. Interaction of Lead and Calcium Uptake by the The Woodlouse, Porcellio scaber (Isopoda, Porcellionidae). Oecologia (Berl) 32, 255-262
OM, pH	Beeby, A. N. 1980. Lead Assimilation and Brood-Size in the Woodlouse Porcellio scaber (Crustacea, Isopoda) Following Oviposition. Pedobiologia 20, 360-365
Media	Beeby, A. N. 1985. The Role of Helix aspersa as a Major Herbivore in the Transfer of Lead Through a Polluted Ecosystem. J Appl Ecol 22, 267-275
Media	Beeby, A. N. and Richmond, L. 1988. Calcium Metabolism in Two Populations of the Snail Helix aspersa on a High Lead Diet. Arch.Environ.Contam.Toxicol. 17, 507-511
Media	Beeby, A. N. and Richmond, L. 1989. The Shell as a Site of Lead Deposition in the Snail Helix aspersa. Arch.Environ.Contam.Toxicol. 18, 623-628
pH, OM	Begonia, G. B., Davis, C. D., Begonia, M. F. T., and Gray, C. N. 1998. Growth Responses of Indian Mustard [Brassica juncea (L.) Czern.] and Its Phytoextraction of Lead from a Contaminated Soil. Bull Environ Contam Toxicol 61[1], 38-43
No Toxicant	Behel, D., Kelly, D., Pier, P., Rogers, B., and Sikora, F. 1996. Test Plan for the Phytoremediation Studies of Lead-Contaminated Soil from the Sunflower Army Ammunition Plant, Desoto, Kansas. Volume I. Rep.No.Sfim-Aec-Et-Cr-96198, Prepared for the U.S.Army Environ.Center, Prepared by the Tennessee Valley Authority

Published literature that reported soil toxicity to terrestrial invertebrates and plants was identified, retrieved and screened. Published literature was deemed Acceptable if it met all 11 study acceptance criteria (Fig. 3.3 in section 3 "DERIVATION OF PLANT AND SOIL INVERTEBRATE ECO-SSLs" and ATTACHMENT J in Standard Operating Procedure #1: Plant and Soil Invertebrate Literature Search and Acquisition). Each study was further screened through nine specific study evaluation criteria (Table 3.2 Summary of Nine Study Evaluation Criteria for Plant and Soil Invertebrate Eco-SSLs, also in section 3 and ATTACHMENT A in Standard Operating Procedure #2: Plant and Soil Invertebrate Evaluation and Data Extraction, Eco-SSL Derivation, Quality Assurance Review, and Technical Write-up.) Publications identified as Not Acceptable did not meet one or more of these criteria. All Not Acceptable publications have been assigned one or more keywords categorizing the reasons for rejection (Table 1. Literature Rejection Categories in Standard Operating Procedure #4: Wildlife TRV Literature Review, Data Extraction and Coding).

Environ.Res.Center, Muscle Shoals, Al, 527

No Toxicant	Behel, D., Kelly, D., Pier, P., Rogers, B., and Sikora, F. 1996. Test Plan For The Phytoremediation Studies Of Lead-Contaminated Soil From The Sunflower Army Ammunition Plant, Desoto, Kansas. Volume II. Rep.No.Sfim-Aec-Et-Cr-96198, Prepared for the U.S.Army Environ.Center, Prepared by the Tennessee Valley Authority Environ.Res.Center, Muscle Shoals, Al 5, 27
Media	Bengtsson, G., Gunnarsson, T., and Rundgren, S. 1983. Growth Changes Caused by Metal Uptake in a Population of Onychiurus armatus (Collembola) Feeding on Metal Polluted Fungi. Oikos 40, 216-225
Media	Bengtsson, G., Gunnarsson, T., and Rundgren, S. 1985. Influence of Metals on Reproduction, Mortality and Population Growth in Onychiurus armatus (Collembola). J Appl Ecol 22, 967-978
No ERE	Bengtsson, G. and Rundgren, S. 1992. Seasonal Variation of Lead Uptake in the Earthworm Lumbricus terrestris and the Influence of Soil Liming and Acidification. Arch.Environ.Contam.Toxicol. 23, 198-205
Rev	Bennett, A. C. 1971. Toxic Effects of Aqueous Ammonia, Copper, Zinc, Lead, Boron, and Manganese on Root Growth 37449. In: E.W.Carson (Ed.), The Plant Root and Its Environment, Chapter 22, Charlottesville University Press, VA, 669-683
No Dose	Berg, M. H. 1970. Lead Absorption from Soil into Legumes. J Minn Acad Sci 36[2-3], 96
Media	Bersenyi, A., Fekete, S., Hullar, I., Kadar, I., Szilagyi, M., Glavits, R., Kulcsar, M., Mezes, M., and Zoldag, L. 1999. Study of the Soil-Plant (Carrot)-Animal Cycle of Nutritive and Hazardous Minerals in a Rabbit Model. Acta Vet.Hung. 47[2], 181-190
FL	Bertels, C., Ruether, P., Kahle, H., and Breckle, S. W. 1989. Root System Growth of Beech Seedlings in Cadmium and Cadmium-Lead Contaminated Soils (Die Entwicklung des Wurzelsystems von Buchenkeimlingen bei Cadmium- und Kombinierter Cadmium-/Bleibelastung). Verh.Ges.Oekol. 18, 367-371
Media	Beyer, W. N. and Anderson, A. 1985. Toxicity to Woodlice of Zinc and Lead Oxides Added to Soil Litter. Ambio 14[3], 172-174

Media	Bharti, N. and Singh, R. P. 1993. Growth and Nitrate Reduction by Sesamum indicum cv PB-I Respond Differentially to Lead. Phytochemistry 33[3], 531-534
No Dose	Bhuiya, M. R. H. and Cornfield, A. H. 1972. Effects of Addition of 1000 ppm Cu, Ni, Pb and Zn on Carbon Dioxide Release During Incubation of Soil Alone and After Treatment with Straw. Environ.Pollut. 3, 173-177
No Dose	Bhuiya, M. R. H. and Cornfield, A. H. 1974. Incubation Study on Effect of pH on Nitrogen Mineralisation and Nitrification in Soils Treated with 1000 ppm Lead and Zinc, as Oxides. Environ.Pollut. 7, 161-164
No Control	Bhuiya, M. R. H. and Cornfield, A. H. 1976. Effect of Addition of Cu, Cr, Pb and Zn on Nitrogen Mineralisation and Nitrification During Incubation of Sandy Soils. Bangladesh J.Biol.Sci. 5[1], 18-20
Mix	Bisessar, S. 1982. Effect of Heavy Metals on Microorganisms in Soils near a Secondary Lead Smelter. Water Air Soil Pollut 17[3], 305-308
Media	Bittell, J., Koeppe, D. E., and Miller, R. J. 1974. Sorption of Heavy Metals Cations by corn Mitochondria and the Effects on Electron and Energy Transfer Reactions. Physiol Plant 30, 226-230
Mix	Blair, C. W., Scanlon, P. F., and Hiller, A. L. 1978. Lead, Cadmium, Nickel, and Zinc Levels in Earthworms and Mammals Recovered near Highways of Different Traffic Volumes. Va.J.Sci. 29[2], 57 (ABS)
No Dose	Blaylock, Michael J., Salt, David E., Dushenkov, Slavik, Zakharova, Olga, Gussman, Christopher, Kapulnik, Yoram, Ensley, Burt D., and Raskin, Ilya. 1997. Enhanced accumulation of Pb in indian mustard by soil-applied chelating agents. Environ.Sci.Technol. 860-865
Mix	Boisson, J., Ruttens, A., and Vangronsveld, J. 1999. Evaluation of Hydroxyapatite as a Metal Immobilizing Soil Additive for the Remediation of Polluted Soils. Part I. Influence of Hydroxyapatite on Metal Exchangeability in Soil, Plant Growth and Plant Metal Accumulation. Environ Pollut 104[2], 225-233
No Dur	Boon, D. Y. and Soltanpour, P. N. 1992. Lead, cadmium and zinc contamination of aspen garden soils and vegetation. J Environ Qual 21[1], 82-86

No Dur	Boruvka, L., Kozak, J., and Kristoufkova, S. 1997. Distribution of cadmium, lead, and zinc in plants grown on heavily polluted soils. Rostl.Vyroba 43[6], 249-256
Mix	Bradshaw, A. D. 1952. Populations of Agrostis tenuis Resistant to Lead and Zinc Poisoning. Nature (London) 169, 1098-1110
Rev	Breckle, S. W. and Kahle, H. 1992. Effects of Toxic Heavy Metals Cadmium Lead on Growth and Mineral Nutrition of Beech (Fagus sylvatica L.). Vegetario 101[1], 43-53
Rev	Brennan, M. A. and Shelley, M. L. 1999. A Model of the Uptake, Translocation, and Accumulation of Lead (Pb) by Maize for the Purpose of Phytoextraction. Ecol.Eng. 12[3/4], 271-297
Rev	Brewer, R. F. 1966. Lead. In: H.D.Chapman (Ed.), Diagnostic Criteria for Plants and Soils, University of California, Berkeley, CA , 213, 216
Media	Brown, B. E. 1977. Uptake of Copper and Lead by a Metal Tolerant Isopod Asellus meridianus Rac. Freshwater Biol 7[3], 235-244
No Dur	Brown, D. H. and Slingsby, D. R. 1972. The Cellular Location of Lead and Potassium in the Lichen Cladonia rangiformis (L.) Hoffm. New Phytol 71, 297-305
Mix	Brown, G. 1995. The Effects of Lead and Zinc on the Distribution of Plant Species at Former Mining Areas of Western Europe. Flora (Jena) 190[3], 243-249
FL	Brown, Gary. 1990. Ecological study of the vegetation in the former lead-mining area near Mechernich (Eifel Mountains). Angew.Bot. 64[5-6], 457-488
OM, pH	Cadmium, Copper, and Lead. Environ Sci & Technol 7[2], 131-135
Media	Buckles, V. P. 1999. Can the Pattern of the Leucage venusto Webs be Used to Indicate Environmental Contamination? Bull Environ Contam Toxicol 62[5], 563-569
Media	Burzynski, M. and Jakob, M. 1983. Influence of Lead on Auxin-Induced Cell Elongation. Acta Soc.Bot.Pol. 52[3/4], 231-239
Media	Burzynski, M. and Grabowski, A. 1984. Influence of Lead on Nitrate Uptake and Reduction in Cucumber Seedlings. Acta Soc.Bot.Pollut. 53[1], 77-86

Media	Burzynski, M. 1985. Influence of Lead on the Chlorophyll Content and on Initial Steps of Its Synthesis in Greening Cucumber Seedlings. Acta Soc.Bot.Pol. 54[1], 95-105
Media	Burzynski, M. 1987. The Uptake and Transpiration of Water and the Accumulation of Lead by Plants Growing on Lead Chloride Solutions. Acta Soc.Bot.Pol. 56[2], 271-280
No Dose	Cancio, I., Gwynn, I., Ireland, M. P., and Cajaraville, M. P. 1995. The Effect of Sublethal Lead Exposure on the Ultrastructure and on the Distribution of Acid Phosphatase Activity in Chloragocytes of Earthworms (Annelida, Oligochaeta). Histochem J 27[12], 965-973
Media	Carlson, R. W., Bazzaz, F. A., and Rolfe, G. L. 1975. The Effect of Heavy Metals on Plants: Part II. Net Photosynthesis and Transpiration of Whole Corn and Sunflower Plants Treated with Pb, Cd, Ni, and Ti. Environ Research 10, 113-120
OM, pH	Carlson, R. W. and Bazzaz, F. A. 1977. Growth Reduction of American Sycamore (Plantanus occidentalis L.) Caused by Pb-Cd Interaction 40295. Environ Pollut 12[4], 243-253
OM, pH	Carlson, R. W. and Bazzaz, F. A. 1977. Growth Reduction in American Sycamore (Plantanus occidentalis L.) Caused by Pb-Cd Interaction 40294. Environ Pollut 12, 243-253
No ERE	Carlson, R. W. and Rolfe, G. L. 1979. Growth of Rye Grass and Fescue as Affected by Lead-Cadmium-Fertilizer Interaction. J Environ Qual 8[3], 348-352
Species	Cartwright, B. and Tiller, K. G. 1976. Heavy Metal Contamination of Soils Around a Lead Smelter at Port Pirie, South Australia. Aust.J.Soil Res. 15, 69-81
OM, pH	Cast. 1976. Application of Sewage Sludge to Cropland: Appraisal of Potential Hazards of the Heavy Metals to Plants and Animals. Rep.No.64, Counc Agric Sci Technol, Ames, IA, 63
No Dose	Cataldo, D. A. and Wildung, R. E. 1978. Soil and Plant Factors Influencing the Accumulation of Heavy Metals by Plants. Environ. Health Perspect. 27, 149-159
FL	Celardin, F. and Landry, J. C. 1988. Bioindicators of pollution earthworms and heavy metals in soil. ARCH SCI (GENEVA). Archives des Sciences (Geneva). 41 (2). 1988. 225-228. 41[2], 225-228

No Dur	Chambers, J. C. and Sidle, R. C. 1991. Fate of heavy metals in an abandoned lead zinc tailings pond I. Vegetation. J Environ Qual 20[4], 745-751
Abstract	Chaney, R. and Ryan, J. 1995. Risk Based Standards For Arsenic, Lead And Cadmium In Urban Soils. Summary Of Information And Methods Developed To Estimate Standards For Cd, Pb And As In Urban Soils 6615. Govt-Reports-Announcements-&-Index-(GRA&I) [19]
Media	Chaney, W. R. and Strickland, R. C. 1984. Relative toxicity of heavy metals to red pine pinus-resinosa pollen germination and germ tube elongation. J Environ Qual 13[3], 391-394
Not Avail	Chang, L. W., Meier, J. R., and Smith, M. K. 1996. Evaluation of Remediation of Lead Contaminated Soil Using Plant Toxicity and Genotoxicity Assays 11470. Environ.Molec.Mutagen. 27[Suppl. 27], 13 (ABS)
No Dose	Chang, L. W., Meier, J. R., and Smith, M. K. 1997. Application of Plant and Earthworm Bioassays to Evaluate Remediation of a Lead-Contaminated Soil. Arch.Environ.Contam.Toxicol. 32[2], 166-171
Media	Chen, Huaiman, Lin, Qi, and Zheng, Chunrong. 1998. Interaction of Pb and Cd in soil- water-plant system and its mechanism: II. Pb-Cd interaction in rhizosphere. Pedosphere 8[3], 237-244
No Dose	Chen, J., Huang, J. W., Caspar, T., and Cummingham, S. D. 1996. Using arabidopsis to study lead accumulation and tolerance in plants. Abstracts of Papers American Chemical Society, AGRO
No Control	Chen, J., Huang, J. W., Caspar, T., and Cunningham, S. D. 1997. Arabidopsis thaliana as a Model System for Studying Lead Accumulation and Tolerance in Plants. In: E.L.Kruger, T.A.Anderson, and J.R.Coats (Eds.), Phytoremediation of Soil and Water Contaminants, Chapter 19, ACS Symp.Ser.No.664, 264-273
No Dose	Chen, Z. S. 1991. Cadmium and Lead Contamination of Soils Near Plastic Stabilizing Materials Producing Plants in Northern Taiwan. Int.Conf.on Metals in Soils, Waters, Plants and Animals, Orlando, FL, April 30-May 3, 1990, Water Air Soil Pollut. 57/58, 745-754
Media	Cheng-nong, Y., Yi, L., Tian-zhi, W., Zhi-qun, T., Song-sheng, Q., and Ping, S. 1999. Thermochemical Studies of the Toxic Actions of Heavy Metal Ions on Rhizopus nigricans. Chemosphere 38[4], 891-898

No Dur	Chernykh, N. A. 1991. Alteration of the concentrations of certain elements in plants by heavy metals in the soil. Sov Soil Sci (Engl Transl Pochvovedenie).Soviet Soil Science (English Translation of Pochvovedenie) 23[6], 45-53
No Dur	Chettri, M. K., Sawidis, T., and Karataglis, S. 1997. Lichens As A Tool For Biogeochemical Prospecting. Ecotoxicol-Environ-Saf 38[3], 322-335
Media	Cheung, Y. H., Wong, M. H., and Tam, N. F. Y. 1989. Root and Shoot Elongation as an Assessment of Heavy Metal Toxicity and `Zn Equivalent Value' of Edible Crops. Hydrobiologia 188/189, 377-383
OM, pH	Chisholm, D. 1972. Lead, Arsenic, and Copper Content of Crops Grown on Lead Arsenate- Treated and Untreated Soils. Can J Plant Sci 52, 583-588
No ERE	Chlopecka, A. and Adriano, D. C. 1997. Influence of Zeolite, Apatite and Fe-oxide on Cd and Pb Uptake by Crops. Sci.Total Environ.207(2-3):195-206 207[2-3], 195-206
No ERE	Chlopecka, Anna. 1993. Forms of Trace Metals from Inorganic Sources in Soils and Amounts Found in Spring Barley. Water Air and Soil Pollution 69[1-2], 127-134
No ERE	Chlopecka, Anna. 1997. Copper and lead species in soil and their uptake by plants when applied as carbonates. Dev.Plant Soil Sci. 71, 459-468
FL	Chrenekova, Eva, Lahucky, Ladislav, and Vollmannova, Alena. 1991. Root absorption of lead and cadmium by spring barley. Pol'nohospodarstvo 37[2], 137-144
Mix	Chukwuma, Chrysanthus. 1993. Comparison of the accumulation of cadmium, lead and zinc in cultivated and wild plant species in the derelict Enyigba lead-zinc mine. Toxicol.Environ.Chem. 38[3-4], 167-173
No Dur	Chukwuma, Chrysanthus, Sr. 1994. Evaluating Baseline Data for Lead and Cadmium in Rice, Yam, Cassava and Guinea Grass from Cultivated Soils in Nigeria (Erratum to document cited in CA122:74215). Toxicol.Environ.Chem. 46[1-2], 135
No Dur	Chukwuma, Chrysanthus, Sr. 1994. Evaluating baseline data for lead (Pb) and cadmium (Cd) in rice, yam, cassava and guinea grass from cultivated soils in Nigeria. Toxicol.Environ.Chem. 45[1-2], 45-56
Mix	Chumbley, C. G. and Unwin, R. J. 1982. Cadmium and Lead Content of Vegetable Crops

	Grown on Land with a History of Sewage Sludge Application. Environ.Pollut. 4B, 231-237
Media	Clark, R. B., Pier, P. A., Knudsen, D., and Maranville, J. W. 1981. Effect of Trace Element Deficiencies and Excesses on Mineral Nutrients in Sorghum. J.Plant Nutr. 3[1-4], 357-374
No Toxicant	Clevenger, T. E. and Rao, D. 1996. Mobility of Lead in Mine Tailings Due to Landfill Leachate. Water Air Soil Pollut. 91[3/4], 197-207
Mix	Cook, C. M., Sgardelis, S. P., Pantis, J. D., and Lanaras, T. 1994. Concentrations of Pb, Zn, and Cu in Taraxacum spp. in relation to urban pollution. Bulletin of Environmental Contamination and Toxicology 53[2], 204-210
Rev	Cook, N. and Hendershot, W. H. 1996. The Problem of Establishing Ecologically Based Soil Quality Criteria. The Case of Lead. Can J Soil Sci 76, 335-342
No Dose	Cooper, E. M., Sims, J. T., Cunningham, S. D., Huang, J. W., and Berti, W. R. 1999. Chelate-Assisted Phytoextraction of Lead from Contaminated Soils. J Environ Qual 28[6], 1709-1719
No Dose	Corp, N. and Morgan, A. J. 1991. Accumulation Of Heavy Metals From Polluted Soils By The Earthworm, Lumbricus Rubellus: Can Laboratory Exposure Of 'Control' Worms Reduce Biomonitoring Problems? Environ Pollut 74[1], 39-52
Media	Coughtrey, P. J. and Martin, M. H. 1979. Cadmium, Lead and Zinc Interactions and Tolerance in Two Populations of Holcus lanatus L. Grown in Solution Culture. Environ.Exp.Bot. 19, 285-290
No COC	Cox, W. J. and Rains, D. W. 1972. Effect of Lime on Lead Uptake by Five Plant Species. J Environ Qual 1[2], 167-169
Species	Crecelius, E. A., Johnson, C. J., and Hofer, G. C. 1974. Contamination of soils Near a Copper Smelter by Arsenic, Antimony, and Lead. Water Air Soil Pollut 3, 337-342
Mix	Cunha Bustamante, M. Biomonitoring Of Heavy Metals Using Higher Plants Growing At Former Mining Sites. Govt-Reports-Announcements-&-Index-(GRA&I),-Issue-01,-1995
Mix	Czuba, M. and Hutchinson, T. C. 1980. Copper and Lead Levels in Crops and Soils of the Holland Marsh Area-Ontario. J Environ Qual 9[4], 566-575

Media	D'souza, T. J. and Mitry, K. B. 1970. Comparative Uptake of Thorium-230, Radium-226, Lead-210 and Polonium-210 by Plants. Radiat.Bot. 10, 293-295
Media	Dallinger, R. and Wieser, W. 1984. Patterns of Accumulation, Distribution and Liberation of Zn, Cu, Cd and Pb in Different Organs of the Land Snail Helix pomatia, L. Comp Biochem Physiol 79C, 117-124
Mix	Davies, B. E. and Roberts, L. J. 1975. Heavy Metals in Soils and Radish in a Mineralised Limestone Area of Wales, Great Britain. Sci.Total Environ. 4, 249-261
No Dur	Davies, B. E. 1992. Interrelationships between soil properties and the uptake of cadmium, copper, lead and zinc from contaminated soils by radish Raphanus-sativus L. Water Air Soil Pollut 63[3/4], 331-342
Mix	De Pieri L.A., Buckley, W. T., and Kowalenko, C. G. 1997. Cadmium and Lead Concentrations of Commercially Grown Vegetables and of Soils in the Lower Fraser Valley of British Columbia. Can.J.Soil Sci. 77[1], 51-57
No Dur	De, Nava C. C. 1988. Environmental lead contamination in Mexico. Third Chemical Congress of North America Held at the 195Th American Chemical Society Meeting, Toronto, Ontario, Canada, June 5-10, 1988.Abstr Pap Chem Congr North Am.3 (1).1988.Envr 182. 3[1], 182
No Dur	Dedollph, R., Haar, G. T., Holtzman, R., and Lucas, H. 1970. Sources of Lead in Perennial Ryegrass and Radishes. Environ Sci & Technol 4[3], 217-223
Mix	Denduluri, S. 1994. Ameliorative effects of ethylenediamine tetraacetic acid and nitrilo triacetic acid on lead toxicity in okra (abelmoschus esculentus l.) grown in sewage-irrigated soil. Bulletin of Environmental Contamination and Toxicology 52[4], 516-522
Mix	Denduluri, Srinivas. 1993. Reduction of lead accumulation by ethylenediamine tetraacetic acid and nitrilo triacetic acid on okra (Abelmoschus esculentus l.) grown in sewage-irrigated soil. Bulletin of Environmental Contamination and Toxicology 51[1], 40-45
OM, pH	Denneman, C. A. J. and Van Straalen, N. M. 1991. The Toxicity of Lead and Copper in Reproduction Toxicity Tests Using the Oribatide Mite Platynothrus peltifer. Pedobiologia 35, 305-311
Mix	Descamps, M., Fabre, M. C., Grelle, C., and Gerard, S. 1996. Cadmium and Lead Kinetics

	During Experimental Contamination and Decontamination of the Centipede Lithobius forficatus L. Arch.Environ.Contam.Toxicol. 31[3], 350-353
No Dur	DeShields, B. R., Meredith, R. W., Griffin, D., Laughlin, T., and Collins, W. 1998. The Use of Field Methods to Evaluate the Toxicity of Lead to Plants at a Small Arms Firing Range. In: E.E.Little, A.J.DeLonay, B.M.Greenberg (Eds.), Environmental Toxicology and Risk Assessment, Volume 7, ASTM STP 1333, Philadelphia, PA, 166-183
Media	Devkota, B. and Schmidt, G. H. 1999. Effects of Heavy Metals (Hg2+, Cd2+, Pb2+) During the Embryonic Development of Acridid Grasshoppers (Insecta, Caelifera). Arch.Environ.Contam.Toxicol. 36[4], 405-414
ОМ	Diab, G. S., Emara, M. D., El Sokkary, E. H., and El Kouny, H. M. 1991. Cadmium and Lead Distribution in Oil-Water System and in Oil Plants Grown in Sandy Soils Irrigated with Cd and Pb Polluted Water. Alexandria Sci.Exch. 12[3], 557-577
OM, pH	Diaz, G., Azcon-Aguilar, C., and Honrubia, M. 1996. Influence of Arbuscular Mycorrhizae on Heavy Metal (Zn and Pb) Uptake and Growth of Lygeum spartum and Anthyllis cytisoides. Plant Soil 180[2], 241-249
рН	Doelman, P. and Haanstra, L. 1979. Effects of Lead on the Decomposition of Organic Matter. Soil Biol Biochem 11, 481-485
Media	Doelman, P., Nieboer, G., Schroote., J., and Visser, M. 1984. Antagonistic and Synergistic Toxic Effects of Pb and Cd in a Simple Foodchain - Nematodes Feeding on Bacteria or Fungi. Bull Environ Contam Toxicol 32[6], 717-723
Rev	Donkin, Steven G. 1997. Graphical determination of metal bioavailability to soil invertebrates utilizing the Langmuir sorption model. ASTM Spec.Tech.Publ., VSTP 1317, Environmental Toxicology and Risk Assessment: Modeling and Risk Assessment 6, 28-43
Mix	Dorn, C. R., Pierce, J. O., Chase, G. R., and Phillips, P. E. 1975. Environmental Contamination by Lead, Cadmium, Zinc, and Copper in a New Lead-Producing Area. Environ Res 9, 159-172
FL	Drabent, Z., Radecka, H., and Radecki, J. 1988. Effect of Fertilization on Magnesium, Manganese, and Zinc Uptake by Corn Growing on Soil Polluted by Tetraethyllead (Wplyw Skazenia Gleby Czteroetyloolowiem na Zawartosc Mg, Mn i Zn w Kukurydzy). Acta Acad.Agric.Tech.Olstenensis [46], 49-58

Mix	Dragland, S. 1996. Content of Cadmium and Lead in Chamomile (Chamomilla recutita L.) and Feverfew (Tanacetum parthenium L.) Grown in Different Parts of Norway (Innhold av Kadmium og bly i Kamille (Chamomilla recutita L.) og Matrem (Tanacetum parthenium L.) Dyrket pa Ulike Steder i Norge). Norsk.Landbruksforsking 10[3/4], 181-188
Mix	Dudka, S., Piotrowska, M., and Terelak, H. 1997. Transfer of cadmium, lead, and zinc from industrially contaminated soil to crop plants: a field study. Environ.Pollut. 94[2], 181-188
No Dur	Dugdale, P. J. 1978. Cadmium in the Lead Smelter at Belledune: Its Association with Heavy Metals in the Ecosystem. In: Proc.1st Int.Cadmium Conf., Cadmium 77, Jan.31- Feb.2, 1977, San Francisco, CA , 53-75
No Toxicant	Dusenbery, D. B. 1988. Avoided Temperature Leads To The Surface: Computer Modeling Of Slime Mold And Nematode Thermotaxis. Behav.Ecol.Sociobiol. 22[3], 219-223
Mix	Dushenko, William T., Grundy, Stephen L., and Reimer, Kenneth J. 1996. Vascular plants as sensitive indicators of lead and pcb transport from local sources in the canadian arctic. Science of the Total Environment 188[1], 29-38
Media	Dushenkov, V., Kumar, P. B. A. N., Motto, H., and Raskin, I. 1995. Rhizofiltration: The Use of Plants to Remove Heavy Metals From Aqueous Streams. Environ Sci Technol 29[5], 1239-1245
FL	Duwensee, H. A. 1992. Anthocyanin Coloration in Agrostis stolonifera L. on Heavy-Metal- Containing Soils (Lead, Zinc) in the Harz (Zur Anthocyanfarbung bei Agrostis stonlonifera L. auf Schwermetallboden (Pb, Zn) im Harz). Florist.Rundbriefe 26[1], 48-49 (GER)
FL	Dzeletovic, Zeljko, Filipovic, Radoslav, Djurdjevic, Melanija, and Jakovljevic, Miodrag. 1991. Influence of elevated lead content in arable land on the uptake of specific elements and the formation of oats biomass. Arh.Poljopr.Nauke 52[187], 229-236
Media	Ebert, Georg and Dimerski, Christian. 1998. Influence of lead application to roots and shoots of 'Elsanta' strawberry plants on growth, gas exchange, and lead partitioning. Gesunde Pflanz. 50[6], 157-161
Meth	Egorov, Yu L. and Kirillov, V. F. 1996. Ecologic significance and hygienic regulation of lead and cadmium in various media (review of literature). Meditsina Truda i Promyshlennaya Ekologiya 0[10], 18-25

Rev	Eisler, R. 1988. Lead Hazards To Fish, Wildlife, And Invertebrates: A Synoptic Review. Biological Report 85 (1.14), Govt Reports Announcements & Index (GRA&I) [14]
No Dur	Eklund, Mats. 1995. Cadmium and lead deposition around a swedish battery plant as recorded in oak tree rings. Journal of Environmental Quality 24[1], 126-131
OM, pH	El Demerdashe, S., Dahdoh, M. S. A., Foda, M. S. A., and El Kassas, H. 1996. Charcoal as a Controlling Material for Soil Pb Pollution. Egypt.J.Soil Sci. 36[1-4], 257-268
No Dose	Elkhatib, E. A., Elshebiny, G. M., and Mohamed, A. A. 1993. Extractability and availability of lead from calcareous egyptian soils. Arid Soil Res.Rehabil. 7[2], 113-124
Media	Ellender, G. and Ham, K. N. 1987. Connective-Tissue Responses to Some Heavy-Metals. 2. Lead - Histology and Ultrastructure. Br J Exp Pathol 68[3], 291-307
ОМ	Eltrop, L., Brown, G., Joachim, O., and Brinkmann, K. 1991. Lead tolerance of betula and salix in the mining area of Mechernich Germany. Plant Soil 131[2], 275-286
No Dur	Emerson, R. Results Of Phytotoxicology Survey, Former Sanderson-Hearld Property, Paris, 1995. Govt-Reports-Announcements-&-Index-(GRA&I),-Issue-11,-1997
Mix	Emerson, R. 1997. Phytotoxicology Vegetation Assessment Survey: Tonolli Company Of Canada Ltd., Mississauga (1992). Govt-Reports-Announcements-&-Index-(GRA&I),-Issue-18,-1997 [18]
Mix	Emerson, R. N. 1993. Phytotoxicology Soil And Vegetation Lead Assessment Surveys In The Vicinity Of Highway 401, Toronto, 1972, 1979 And 1990. Govt-Reports- Announcements-&-Index-(GRA&I) [11]
Meth	Emmerling, C., Krause, K., and Schroeder, D. 1997. The Use Of Earthworms In Monitoring Soil Pollution By Heavy Metals. Zeitschrift Fuer Pflanzenernaehrung Und Bodenkunde 160[1], 33-39
Media	Ensley, Burt D., Blaylock, Michael J., Dushenkov, Slavik, Kumar, Nanda P. B. A., Kapulnik, Yoram, and Huang, Jianwei. 1997. Hyperaccumulation of metals in plant shoots, useful for soil phytoremediation. 67
No Control	Entry, J. A. and Emmingham, W. H. 1996. Accumulation of lead and zinc in contaminated potting soil by tree seedlings. Abstracts of Papers American Chemical Society, AGRO

No ERE	Environmental Research Branch, Whiteshell Nuclear Research Est. Atomic Energy of Canada Limited. 1992. Effect of Soil Type on Radionuclides in Plants. Field Study. Govt Reports Announcements & Index (GRA&I) 6, 39 p.
No Control	Epstein, A. L., Gussman, C. D., Blaylock, M. J., Yermiyahu, U., Huang, J. W., Kapulnik, Y., and Orser, C. S. 1999. EDTA and Pb-EDTA Accumulation in Brassica juncea Grown in Pb-Amended Soil. Plant Soil 208[1], 87-94
Media	Fargasova, A. 1994. Effect of Pb, Cd, Hg, As, and Cr on Germination and Root Growth of Sinapis alba Seeds. Bull Environ Contam Toxicol 52, 452-456
No Dose	Feng, J. and Barker, A. V. 1992. Ethylene evolution and ammonium accumulation by nutrient-stressed tomatoes grown with inhibitors of ethylene synthesis or action. Journal Of Plant Nutrition. 15[2], 155-167
Mix	Ferrari, B., Radetski, C. M., Veber, A. M., and Ferard, J. F. 1999. Ecotoxicological Assessment of Solid Wastes: A Combined Liquid- and Solid-Phase Testing Approach Using a Battery of Bioassays and Biomarkers. Environ Toxicol Chem 18[6], 1195-1202
FL	Fiussello, N. and Molinari, M. T. 1973. Effect of Lead on Plant Growth (Azione del Piombo Sull'Accrescimento dei Vegetali). Allionia 19, 89-96
Media	Fleming, T. P. and Richards, K. S. 1982. Localization Of Adsorbed Heavy Metals On The Earthworm Body Surface And Their Retrieval By Chelation. Pedobiologia 23[6], 415-418
Media	Fodor, Ferenc, Sarvari, Eva, Lang, Ferenc, Szigeti, Zoltan, and Cseh, Edit. 1996. Effects of Pb and Cd on cucumber depending on the Fe-complex in the culture solution. J.Plant Physiol. 148[3/4], 434-439
Media	Forge, T. A., Berrow, M. L., Darbyshire, J. F., and Warren, A. 1993. Protozoan bioassays of soil amended with sewage sludge and heavy metals, using the common soil ciliate Colpoda steinii. Biol.Fertil.Soils 16, 282-286
Rev	Fowler, B. A. and Mahaffey, K. R. 1978. Interactions Among Lead, Cadmium, and Arsenic in Relation to Porphyrin Excration Patterns. Environ Health Perspect 25, 87-90
No Dur	Franson, J. C., Petersen, M. R., Meteyer, C. U., and Smith, M. R. 1995. Lead Poisoning of Spectacled Eiders (Somateria fischeri) and of a Common Eider (Somateria mollissima) in Alaska. J Wildl Dis 31[2], 268-271

No Dose	Gelinas, Y. and Schmit, J. P. 1997. Extending the Use of the Stable Lead Isotope Ratios as a Tracer in Bioavailability Studies. Environ.Sci.Technol. 31[7], 1968-1972
Media	Gigliotti, G., Businelli, D., and Giusquiani, P. L. 1996. Trace Metals Uptake and Distribution in Corn Plants Grown on a 6-Year Urban Waste Compost Amended Soil. Agric.Ecosyst.Environ. 58[2/3], 199-206
No Dose	Gill, B. S. and Sandhu, S. S. 1992. Application of the tradescantia micronucleus assay for the genetic evaluation of chemical mixtures in soil and aqueous media. Mutation Research 270[1], 65-69
Species	Gimeno-Garcia, E., Andreu, V., and Boluda, R. 1995. Distribution of heavy metals in rice farming soils. Archives of Environmental Contamination and Toxicology 29[2], 476-483
Mix	Gingell, S. M., Campbell, R., and Martin, R. 1976. The Effect of Zinc, Lead, and Cadmium Pollution on the Leaf Surface Microflora. Environ Pollut 11[1], 25-37
Species	Gintenreiter, S., Ortel, J., and Nopp, H. J. 1993. Effects of different dietary levels of cadmium, lead, copper, and zinc on the vitality of the forest pest insect Lymantria dispar L. (Lymantriidae, Lepid). Archives of Environmental Contamination and Toxicology , 62-66
Mix	Gintenreiter, S., Ortel, J., and Nopp, H. J. 1993. Bioaccumulation of Cadmium, Lead, Copper, and Zinc in Successive Developmental Stages of Lymantria dispar L. (Lymantriidae, Lepid): A Life Cycle Study. Archives of Environmental Contamination and Toxicology 25[1], 55-61
No Dur	Gish, C. D. and Christensen, R. E. 1973. Cadmium nickel lead and zinc in earthworms from roadside soil. Environ Sci Technol 7[11], 1060-1062
Media	Godbold, D. L., Schlegel, H., and Hutterman, S. 1985. Heavy metals - a possible factor in spruce decline. VDI Berichte 560, 703-716
Media	Godbold, D. L. and A.Huttermann. 1986. The Uptake and Toxicity of Mercury and Lead to Spruce (Picea abies Karst.) Seedlings. Water Air Soil Pollut. 31[3-4], 509-515
Media	Godbold, D. L., Tischner, R., and Huttermann, A. 1987. Effects of Heavy Metals and Aluminum on the Root Physiology of Spruce (Picea abies Karst.) Seedlings. In: T.C.Hutchinson and K.M.Meema (Eds.), Proc.of the NATO Advanced Research Workshop on Effects of Acidic Deposition on Forests, Wetlands, and Agricultural Ecosystems, Held at

	Toronto, Canada, May 12-17, 1985, Springer-Verlag, NY, 387-400
Media	Godbold, D. L. and Kettner, C. 1991. Use of Root Elongation Studies to Determine Aluminum and Lead Toxicity in Picea abies Seedlings. J.Plant Physiol. 138, 231-235
No Dur	Goldsmith, C. D. J. 1976. Lead Concentrations in Soil and Vegetation Associated with Highways of Different Traffic Densities. Bull Environ Contam Toxicol 16, 66-70
FL	Goren, A. and Wanner, H. 1971. The Absorption of Lead and Copper by Roots of Hordeum vulgare (Die Absorption von Blei und Kupfer durch Wurzeln von Hordeum vulgare). Ber.Schweig.Bot.Gaz. 80, 334-339 (GER) (ENG ABS)
Media	Graff, S., Berkus, M., Alberti, G., and Kohler, H. R. 1997. Metal Accumulation Strategies In Saprophagous And Phytophagous Soil Invertebrates: A Quantitative Comparison. Biometals 10[1], 45-53
No Dur	Gratani, L., Taglioni, S., and Crescente, M. F. 1992. The accumulation of lead in agricultural soil and vegetation along a highway. Chemosphere 24[7], 941-949
Mix	Gray, N. F. 1988. Ecology of nematophagous fungi: effect of the soil nutrients nitrogen, phosphorus, and potassium and seven major metals on distribution. Plant Soil 108[2], 286-290
Media	Gregory, R. P. G. and Bradshaw, A. D. 1965. Heavy Metal Tolerance in Populations of Agrostis tenuis Sibth. and Other Grasses. New Phytol 64, 131-143
No Dur	Grobecker, K. 1995. Schwermetallbelastung Durch Blei Und Quecksilber In Zwei Terrestrischen Und Einem Aquatischen Oekosystem. (Heavy Metal Pollution Of Two Terrestrial Ecosystems And One Aquatic System Through Lead And Mercury). Govt- Reports-Announcements-&-Index-(GRA&I) [17]
FL	Gu, Shuhua, Xu, Jun, Zhu, Zhongjing, Gu, Zonglian, Wang, Zuqiang, and Luo, Zongyan. 1989. Lead environmental capacity of paddy soil derived from red earth. Huanjing Kexue Xuebao 9[1], 27-36
No Dose	Guenther, A. and Greven, H. 1990. Increase Of The Number Of Epidermal Gland Cells: An Unspecific Response Of Lumbricus Terrestris L. (Lumbricidae: Oligochaeta) To Different Environmental Stressors. Zool Anz 225[5-6], 278-286

FL	Guo, Y., Wang, Z., Lai, Q., Zhang, Y., Xia, W., Yan, H., and Deng, J. 1995. Soil Heavy Metal Pollution And Earthworm Isozymes. Yingyong Shengtai Xuebao 6[3], 317-322
No Dose	Guyette, Richard P., Cutter, Bruce E., and Henderson, Gray S. 1991. Long-term correlations between mining activity and levels of lead and cadmium in tree-rings of eastern red-cedar. J.Environ.Qual. 20[1], 146-150
No Control	Gworek, B. 1992. Lead inactivation in soils by zeolites. Plant Soil 143[1], 71-74
No COC	Gworek, Barbara. 1992. Use of synthetic zeolites of 3a and 5a type for lead immobilization in anthropogenic soils. Polish Journal of Soil Science 25[1], 35-39
FL	Gworek, Barbara. 1993. Effect of zeolites on the lead uptake by plants from soils with simulated contamination. Rocz.Glebozn. 44[1-2], 19-26
Mix	Gzyl, J. 1990. Lead and Cadmium Contamination of Soil and Vegetables in the Upper Silesia Region of Poland. Sci.Total Environ. 96[1/2], 199-209
No Dur	Haagvar, S. and Abrahamsen, G. 1990. Microarthropoda And Enchytraeidae (Oligochaeta) In Naturally Lead-Contaminated Soil: A Gradient Study. Environ Entomol 19[5], 1263- 1277
ОМ	Hagemeyer, J. and Weinand, T. 1996. Radial Distribution of Pb in Stems of Young Norway Spruce Trees Grown in Pb-Contaminated Soil. Tree Physiol. 16[6], 591-594
ОМ	Hagemeyer, J. and Hubner, C. 1999. Radial Distributions of Pb in Stems of 6-Year-Old Spruce Trees (Pica abies (L.) Karst.) Grown for 2 Years in Pb-Contaminated Soil. Water Air Soil Pollut 111[1-4], 215-224
Media	Hager, A., Moser, I., and Berthold, W. 1987. Organolead Toxicity in Plants: Triethyl Lead (Et3Pb+) Acts as a Powerful Transmembrane Cl/OH Exchanger Dissipating H+Gradients at Nano-Molar Levels. Z.Naturforsch.Sect C Biosci. 42, 1116-1120
No ERE	Hahne, H. C. H. and Kroontje, W. 1973. Significance of pH and Chloride Concentration on Behaviour of Heavy Metal Pollutants: Mercury (II), Cadmium (II), Zinc (II) and Lead (II) 42379. J Environ Qual 2, 444-450
Species	Hahne, H. C. H. and Kroontje, W. 1973. Significance of pH and Chloride Concentration on Behaviorof Heavy Metal Pollutants: Mercury (II), Cadmium (II), Zinc (II), and Lead (II)

Published literature that reported soil toxicity to terrestrial invertebrates and plants was identified, retrieved and screened. Published literature was deemed Acceptable if it met all 11 study acceptance criteria (Fig. 3.3 in section 3 "DERIVATION OF PLANT AND SOIL INVERTEBRATE ECO-SSLs" and ATTACHMENT J in Standard Operating Procedure #1: Plant and Soil Invertebrate Literature Search and Acquisition). Each study was further screened through nine specific study evaluation criteria (Table 3.2 Summary of Nine Study Evaluation Criteria for Plant and Soil Invertebrate Literature Evaluation and Data Extraction, Eco-SSL Derivation, Quality Assurance Review, and Technical Write-up.) Publications identified as Not Acceptable did not meet one or more of these criteria. All Not Acceptable publications have been assigned one or more keywords categorizing the reasons for rejection (Table 1. Literature Rejection Categories in Standard Operating Procedure #4: Wildlife TRV Literature Review, Data Extraction and Coding).

42380. J Environ Qual 2[4], 444-450

Media	Hammett, F. S. 1928. Studies in the Biology of Metals. I. The Localization of Lead by Growing Roots. Protoplasma 4, 183-186
Media	Hampp, R., Ziegler, H., and Ziegler, I. 1973. Influence of Lead Ions on the Activity of Enzymes of the Reductive Pentose Phosphate Pathway. Biochem.Physiol.Pflanz (BPP) 164, 588-595
Media	Hampp, R. and Lendzian, K. 1974. Effect of Lead Ions on Chlorophyll Synthesis. Naturwissenschaften 61, 218
Mix	Han, D. H. and Lee, J. H. 1996. Effects of liming on uptake of lead and cadmium by Raphanus sativa. Archives Of Environmental Contamination And Toxicology. 31[4], 488-493
Mix	Hardiman, R. T., Jacoby, B., and Banin, A. 1984. Factors Affecting the Distribution of Cadmium, Copper and Lead and Thier Effect upon Yield and Zinc Content in Bush Bean (Phaseolus vulgaris L.). Plant Soil 81, 17-27
Media	Hartenstein, R., Neuhauser, E. F., and Collier, J. 1980. Accumulation of Heavy Metals in the Earthworm, Eisenia foetida 42541. J Environ Qual 9[1], 23-26
Media	Hasnain, S., Yasmin, S., and Yasmin, A. 1993. The effects of lead-resistant Pseudomonads on the growth of Triticum aestivum seedlings under lead stress. Environmental Pollution 81[2], 179-184
No Control	Hassett, J. J. and Miller, J. E. 1977. Uptake of Lead by Corn from Roadside Samples. Commun Soil Sci Plant Anal 8, 49-55
Media	Hellmuth, U. and Schmidt, W. 1991. Lead Tolerance of Annuals at Roadsides. In: G.Esser and D.Overdieck (Eds.), Modern Ecology, Elsevier Science Publ., The Netherlands , 844
No Dose	Hemphill, D. D., Marienfeld, C. J., Reddy, R. S., Heidlage, W. D., and Pierce, J. O. 1973. Toxic Heavy metals in Vegetables and Forage Grasses in Missouri's Lead Belt 42664. J Assoc Off Anal Chem 56[4], 994-998
No Dose	Hemphill, D. D., Marienfeld, C. J., Reddy, R. S., Heilage, W. D., and Pierce, J. O. 1973.

	Toxic Heavy Metals in Vegetables and Forage Grasses in the Missouri Lead Belt 42663. J Assoc Off Anal Chem 56, 994-998
No Control	Hemphill, D. D. and Rule, J. H. 1975. Foliar Uptake and Translocation of Pb210 and Cd109 by Plants. In: Intl Conf on Heavy Metals in the Environ, Symp.Proc., Vol.2(2), University of Toronto, Ont., Canada 2[2], 77-86
Media	Herstein, U. and Jager, H. J. 1986. Tolerances of Different Populations of Three Grass Species to Cadmium and Other Metals. Environ.Exp.Bot. 26[4], 309-319
Mix	Hetrick, B. A. D., Wilson, G. W. T., and Figge, D. A. H. 1994. The influence of mycorrhizal symbiosis and fertilizer amendments on establishment of vegetation in heavy metal mine spoil. Environmental Pollution 86[2], 171-179
Media	Hevesy, G. 1923. The Absorption and Translocation of Lead by Plants. A Contribution to the Application of the Method of Radioactive Indicators in the Investigation of the Change of Substance in Plants. Biochem.J. 17, 439-445
Media	Hooper, M. C. 1937. An Investigation of the Effect of Lead on Plants. Ann.Appl.Biol. 24, 690-695
No Dur	Hopkin, S. P. and Martin, M. H. 1982. The Distribution of Zinc, Cadmium, Lead and Copper Within the Hepatopancreas of a Woodlouse. Tissue & Cell 14[4], 703-715
No Dur	Hopkin, S. P. and Martin, M. H. 1982. The Distribution of Zinc, Cadmium, Lead and Copper Within the Woodlouse Oniscus asellus (Crustacea, Isopoda). Oecologia (Berlin) 54, 227
Mix	Hopkin, S. P. and Martin, M. H. 1984. Assimilation of Zinc, Cadmium, Lead and Copper by the Centipede, Lithobius variegatus (Chilopoda). J Appl Ecol 21, 535-546
Mix	Hopkin, S. P. and Martin, M. H. 1985. Assimilation of Zinc, Cadmium, Lead, Copper and Iron by the Spider Dysdera crocata, a Predator of Woodlice. Bull Environ Contam Toxicol 34, 183-187
No Dur	Hopkin, S. P., Hardisty, G., and Martin, M. H. 1986. The Woodlouse Porcellio scaber as a Biological Indicator of Zinc, Cadmium, Lead and Copper Pollution. Environ Pollut 11, 271-290

Mix	Hopkin, S. P. 1990. Species-specific differences in the net assimilation of zinc cadmium lead copper and iron by the terrestrial isopods Oniscus-asellus and Porcellio-scaber. J APPL ECOL.Journal of Applied Ecology. 27[1], 460-474
Media	Hopkin, S. P. and Hames, C. A. C. 1994. Zinc, among a 'cocktail' of metal pollutants, is responsible for the absence of the terrestrial isopod Porcellio scaber from the vicinity of a primary smelting works. Ecotoxicology 3[1], 68-78
Media	Hoxha, Y., Jablanavic, M., Abdullai, K., and Filipovic, R. 1985. Catalase Activity in Plant Exposed to Contamination with Heavy Metals. Acta Biol.Med.Exp. 10, 23-26
Media	Hsu, Fu Hsing and Lin, H. S Ed. 1993. Studies on seed germination of miscanthus species. <book> taichung district agricultural improvement station special publication; crop genetics, breeding, physiology and cultivation. Taichung District Agricultural Improvement Station Special Publication , 205-217</book>
OM, pH	Huang, C. Y., Bazzaz, F. A., and Vanderhoef, L. N. 1974. The Inhibition of Soybean Metabolism by Cadmium and Lead. Plant Physiol 54, 122-124
Abstract	Huang, J. 1997. Mechanisms of Synthetic Chelate Triggered Lead Hyperaccumulation in Plants. Plant Physiol.(Rockville) 114[Suppl. 3], 122-123
Media	Huang, J. W., Cunningham, S. D., and Chen, J. 1996. Phytoextraction of lead from lead- contaminated soils. Abstracts of Papers American Chemical Society, AGRO
Media	Huang, J. W. and Cunningham, S. D. 1996. Lead Phytoextraction: Species Variation in Lead Uptake and Translocation. New Phytol. 134[1], 75-84
Rev	Huang, J. W., Chen, J., and Cunningham, S. D. 1997. Phytoextraction of Lead from Contaminated Soils. In: E.L.Kruger, T.A.Anderson, and J.R.Coats (Eds.), Phytoremediation of Soil and Water Contaminants, Chapter 21, ACS Symp.Ser.No.664 , 283-298
Abstract	Huang, J. W., Shaff, J. E., and Kochian, L. V. 1997. Measurement of Lead Fluxes in Corn Roots Using a Lead-Selective Vibrating Microelectrode. Plant Physiol.(Rockville) 114[Suppl. 3], 198
No Control	Huber, M. C., Winter, R. E. K., and Bolla, R. I. 1989. Effect of copper sulfate and lead acetate on infection of pines with Bursaphelenchus-xylophilus. J Nematol 21[1], 1-9

Rev	Humphreys, D. J. 1991. Effects of Exposure to Excessive Quantities of Lead on Animals. Br Vet J 147, 18-30
FL	Igoshina, T. I. and Kositsin, A. V. 1990. Lead tolerance of carbonic anhydrase in Melica nutans (Poaceae). Bot.Zh. 75[8], 1144-1150
FL	Ikeda, A. and Imaizumi, M. 1991. Establishment of Diagnosis Standard for Soil Pollution by Heavy Metals: 1. Effect of Lead in Soil on Upland Crops. Res.Bull.Aichi-ken Agric.Res.Ctr. 0[23], 289-296
No Dur	Ingram, E. M. and Eaton, J. M. 1991. Release Investigation Report For Underground Storage Tank 2305-U At Building 9998, Oak Ridge Y-12 Plant, Oak Ridge, Tennessee. Govt-Reports-Announcements-&-Index-(GRA&I),-Issue-19,-1991 [19]
Species	Ireland, M. P. 1977. Lead Retention in Toads Xenopus laevis Fed Increasing Levels of Lead-Contaminated Earthworms. Environ Pollution 12, 85-92
Media	Ireland, M. P. 1984. Effect of Chronic and Acute Lead Treatment in the Slug Arion ater on calcium and Delta-Aminolaevulinic Acid Dehydratase Activity. Comp Biochem Physiol 79C, 287-290
FL	Ishchenko, G. S., Butnik, A. S., and Afanasyeva, T. F. 1992. Evaluation of simultaneous contamination of wheat crops by lead, cadmium, strontium-90, and cesium-137. Agrokhimiya [6], 99-103
FL	Ishchenko, G. S., Butnik, A. S., and Afanas'eva, T. F. 1992. Evaluation of combined contamination of wheat yield by lead, cadmium, strontium-90, and cesium-137. Agrokhimiya [6], 99-103
Mix	Jackson, D. R. and Watson, A. P. 1977. Disruption of Nutrient Pools and Transport of Heavy Metals in a Forested Watershed near a Lead Smelter. J Environ Qual 6[4], 331-338
OM, pH	Jackson, D. R., Selvidge, W. J., and Ausmus, B. S. 1978. Behavior of Heavy Metals in Forest Microcosms: II. Effects on Nutrient Cycling Processes. Water Air Soil Pollut 10, 13- 18
No Dur	Janssen, H. H. 1989. Heavy Metal Analysis In Earthworms From An Abandoned Mining Area. Zool Anz 222[5-6], 306-321

Media	Jaworska, M., Gorczyca, A., Sepiol, J., and Tomasik, P. 1997. Effect of Metal Ions on the Entomopathogenic Nematode Heterohabditis becteriophora poinar (Nematode: Heterohabditidae) Under Laboratory Conditions. Water Air Soil Pollut 93, 157-166
Media	Jentschke, G., Schlegel, H., and Godbold, D. L. 1991. The Effect of Aluminium on Uptake and Distribution of Magnesium and Calcium in Roots of Mycorrhizal Norway Spruce Seedlings 38505. Physiol.Plant. 82, 266-270
Media	Jentschke, G., Fritz, E., and Godbold, D. L. 1991. Distribution of Lead in Mycorrhizal and Non-Mycorrhizal Norway Spruce Seedlings. Physiol.Plant. 81, 417-422
No Dose	John, M. K. and Van Laerhoven, C. 1972. Lead Uptake by Lettuce and Oats as Affected by Lime, Nitrogen, and Sources of Lead. J Environ Qual 1[2], 169-171
Species	John, M. K., VanLaerhoven, C. J., and Bjerring, J. H. 1976. Effect of a Smelter Complex on the Regional Distribution of Cadmium, Lead, and Zinc in Litters and Soil Horizons. Arch.Environ.Contam.Toxicol. 4[4], 456-468
No Toxicant	Johnson, C. E., Siccama, T. G., Driscoll, C. T., Likens, G. E., and Moeller, R. E. 1995. Changes in lead biogeochemistry in response to decreasing atmospheric inputs. Ecological Applications : A Publication Of The Ecological Society Of America. 5[3], 813-822
No ERE	Johnson, M. S., McNeilly, T., and Putwain, P. O. 1977. Revegetation of Metalliferous Mine Spoil Contaminated by Lead and Zinc. Environ Pollut 12[4], 261-277
Mix	Johnson, W. R. and Proctor, J. 1977. A Comparative Study of Metal Levels in Plants from Two Contrasting Lead-Mine Sites. Plant Soil 46, 251-257
Mix	Jones, J. S. and Hatch, M. B. 1945. Spray Residues and Crop Assimilation of Arsenic and Lead. Soil Sci 60, 277-288
Media	Jones, L. H. P. and Clement, C. R. 1972. Lead Uptake by Plants and Its Significance for Animals. In: P.Hepple (Ed.), Lead in the Environment, Applied Science Publ.Ltd., Barking, England , 29-33
OM, pH	Jones, L. H. P., Clement, C. R., and Hopper, M. J. 1973. Lead Uptake from Solution by Perennial Ryegrass and Its Transport from Roots to Shoots. Plant Soil 38[2], 403-414
No Control	Jones, L. H. P., Jarvis, S. C., and Cowling, D. W. 1973. Lead Uptake from Soils by

	Perennial Ryegrass and Its Relation to the to the Supply of an Essential Element (Sulphur). Plant Soil 38[3], 605-619
Media	Joosse, E. N. G. and Buker, J. B. 1979. Uptake and Excretion of Lead by Litter-Dwelling Collembola. Environ Pollut 18, 235-240
Media	Joosse, E. N. G. and Verhoef, S. C. 1983. Lead Tolerance in Collembola. Pedobiologia 25, 11-18
ОМ	Jopony, M. and Young, S. 1993. Assessment of Lead Availability in Soils Contaminated by Mine Spoil. Plant Soil 151[2], 273-278
No Dur	Kabata-Pendias, A. and Dudka, S. Baseline data for cadmium and lead in soils and some cereals of poland. International Conference on Metals in Soils, Waters, Plants and Animals, Orlando, Florida, Usa, April 30-May 3, 1990.Water Air Soil Pollut.57-58 (0).1991.723-732.
Rev	Kagi, J. H. R. and Hapke, H. J. 1984. Biochemical Interactions of Mercury, Cadmium, and Lead. In: J.O.Nriagu (Ed.), Changing Metal Cycles and Human Health, Dahlem Konferenzen, Berlin , 237-250
Mix	Kahle, H. and Breckle, S. W. 1989. Single and Combined Effects of Lead and Cadmium on Young Beech Trees (Fagus silvatica L.). In: J.B.Bucher and I.Bucher-Wallin (Eds.), Proc.14th Int.JUFRO Meeting for Specialists in Air Pollution Effects on Forest Ecosystems, Oct.2-8, 1988, Birmensdorf, Switzerland, 442-444
No Control	Kalbasi, M., Peryea, F. J., Lindsay, W. L., and Drake, S. R. 1995. Measurement of Divalent Lead Activity in Lead Arsenate Contaminated Soils. Soil Sci.Soc.Am.J. 59[5], 1274-1280
Mix	Kanabo, I. A. K. and Gilkes, R. J. 1992. Low-contaminant jarosite waste as a fertilizer amendment. Journal of Environmental Quality 21[4], 679-684
Media	Kannan, S. and Keppel, H. 1976. Absorption and Transport of Pb2+ in Young Pea Seedlings. Z Naturforsch Teil C Biochem Biophys Biol 31, 393-396
No Control	Karamanos, R. E., Bettany, J. R., and Stewart, J. W. B. 1976. The Uptake of Native and Applied Lead by Alfalfa and Bromegrass from Soil. Can.J.Soil Sci. 56, 485-494
FL	Kastori, R., Petrovic, N., Gasic, O., and Janjatovic, V. 1991. Effect of Lead on the Accumulation and Distribution of Mineral Substances in Soybean (Glycine max. (L.)

Published literature that reported soil toxicity to terrestrial invertebrates and plants was identified, retrieved and screened. Published literature was deemed Acceptable if it met all 11 study acceptance criteria (Fig. 3.3 in section 3 "DERIVATION OF PLANT AND SOIL INVERTEBRATE ECO-SSLs" and ATTACHMENT J in Standard Operating Procedure #1: Plant and Soil Invertebrate Literature Search and Acquisition). Each study was further screened through nine specific study evaluation criteria (Table 3.2 Summary of Nine Study Evaluation Criteria for Plant and Soil Invertebrate Literature Evaluation and ATTACHMENT A in Standard Operating Procedure #2: Plant and Soil Invertebrate Literature Evaluation and Data Extraction, Eco-SSL Derivation, Quality Assurance Review, and Technical Write-up.) Publications identified as Not Acceptable did not meet one or more of these criteria. All Not Acceptable publications have been assigned one or more keywords categorizing the reasons for rejection (Table 1. Literature Rejection Categories in Standard Operating Procedure #4: Wildlife TRV Literature Review, Data Extraction and Coding).

Merr.). Zb.Matice Srp.Prir.Nauke (SER) (ENG ABS) 80, 55-65

- **OM, pH** Keaton, C. M. 1937. The Influence of Lead Compounds on the Growth of Barley. Soil Sci. 43[6], 401-411
- OM Khan, D. H. and Frankland, B. 1983. Effects of Cadmium and Lead on Radish Plants with Particular Reference to Movement of Metals Through Soil Profile and Plant. Plant Soil 70, 335-345
- **pH** Khan, S. and Khan, N. 1983. Influence of Lead and Cadmium on the Growth and Nutrient Concentration of Tomato (Lycopersicum esculentum) and Egg-Plant (Solanum melangena). Plant Soil 74, 387-394
- Dup Khan, S. and Khan, N. N. 1983. Influence of Lead and Cadmium on the Growth and Nutrient Concentration of Tomato (Lycopersicum esculentum) and Egg-Plant (Solanum melongena) 38390. Plant Soil 74, 387-394
- No Dose Kim, N. D. and Fergusson, J. E. 1994. Seasonal variations in the concentrations of cadmium, copper, lead and zinc in leaves of the horse chestnut (Aesculus hippocastanum L.). Environmental Pollution. 86[1], 89-97
- **Rev** Kiss, Tibor and Osipenko, Oleg. 1994. Metal ion-induced permeability changes in cell membranes: a minireview. Cellular and Molecular Neurobiology 14[6], 781-789
- FL Klose, S. and Machulla, G. 1993. Influence of Cadmium and Lead on Selected Parameters of Soil-Microbial Activity. Mengen- Spurenelem., Arbeitstag., 13th, 43-51
- No Dose Kock, M., Sixl, W., and Mose, J. R. 1989. Lead, Cadmium, Mercury and Insecticide Residue Control of Fresh Vegetables. Geogr.Med.Suppl. 2, 91-100
- **OM, pH** Koehler, H. and Triebskorn, R. 1998. Assessment Of The Cytotoxic Impact Of Heavy Metals On Soil Invertebrates Using A Protocol Integrating Qualitative And Quantitative Components. Biomarkers 3[2], 109-127
- Media Koehler, H. R., Storch, V., and Alberti, G. 1992. The Impact Of Lead On The Assimilation Efficiency Of Laboratory-Held Diplopoda (Arthropoda) Preconditioned In Different Environmental Situations. Oecologia 90[1], 113-119

Media Koehler, H. R., Triebskorn, R., Stoecker, W., Kloetzel, P. M., and Alberti, G. 1992. The 70

	Kd Heat Shock Protein (Hsp 70) In Soil Invertebrates: A Possible Tool For Monitoring Environmental Toxicants. Arch.Environ.Contam.Toxicol. 22[3], 334-338
Rev	Koeppe, D. E. 1977. The Uptake, Distribution, and Effect of Cadmium and Lead in Plants. Sci.Total Environ. 7[3/4], 197-206
Rev	 Koeppe, D. E., Bazzaz, F. A., Boggess, S., Carlson, R., Hassett, J. J., Koeppe, D. E., Cole, M., Rolfe, G. L., and Stevenson, F. J. 1977. Environmental Contamination by Lead and Other Heavy Metals. Volume IV: Soil-Water-Air-Plant Studies 49569. In: G.L.Krolfe and K.A.Reinbold (Eds.), Final Rep.National Science Foundation RANN Program, Inst.Environ.Stud., University of Illinois at Urbana-Champaign, Urbana, IL, 143 p.
Rev	Koeppe, D. E. 1981. Lead: Understanding the Minimal Toxicity of Lead in Plants. In: N.W.Lepp (Ed.), Effects of Heavy Metal Pollution on Plants, Volume 1, Effects of Trace Metals on Plant Function, Applied Science Publ., NJ , 55-76
No Dose	Kong, L. S., Gao, P., Ren, T. X., and Hong, H. J. Characteristics of plant communities and element contents in plants at mengentaoligai silver lead zinc mine area in inner mongolia. Acta Bot.Sin.
No Toxicant	Kort, H. S., Schober, G., Koren, L. G., and Scharringa, J. 1997. Mould-Devouring Mites Differ In Guanine Excretion From Dust-Eating Acari, A Possible Error Source In Mite Allergen Exposure Studies. Clin-Exp-Allergy; VOL 27, ISS 8, 1997, P921-5 27[8], 921-925
Mix	Kowalska Pylka, H., Kot, A., Wiercinski, J., Kursa, K., Walkuska, G., and Cybulski, W. 1995. Lead, Cadmium, Copper and Zinc Content in Vegetables, Gooseberry Fruits and Soils from Gardening Plots of Lublin (Zawartosc Olowiu, Kadmu, Miedzi i Cynku w Warzywch, Owocach Agrestu Oraz Glebie Ogrodow Dzialkowych Lublina). Rocz.Panstw.Zakl.Hig. 46[1], 3-12 (CZE) (ENG ABS)
Mix	Kralovec, J. and Slavik, L. 1997. Transfer of lead, cadmium, and mercury in the system soil-plant-animal. Rostl.Vyroba 43[6], 257-262
Mix	Kronshage, J. 1993. Freiland- Und Laboruntersuchungen Zur Wirkung Von Bleiverbindungen, Saeuren Und Kalk Auf Collembolen. (Investigations In The Field And Laboratory On The Effect Of Lead Compounds, Acids And Lime On Collembola). Govt- Reports-Announcements-&-Index-(GRA&I) [19]

Mix	Krupinska, I. 1976. Influence of Lead Tetraethyl on the Growth of Funaria hygrometrica L. and Marchantia polymorpha L. Acta Soc.Bot.Pol. 45[4], 421-428
FL	Kryukov, V. I., Shishkin, V. A., and Sokolenko, S. F. 1996. Chorinical Influence of Radiation and Lead on Mutation Rates in Plants of Arabidopsis thaliana (L.) hyenh. Radiat.Biol.Radioecol. 36[2], 209-218 (RUS)
FL	Kulich, J. 1987. Basic Nutrition and Phytotoxicity Caused by Arsenic and Lead. Part II 38890. Agriculture 33[10], 907-919 (RUS)
FL	Kulich, Jozef. 1988. The response of cereals to arsenic and lead. Rostl.Vyroba 34[5], 491-498
Media	Kumar, G., Singh, R. P., and Sushila. 1993. Nitrate Assimilation and Biomass Production in Sesamum indicum L. Seedlings in a Lead Enriched Environment. Water Air Soil Pollut. 66[1/2], 163-171
No Dose	Kumar, P. B. A. N., Dushenkov, Viatcheslav, Motto, Harry, and Raskin, Ilya. 1995. Phytoextraction: the use of plants to remove heavy metals from soils. Environ.Sci.Technol. 1232-1238
рН	Kundu, Sharmila, Singh, Arvind, and De, S. K. 1998. Effects of chlorides of Cd, Pb and Hg on true and crude proteins in wheat seeds (Triticum aestivum L.). Indian J.Agric.Chem. 31[2], 106-110
No Dur	Kunguru, K. and Tole, P. M. 1994. Contamination of Soils, Maize, Wheat and Milk with Lead from Motor Vehicle Emissions in Uasin Gishu District, Kenya. Discov.Innov. 6[3], 261-264
FL	Labii, Yu. 1989. The effect of plants on lead migration in soil. Biol.Nauki (Moscow) [9], 86-88
Media	Labrot, F., Narbonne, J. F., Ville, P., Saint Senis, M., and Ribera, D. 1999. Acute Toxicity, Toxicokinetics, and Tissue Target of Lead and Uranium in the Clam Corbicula fluminea and the Worm Eisenia fetida: Comparison with the Fish Brachydanio rerio. Arch.Environ.Contam.Toxicol. 36[2], 167-178
Media	Labrot, F., Narbonne, J. F., Ville, P., Saint Denis, M., and Ribera, D. 1999. Acute Toxicity, Toxicokinetics, and Tissue Target of Lead and Uranium in the Clam corbicula flumionea

	and the Worm Eisenia fetida: Comparison with the Fish Brachydanio rerio 43973. Arch.Environ.Contam.Toxicol. 36[2], 167-178
No Dur	Lagerwerff, J. V. and Specht, A. W. 1970. Contamination of Roadside Soil and Vegetation with Cadmium, Copper, Lead, and Zinc in Soil and Vegetation in the Proximity of a Smelter. Environ Sci & Technol 4[7], 583-586
ОМ	Lagerwerff, J. V. 1971. Uptake of Cadmium, Lead and Zinc by Radish from Soil and Air. Soil Sci 111, 129-133
Rev	Lagerwerff, J. V. 1972. Lead, Mercury, and Cadmium as Environmental Contaminants. Micronutrients in Agriculture 23, 593, 628-593, 636
No Control	Lagerwerff, J. V., Armiger, W. H., and Specht, A. W. 1973. Uptake of Lead by Alfalfa and Corn from Soil and Air. Soil Sci. 115[6], 455-460
FL	Lahner, Gabriele and Streit, Bruno. 1989. Variation of lead concentration and accumulation in earthworms. Verh.Ges.Oekol. 18, 415-418
Media	Lamersdorf, N. P., Godbold, D. L., and Knoche, D. Risk assessment of some heavy metals for the growth of norway spruce 44005. INTERNATIONAL CONFERENCE ON METALS IN SOILS, WATERS, PLANTS AND ANIMALS, ORLANDO, FLORIDA, USA, APRIL 30-MAY 3, 1990.WATER AIR SOIL POLLUT.57-58 (0).1991.535-544.
Media	Lamersdorf, N. P., Godbold, D. L., and Knoche, D. 1991. Risk Assessment of Some Heavy Metals for the Growth of Norway Spruce 44006. Water Air Soil Pollut 57/58, 535-543
Mix	Lamersdorf, Norbert P. 1989. The behavior of lead and cadmium in the intensive rooting zone of acid spruce forest soils. Toxicol.Environ.Chem. 18[4], 239-247
Mix	Lan, C. Y., Shu, W. S., and Wong, M. H. 1997. Revegetation of Lead/Zinc Mine Tailings at Shaoguan, Guangdong Province, China: Phytotoxicity of the Tailings. Global Environ.Biotechnol. 119-130
Media	Lane, I. and Puckett, K. J. 1979. Responses of the Phosphatase Activity of the Lichen Cladina rangiferina to Various Environmental Factors Including Metals. Can.J.Bot. 57, 1534-1540

Media	Lane, S. D., Martin, E. S., and Garrod, J. P. 1978. Lead Toxicity Effect on Indole-3- Ylacetic Acid-Induced Cell Elongation. Planta 144, 79-84
Media	Lane, S. D. and Martin, E. S. 1980. An Evaluation of the Effect of Lead on the Gross Morphology of Raphanus sativus. Z.Pflanzenphysiol.Bodenkd. 98, 437-452
Mix	Laperche, Valerie, Logan, Terry J., Gaddam, Pranitha, and Traina, Samuel J. 1997. Effect of apatite amendments on plant uptake of lead from contaminated soil. Environ.Sci.Technol. 2745-2753
Species	Laskowski, R. and Hopkin, S. P. 1996. Accumulation of Zn, Cu, Pb, and Cd in the Garden Snail (Helix aspersa): Implications for Predators. Environ Pollut 91[3], 289-297
Media	Lee, C. R., Sturgis, T. C., and Landin, M. C. 1976. A Hydroponic Study of Heavy Metal Uptake by Selected Marsh Plant Species. U.S.Army Eng Waterways Exp Stn Tech Rep.No.D-76-5, 63
Media	Lee, K. C., Cunningham, B. A., Chung, K. H., Paulsen, G. M., and Liang, G. H. 1976. Lead Effect on Several Enzymes and Nitrogenous Compounds in Soybean Leaf. J.Environ.Qual. 5[4], 357-359
Media	Lee, K. C., Cunningham, B. A., Chung, K. H., Paulsen, G. M., and Liang, G. H. 1976. Effect of Cadmium on the Root and Nodule Ultrastructure of Alnus rubra. J Environ Qual 5[4], 357-359
FL	Lee, Yahn Chir and Wang, Yin Po. 1997. Relationships between extraction ratio of lead and concentrations in crops in contaminated soils. Huanjing Baohu (Taipei) (CHI) 20[2], 78-91
Media	Lemaistre, V. 1985. Influence of Automobile Exhaust and Lead on the Oxygen Exchange of Two Lichens Measured by a New Oxygen Electrode Method. In: D.H.Brown (Ed.), Lichen Physiology and Cell Biology, Plenum Press, NY, 173-183
No Dur	Little, P. and Martin, M. H. 1972. A Survey of Zinc, Lead, and Cadmium in Soil and Natural Vegetation Around a Smelting Complex. Environ Pollut 3, 241-243
Media	Liu, D., Jiang, W., Wang, W., Zhao, F., and Lu, C. 1994. Effects of Lead on Root Growth, Cell Division, and Nucleolus of Allium cepa. Environ Pollut 86, 1-4
Media	Lui, Donghua, Jiang, Wusheng, Wang, Wei, and Zhai, Lin. 1995. Evaluation of metal ion

Published literature that reported soil toxicity to terrestrial invertebrates and plants was identified, retrieved and screened. Published literature was deemed Acceptable if it met all 11 study acceptance criteria (Fig. 3.3 in section 3 "DERIVATION OF PLANT AND SOIL INVERTEBRATE ECO-SSLs" and ATTACHMENT J in Standard Operating Procedure #1: Plant and Soil Invertebrate Literature Search and Acquisition). Each study was further screened through nine specific study evaluation criteria (Table 3.2 Summary of Nine Study Evaluation Criteria for Plant and Soil Invertebrate Literature Evaluation and Data Extraction, Eco-SSL Derivation, Quality Assurance Review, and Technical Write-up.) Publications identified as Not Acceptable did not meet one or more of these criteria. All Not Acceptable publications have been assigned one or more keywords categorizing the reasons for rejection (Table 1. Literature Rejection Categories in Standard Operating Procedure #4: Wildlife TRV Literature Review, Data Extraction and Coding).

toxicity on root tip cells by the allium test. Israel Journal of Plant Sciences 43, 125-133

- Mix Lutynski, R. 1996. The Role Of Lead As An Environmental Pollutant In The Period Of Growing Ecological Consciousness. Przegl-Lek 53[4], 371-374
- No Toxicant Luwe, Michael W. F., Nilsson, L. O., Huttl, R. F., and Johansson, U. T Eds. 1995. Distribution of nutrients and phytotoxic metal ions in the soil and in two forest floor plant species of a beech (fagus sylvatica l.) Stand. <Book> developments in plant and soil sciences; nutrient uptake and cycling in forest ecosystems. Developments in Plant and Soil Sciences 168-169, 195-202
- Mix Ma, W., Edelman, T., Beersum, I., and Van and, Jans. 1983. Uptake of Cadmium, Zinc, Lead, and Copper by Earthworms near a Zinc-Smelting Complex: Influence of Soil pH and Organic Matter. Bull Environ Contam Toxicol 30[4], 424-427
- Media Maboeta, M. S., Reinecke, A. J., and Reinecke, S. A. 1999. Effects of Low Levels of Lead on Growth and Reproduction of the Asian Earthworm Perionyx excavatus (Oligochaeta). Ecotoxicol Environ Saf 44[3], 236-240
- No Dose Macpherson, S. A. and Martin, M. H. 1994. Effects of phosphate additions to soil on lead and phosphate concentrations of holcus lanatus grown on lead amended soil. Chemosphere 29[12], 2571-2581
- Rev Mahaffey, K. R. 1984. Toxicity of Lead, Cadmium, and Mercury: Considerations for Total Parenteral Nutritional Support. Bull NY Acad Med 60[2], 196-209
- FLMaier, R. 1978. Studies on the Effect of Lead on Acid Phosphatase in Zea mays L.
(Untersuchungen zur Wirkung von Blei auf die Saure Phosphatase in Zea mays L.).
Z.Pflanzenphysiol. 87, 347-354
- Mix Majdi, Hooshang and Persson, Hans. 1989. Effects of road-traffic pollutants (lead and cadmium) on tree fine-roots along a motor road. Plant Soil 119[1], 1-5
- No Dose Majid, A., Sparks, B. D., Khan, A. A., and Xu, J. G. 1999. Treatment of Used Diesel Invert Drilling Mud to Remove Hydrocarbons, Fix Lead, and Leach Brine. J.Soil Contam. 8[2], 255-283
- **OM, pH** Malecki, M. R., Neuhauser, E. F., and Lehr, R. C. 1982. The Effect Of Metals On The Growth And Reproduction Of Eisenia Foetida (Oligochaeta, Lumbricidae)

Published literature that reported soil toxicity to terrestrial invertebrates and plants was identified, retrieved and screened. Published literature was deemed Acceptable if it met all 11 study acceptance criteria (Fig. 3.3 in section 3 "DERIVATION OF PLANT AND SOIL INVERTEBRATE ECO-SSLs" and ATTACHMENT J in Standard Operating Procedure #1: Plant and Soil Invertebrate Literature Search and Acquisition). Each study was further screened through nine specific study evaluation criteria (Table 3.2 Summary of Nine Study Evaluation Criteria for Plant and Soil Invertebrate Literature Evaluation and Data Extraction, Eco-SSL Derivation, Quality Assurance Review, and Technical Write-up.) Publications identified as Not Acceptable did not meet one or more of these criteria. All Not Acceptable publications have been assigned one or more keywords categorizing the reasons for rejection (Table 1. Literature Rejection Categories in Standard Operating Procedure #4: Wildlife TRV Literature Review, Data Extraction and Coding).

44578. Pedobiologia 24[3], 129-137

No Data	Malone, C., Koeppe, D. E., and Miller, R. J. 1974. Localization of Lead Accumulated by Corn Plants. Plant Physiol 53, 388-394
Species	Marigomez, J. A., Angulo, E., and Saez, V. 1986. Feeding and Growth Responses to Copper, Zinc, Mercury and Lead in the Terrestrial Gastropod Arion ater (Linne). J Mollusc Stud 52, 68-78
No Dur	Marino, F., Ligero, A., and Diaz Cosin, D. J. 1994. Heavy Metals In Several Earthworm Species Living In Serpentine Soils. Nova-Acta-CientCompostel(Biol.) 5, 245-250
No Dur	Marino, F., Ligero, A., and Diaz, C. 1996. Heavy Metals In Earthworms And Soils Around To A Thermic Power Station At As Pontes (La Coruna, Nw Spain). Boletin De La Real Sociedad Espanola De Historia Natural Seccion Biologica 92[1-4], 65-73
No ERE	Marinussen, M. P. J. C. and Van der Zee, S. E. A. T. 1996. Conceptual Approach To Estimating The Effect Of Home-Range Size On The Exposure Of Organisms To Spatially Variable Soil Contamination. EcolModel. 87[1-3], 83-89
Mix	Marinussen, M. P. J. C., Van der Zee, S. E. A. T., De Haan, F. A. M., Bouwman, L. M., and Hefting, M. M. 1997. Heavy Metal (Copper, Lead, and Zinc) Accumulation and Excretion by the Earthworm, Dendrobaena veneta. J Environ Qual 26[1], 278-284
No Control	Marinussen, M. P. J. C., Van der Zee, S. E. A. T., and De Haan, F. A. M. 1997. Effect of Cd or Pb Addition to Cu-Contaminated Soil on Tissue Cu Accumulation in the Earthworm, Dendrobaena veneta. Ecotoxicol Environ Saf 38[3], 309-315
No Toxicant	Marr, K., Fyles, H., and Hendershot, W. 1999. Trace Metals in Montreal Urban Soils and the Leaves of Taraxacum officinale. Can.J.Soil Sci. 79[2], 385-387
Media	Marschner, P., Godbold, D. L., and Jentschke, G. 1996. Dynamics of Lead Accumulation in Mycorrhizal and Non-Mycorrhizal Norway Spruce (Picea abies (L.) Karst). Plant Soil 178[2], 239-245
Media	Marschner, P., Jentschke, G., and Godbold, D. L. 1998. Cation exchange capacity and lead sorption in ectomycorrhizal fungi. Plant Soil 205[1], 93-98
Media	Marschner, P., Klam, A., Jentschke, G., and Godbold, D. L. 1999. Aluminium and Lead

Published literature that reported soil toxicity to terrestrial invertebrates and plants was identified, retrieved and screened. Published literature was deemed Acceptable if it met all 11 study acceptance criteria (Fig. 3.3 in section 3 "DERIVATION OF PLANT AND SOIL INVERTEBRATE ECO-SSLs" and ATTACHMENT J in Standard Operating Procedure #1: Plant and Soil Invertebrate Literature Search and Acquisition). Each study was further screened through nine specific study evaluation criteria (Table 3.2 Summary of Nine Study Evaluation Criteria for Plant and Soil Invertebrate Literature Evaluation and Data Extraction, Eco-SSL Derivation, Quality Assurance Review, and Technical Write-up.) Publications identified as Not Acceptable did not meet one or more of these criteria. All Not Acceptable publications have been assigned one or more keywords categorizing the reasons for rejection (Table 1. Literature Rejection Categories in Standard Operating Procedure #4: Wildlife TRV Literature Review, Data Extraction and Coding).

Tolerance in Ectomycorrhizal Fungi. J.Plant Nutr.Soil Sci./Z.Pflanzenernahr.Bodenkd. 162[3], 281-286

- **OM, pH** Marten, G. C. and Hammond, P. B. 1966. Lead Uptake by Bromegrass from Contaminated Soils. Agron.J. 58, 553-554
- MediaMcCreight, J. D. and Schroeder, D. B. 1982. Inhibition of Growth of Nine Ectomycorrhizal
Fungi by Cadmium, Lead, and Nickel In Vitro. Environ.Exp.Bot. 22[1], 1-7
- **NO OM** McKenzie, R. M. 1978. The Effect of Two Manganese Dioxides on the Uptake of Lead, Cobalt, Nickel, Copper and Zinc by Subterranean Clover. Aust.J.Soil Res. 16[2], 209-214
- **OM, pH** Mclean, H. C., Weber, A. L., and Joffe, J. S. 1944. Arsenic Content of Vegetables Grown in Soils Treated with Lead Arsenate. J Econ Entomol 37[3], 315-316
- No Dur Merry, R. H. and Tiller, K. G. Distribution and budget of cadmium and lead in an agricultural region near adelaide south australia. International Conference on Metals in Soils, Waters, Plants and Animals, Orlando, Florida, Usa, April 30-May 3, 1990.Water Air Soil Pollut.57-58 (0).1991.171-180.
- Mix Merry, R. H., Tiller, K. G., and Alston, A. M. 1986. the Effects of Soil Contamination with Copper, Lead and Arsenic on the Growth and Composition of Plants. II. Effects of Source of Contamination, Varying soil pH, and Prior Waterlogging. Plant Soil 95, 255-269
- **No Control** Merry, R. H., Tiller, K. G., and Alston, A. M. 1986. The Effects of Contamination of Soil with Copper, Lead and Arsenic on the Growth and Composition of Plants. I. Effects of Season, Genotype, Soil Temperature and Fertilizers. Plant Soil 91, 115-128
- Mix Merwin, I., Pruyne, P. T., Ebel, J. G. J., Manzell, K. L., and Lisk, D. J. 1994. Persistence, phytotoxicity, and management of arsenic, lead and mercury residues in old orchard soils of New York state. Chemosphere 29[6], 1361-1367
- Media Migula, P., Kafel, A., Kedziorski, M., and Makonieczny, M. 1989. Combined and Separate Effects of Cadmium, Lead and Zinc on Growth and Feeding in the House Cricket (Acheta domesticus). Biologia (Bratisl) 44[10], 911-921
- **OM, pH** Mikula, W. and Indeka, L. 1997. Heavy metals in allotment gardens close to an oil refinery in plock. Water Air Soil Pollut. 96[1/4], 61-71

No Dose	Miles, L. J. and Parker, G. R. 1979. Heavy Metal Interaction for Andropogon scoparius and Rudbeckia hirta Grown on Soil from Urban and Rural Sites with Heavy Metals Additions. J Environ Qual 8[4], 443-449
ОМ	Miller, J. E., Hassett, J. J., and Koeppe, D. E. 1975. The Effect of Soil Properties and Extractable Lead Levels on Lead Uptake by Soybeans. Commun Soil Sci Plant Anal 6[4], 339-347
ОМ	Miller, J. E., Hassett, J. J., and Koeppe, D. E. 1975. The Effect of Soil Lead Soil Capacity on the Uptake of Lead by. Commun Soil Sci Plant Anal 6[4], 349-358
ОМ	Miller, J. E., Hassett, J. J., and Koeppe, D. E. 1977. Interactions of Lead and Cadmium on Metal Uptake and Growth of Corn Plants. J Environ Qual 6[1], 18-20
No Control	Miller, J. E., Hassett, J. J., and Koeppe, D. E. 1977. Interactions of Lead and Cadmium on Metal Uptake and Growth of Corn Plants 45056. J Environ Qual 6[1], 18-20
OM, pH	Miller, R. J. and Koeppe, D. E. 1970. Accumulation and Physiological Effects of Lead in Corn. In: D.D.Hemphill (Ed.), 4th Annu.Conf.on the Proc.of Trace Substances in Environmental Health - IV, University of Missouri, Columbia, MO, 186-193
ОМ	Miller, R. L., Bassett, I. P., and Yothers, W. W. 1933. Effect of Lead Arsenate Insecticides on Orange Trees in Florida. U.S.Dep of Agriculture Technical Bulletin 350, Washington, DC: U.S.Dep of Agriculture , 20
Media	Mishra, A. and Choudhuri, M. A. 1999. Monitoring of Phytotoxicity of Lead and Mercury from Germination and Early Seedling Growth Indices in Two Rice Cultivars. Water Air Soil Pollut 114[3/4], 339-346
FL	Misra, S. G. and Misra, Uma Shanker. 1996. Effect of adding soluble form of heavy metals on the numbers of earthworms at different depths. Vijnana Parishad Anusandhan Patrika 39[2], 79-83
FL	Mochizuki, Takeo, Chiba, Shigeo, Hanada, Satoshi, and Saitoh, Hiroshi. 1975. Apple orchard soils contaminated by inorganic agricultural chemicals. I. Effects of the contents of residual copper, lead, and arsenate on the soil macrofauna on an apple orchard in the Tsugaru district of Aomori Prefecture, Japan. Nippon Dojo-Hiryogaku Zasshi 46[2], 45-50

No Dur	Morgan, A. J. and Morris, B. 1982. The Accumulation And Intracellular Compartmentation Of Cadmium, Lead, Zinc And Calcium In 2 Earthworm Species (Dendrobaena rubida And Lumbricus rubellus) Living In Highly Contaminated Soil. Histochemistry 75[2], 269-286
Mix	Morgan, J. E. and Morgan, A. J. 1988. Earthworms As Biological Monitors Of Cadmium Copper Lead And Zinc In Metalliferous Soils. Environ Pollut 54[2], 123-138
ОМ	Morgan, J. E. and Morgan, A. J. 1988. Calcium-Lead Interactions Involving Earthworms. Part 1: The Effect of Exogenous Calcium on Lead Accumulation by Earthworms Under Field and Laboratory Conditions. Environ.Pollut 54[1], 41-53
Media	Morgan, J. E. and Morgan, A. J. 1988. Calcium-Lead Interactions Involving Earthworms. II. The Effect of Accumulated Lead on Endogenous Calcium in Lumbricus rubellus. Environ Pollut 55[1], 41-54
No Dur	Morgan, J. E. and Morgan, A. J. 1989. The Effect Of Lead Incorporation On The Elemental Composition Of Earthworm (Annelida, Oligochaeta) Chloragosome Granules. Histochemistry 92[3], 237-241
No Dur	Morgan, J. E. and Morgan, A. J. 1990. The Distribution Of Cadmium, Copper, Lead, Zinc And Calcium In The Tissues Of The Earthworm Lumbricus Rubellus Sampled From One Uncontaminated And Four Polluted Soils. Oecologia 84[4], 559-566
Mix	Morgan, J. E. and Morgan, A. J. 1993. Seasonal Changes In The Tissue-Metal (Cadmium, Zinc, And Lead) Concentrations In Two Ecophysiologically Dissimilar Earthworm Species: Pollution-Monitoring Implications. Environ Pollut 82[1], 1-7
No Dur	Morris, B. and Morgan, A. J. 1986. Calcium-Lead Interactions In Earthworms Observations On Lumbricus-Terrestris Sampled From A Calcareous Abandoned Lead Mine Site. Bull Environ Contam Toxicol 37[2], 226-233
No Control	Mosbaek, Hans, Tjell, J. C., and Hovmand, Mads F. 1989. Atmospheric lead input to agricultural crops in Denmark. Chemosphere 19[10/11], 1787-1799
No Dose	Motto, H. L., Daines, R. H., Chilko, D. M., and Motto, C. K. 1970. Lead in Soils and Plants: Its Relationship to Traffic Volume and Proximity to Highways. Environ Sci & Technol 4, 231-238
Media	Mukherji, S. and Maitra, P. 1976. Toxic Effects of Lead on Growth & Metabolism of

	Germinating Rice (Oryza sativa L.) Seeds & on Mitosis of Onion (Allium cepa L.) Root Tip Cells. Ind.J.Exp.Biol. 14, 519-521
Mix	Mungur, A. S., Shutes, R. B. E., Revitt, D. M., House, M. A., and Haberl, R. 1997. An Assessment Of Metal Removal By A Laboratory Scale Wetland. 35[5], 125-133
No Dur	Muskett, C. J. and Jones, M. P. 1980. The dispersal of lead cadmium and nickel from motor vehicles and effects on roadside invertebrate macro fauna. Environ Pollut Ser A Ecol Biol 23[3], 231-242
Mix	Nakos, G. 1979. Lead Pollution: Fate of Lead in the Soil and Its Effect on Pinus halepensis. Plant Soil 53, 427-443
Mix	Nan, Z. R., Zhao, C. Y., Li, J. J., Chen, F. H., and Liu, Y. 1999. Field survey of cd and pb contents in spring wheat (triticum aestivum l.) Grain grown in baiyin city, gansu province, people's republic of china. Bulletin of Environmental Contamination & Toxicology 63[4], 546-552
Rev	Natural Research Council of Canada. 1973. Lead in the Canadian Environment. NRCC 13682, Ottawa, Ontario, Canada , 116
Rev	Neathery, M. W. and Miller, W. J. 1975. Metabolism and Toxicity of Cadmium, Mercury, and Lead in Animals: A Review. J Dairy Sci 58[12], 1767-1781
FL	Neite, H., Wittig, R., and Kuttler (Ed.), W. 1989. Lead and Zinc Contents in Soil and Plants of Beech Forests from North Rhine-westphalia (Blei-und Zinkgehalte in Boden und Pflanzen einiger Buchenwalder Nordrhein-Westfalens). Verh.Ges.Oekol. 18, 425-429
Media	Neto, M. M. P. M. and DeVarennes, A. 1993. Determination of Lead in White Lupin by Anodic Stripping Voltammetry. In: M.A.C.Fragoso and M.L.Van Beusichem (Eds.), Optimization of Plant Nutrition, Kluwer Acad.Publ., Netherlands , 19-23
Media	Neuhauser, E. F., Malecki, M. R., and Loehr, R. C. 1983. Methods Using Earthworms for the Evalution of Potentially toxic Materials in Siols. In: R.A.Conway and W.P.Gulledge (Eds.), Hazardous and Industrial Solid Waste Testing, Volume 2, ASTM STP 805, Philadelphia, PA , 313-320
OM, pH	Neuhauser, E. F., Malecki, M. R., and Loehr, R. C. 1984. Growth and Reproduction of the Earthworm Eisenia fetida After Exposure to Sublethal Concentrations of Metals.

Published literature that reported soil toxicity to terrestrial invertebrates and plants was identified, retrieved and screened. Published literature was deemed Acceptable if it met all 11 study acceptance criteria (Fig. 3.3 in section 3 "DERIVATION OF PLANT AND SOIL INVERTEBRATE ECO-SSLs" and ATTACHMENT J in Standard Operating Procedure #1: Plant and Soil Invertebrate Literature Search and Acquisition). Each study was further screened through nine specific study evaluation criteria (Table 3.2 Summary of Nine Study Evaluation Criteria for Plant and Soil Invertebrate Eco-SSLs, also in section 3 and ATTACHMENT A in Standard Operating Procedure #2: Plant and Soil Invertebrate Evaluation and Data Extraction, Eco-SSL Derivation, Quality Assurance Review, and Technical Write-up.) Publications identified as Not Acceptable did not meet one or more of these criteria. All Not Acceptable publications have been assigned one or more keywords categorizing the reasons for rejection (Table 1. Literature Rejection Categories in Standard Operating Procedure #4: Wildlife TRV Literature Review, Data Extraction and Coding).

Pedobiologia 27, 89-97

Media	Ngu, M., Moya, E., and Magan, N. 1998. Tolerance and uptake of cadmium, arsenic and lead by Fusarium pathogens of cereals. International Biodeterioration & Biodegradation 42[1], 55-62
ОМ	Nicklow, C. W., Comaws-Haezelbrouck, P. H., and Feder, W. A. 1983. Influence of Varying Soil Lead Levels on Lead Uptake by Leafy and Root Vegetables. J.Am.Soc.Hortic.Sci. 108[2], 193-195
FL	Noack, Gritli and Breckle, Siegmar Walter. 1989. Effect of lead on the root development of beech seedlings in a Rhizotron. Verh Ges.Oekol. 17, 563-566
OM, pH	Noweir, K. H. 1990. Study Of The Role Of Airborne Lead In Food Chain Of Crops Grown Around A Main Highway In Egypt. J-Egypt-Public-Health-Assoc; 65[3/4], 427-435
FL	Nuess, D. 1993. Outdoor Experiments With Monitor-Systems: Effects Of Acid Rain, Liming And Heavy Metals On Decomposition And Collembola. Zoologische Beitraege 35[2], 121-183
FL	Nustorova, M. and Plugchieva, M. 1991. The influence of lead upon the development of soil microflora. Nauka Gorata 28[2], 46-50
Mix	Nwosu, J. U., Harding, A. K., and Linder, G. 1995. Cadmium and lead uptake by edible crops grown in a silt loam soil. Bulletin Of Environmental Contamination And Toxicology. 54[4], 570-578
рН	Nyarai-Horvath, F., Szalai, T., Kadar, I., and Csatho, P. 1997. Germination characteristics of pea seeds originating from a field trial treated with different levels of harmful elements. Acta Agron.Hung. 452[147-154]
Media	Odendaal, J. P. and Reinecke, A. J. 1999. The Toxicity of Sublethal Lead Concentrations for the Woodlouse, Porcellio laevis (Crustacea, Isopoda). Biol.Fert.Soils 29[2], 146-151
Media	Okamoto, K., Suzuki, M., Fukanim, M., Toda, S., and Fuwa, K. 1977. Heavy Metal Tolerance of Penicillium Ochro-Chloron II. Uptake of Heavy Metals by Copper Tolerant Fungus Penicillium Ochro-Chloron. Agric.Biol.Chem. 41, 17-22
ОМ	Osuji, G. O., Haby, V. A., Beyene, A., Madu, W. C., and Mangaroo, A. S. 1998. The

	Isomerization of Glutamate Dehydrogenase in Response to Lead Toxicity in Maize. Biol.Plant. 40[3], 389-398
Mix	Ozores-Hampton, M., Hanlon, E., Bryan, H., and Schaffer, B. 1997. Cadmium, Copper, Lead, Nickel and Zinc Concentrations in Tomato and Squash Grown in MSW Compost-Amended Calcareous Soil. Compost Sci.Util. 5[4], 40-45
Media	Paivoke, A. 1983. Anatomical Response of the Roots of Pea Seedlings to Lead and Arsenate Ions. Ann.Bot.Fenn. 20, 307-315
No Dur	Pandit, B. R., Prasannakumar, P. G., and Jana, Chandran Kumar. 1997. Seasonal variations in lead content in dangs forest, gujarat. Adv.Plant Sci. 10[2], 145-148
Species	Pankakoski, E., Koivisto, I., Hyvaerinen, H., Terhivuo, J., and Taehkae, K. M. 1994. Experimental Accumulation Of Lead From Soil Through Earthworms To Common Shrews. Chemosphere 29[8], 1639-1649
Media	Pawert, M., Triebskorn, R., Graff, S., Berkus, M., Schulz, J., and Koehler, H. 1996. Cellular Alterations In Collembolan Midgut Cells As A Marker Of Heavy Metal Exposure: Ultrastructure And Intracellular Metal Distribution. Science of the Total Environment 181[3], 187-200
No Dose	Peles, J. D., Brewer, S. R., and Barrett, G. W. 1996. Metal uptake by agricultural plant species grown in sludge-amended soil following ecosystem restoration practices. Bulletin of Environmental Contamination and Toxicology 57[6], 917-923
Mix	Peraemaeki, P., Itaemies, J., Karttunen, V., Lajunen, L. H. J., and Pulliainen, E. 1992. Influence Of pH On The Accumulation Of Cadmium And Lead In Earthworms (Aporrectodea Caliginosa) Under Controlled Conditions. Ann.Zool.Fenn. 29[2], 105-111
Species	Peryea, F. J. 1991. Phosphate-induced release of arsenic from soils contaminated with lead arsenate. Soil Sci Soc Am J 55[5], 1301-1306
Rev	Petering, H. G. 1978. Some Observations on the Interaction of Zinc, Copper, and Iron Metabolism in Lead and Cadmium Toxicity. Environ Health Perspect 25, 141-145
No Dose	Peters, M. S. and Afton, A. D. 1993. Effects of Deep Tillage on Redistribution of Lead Shot and Chufa Flatsedge at Catahoula Lake, Louisiana. Wildl.Soc.Bull. 21[4], 471-479

Media	Phuong, D. Dao Thi, Tatar, E., Varga, I., Zaray, G., Cseh, E., and Fodor, F. 1995. Accumulation and translocation of lead in cucumber plants monitored by graphite furnace atomic absorption spectrometry. Microchemical Journal 51[1/2], 145-150
No Dur	Pierzynski, Gary M. and Schwab, A. Paul. 1993. Bioavailability of zinc, cadmium, and lead in a metal-contaminated alluvial soil. Journal of Environmental Quality 22[2], 247-254
Mix	Piha, M. I., Vallack, H. W., Reeler, B. M., and Michael, N. 1995. A low input approach to vegetation establishment on mine and coal ash wastes in semi-arid regions. I. Tin mine tailings in Zimbabwe. Journal of Applied Ecology , 372-381
Mix	Pilgrim, W. 1995. Lead, Cadmium, Arsenic, And Zinc In The Ecosystem Surrounding The Belledune Lead Smelter. Govt-Reports-Announcements-&-Index-(GRA&I) [24]
No Dur	Piotrowska, M., Dudka, S., Ponce-Hernandez, R., and Witek, T. 1994. The Spatial Distribution of Lead Concentrations in the Agricultural Soils and Main Crop Plants in Poland. Sci.Total Environ. 158[1-3], 147-155
FL	Piotrowska, Maria, Dudka, Stanislaw, and Bolibrzuch, Edward. 1992. Effect of different doses of trace metals on yields and concentrations of these elements in corn (Zea mays L.). Part II. Copper and lead. Arch.Ochr.Srodowiska [2], 145-152
No Control	Pizl, V. and Sterzynska, M. 1991. The Influence Of Urbanization On The Earthworm Infection By Monocystid Gregarines. Fragm Faun (Warsaw) 35[9-14], 203-212
OM, pH	Polivka, J. B. 1951. Effect of Insecticides on Earthworm Populations. Ohio J Sci 51, 195- 196
Media	Popham, J. D. and Webster, J. M. 1976. Comparative toxicity of heavy metals with special reference to cadmium on caenorhabditis-elegans. Proc Int Colloq Invertebr Pathol , 372-373
Species	Pouyat, Richard V., Mcdonnell, Mark J., and Pickett, S. T. A. 1995. Soil characteristics of oak stands along an urban-rural land-use gradient. Journal of Environmental Quality 24[3], 516-526
Media	Prasad, D. D. K. and Prasad, A. R. K. 1987. Effect of Lead and Mercury on Chlorophyll Synthesis in Mung Bean Seedlings. Phytochemistry 26[4], 881-883
Media	Puckett, K. J., Nieboer, E., Gorzynski, M. J., and Richardson, D. H. S. 1973. The Uptake of

Published literature that reported soil toxicity to terrestrial invertebrates and plants was identified, retrieved and screened. Published literature was deemed Acceptable if it met all 11 study acceptance criteria (Fig. 3.3 in section 3 "DERIVATION OF PLANT AND SOIL INVERTEBRATE ECO-SSLs" and ATTACHMENT J in Standard Operating Procedure #1: Plant and Soil Invertebrate Literature Search and Acquisition). Each study was further screened through nine specific study evaluation criteria (Table 3.2 Summary of Nine Study Evaluation Criteria for Plant and Soil Invertebrate Literature Evaluation and Data Extraction, Eco-SSL Derivation, Quality Assurance Review, and Technical Write-up.) Publications identified as Not Acceptable did not meet one or more of these criteria. All Not Acceptable publications have been assigned one or more keywords categorizing the reasons for rejection (Table 1. Literature Rejection Categories in Standard Operating Procedure #4: Wildlife TRV Literature Review, Data Extraction and Coding).

Metal Ions by Lichens: A Modified Ion-Exchange Process. New Phytol 72, 329-342

- Media Puckett, K. J. 1976. The Effect of Heavy Metals on Some Aspects of Lichen Physiology. Can J Bot 54, 2695-2703
- Media Qureshi, J. A., Hardwick, K., and Collin, H. A. 1986. Intracellular Localization of Lead in a Lead Tolerant and Sensitive Clone of Anthoxanthum odoratum. J.Plant Physiol. 122, 357-364
- **No Control** Rabinowitz, M. 1972. Plant Uptake of Soil and Atmospheric Lead in Southern California. Chemosphere 4, 175-180
- No Dur Rabitsch, W. B. 1995. Metal Accumulation In Arthropods Near A Lead/Zinc Smelter In Arnoldstein, Austria. I. Environ Pollut 90[2], 221-237
- MixRabitsch, W. B. 1995. Metal Accumulation in Arthropods near a Lead/Zinc Smelter in
Arnoldstein, Austria. II. Formicidae. Environ Pollut 90[2], 239-247
- **No Dur** Rabitsch, W. B. 1995. Metal Accumulation in Arthropods near a Lead/Zinc Smelter in Arnoldstein, Austrial. III. Arachnida. Environ Pollut 90[2], 249-257
- **No Dose** Rains, D. W. 1971. Lead Accumulation by Wild Oats (Avena fatua) in a Contaminated Area. Nature 233, 210-211
- FL Rauta, C., Ionescu, Ariana, Carstea, S., and Neata, Gabriela. 1988. Effects on crops of soil pollution by lead. An.Inst.Cercet.Pedol.Agrochim., Acad.Stiinte Agric.Silvice 48, 257-267
- No Dur Rebele, F. 1989. The Lead Contents in Goldenrod Leaves (Solidago canadensis L.) in the Vicinity of the Sonnenschein Lead Battery Factory in Berlin-Mariendorf (Der Bleigehalt von Goldrutenblattern (Solidago canadensis L.) in der Umgebung der Akkumulatorenfabrik Sonnenschein in Berlin-Mariendorf). Verh.Ges.Oekol. 18, 437-442
- **No Control** Reboredo, F., Ferreira, F., Ferreira, A., Simoes, M. C., Astruc, M., and Lester, John Norman. 1988. Accumulation of copper and lead by Halimione portulacoides (L) Aellen: a seasonal study. Heavy Met.Hydrol.Cycle, 173-180
- **No Dose** Reboredo, F. 1997. Some Observations on the Effects of Iron on the Leaf Ultrastructure of Halimione portulacoides. J Plant Physiol 115, 581-589

Media	Reinecke, A. J. and Reinecke, S. A. 1996. The Influence Of Heavy Metals On The Growth And Reproduction Of The Compost Worm Eisenia fetida (Oligochaeta). Pedobiologia 40[5], 439-448
Media	Reinecke, A. J., Maboeta, M. S., and Reinecke, S. A. 1997. Stimulating Effects Of Low Lead Concentrations On Growth And Cocoon Production Of Eisenia fetida (Oligochaeta). S.Afr.J.Zool. 32[3], 72-75
Media	Reinecke, S. A. and Reinecke, A. J. 1997. The influence of lead and manganese on spermatozoa of Eisenia fetida (Oligochaeta). Soil Biology & Biochemistry 29[3/4], 737-742
Mix	Richards, K. S. and Ireland, M. P. 1978. Glycogen-Lead Relationship in the Earthworm Dendrobaena rubida from a Heavy Metal Site. Histochemie 56, 55-64
Mix	Rida, A. and Bouche, M. B. 1997. Heavy Metal Linkages With Mineral, Organic And Living Soil Compartments. Soil Biol Biochem 29[3-4], 649-655
No Dur	Roberts, R. D., Johnson, M. S., and Hutton, M. 1978. Lead contamination of small mammals from abandoned metalliferous mines. Environ Pollut 15[1], 61-70
Mix	Robinson, B. H., Leblanc, M., Petit, D., Brooks, R. R., Kirkman, J. H., and Gregg, P. E. H. 1998. The potential of Thlaspi caerulescens for phytoremediation of contaminated soils. Plant Soil 203[1], 47-56
ОМ	Roeder, U. and Breckle, S. W. 1989. Effect of Lead and Cadmium on the Growth and Cation Content of Beech Seedlings on Forest Soil. Verh Ges.Oekol. 17, 557-562
OM, pH	Rolfe, G. L. and Bazzaz, F. A. 1975. Effect of Lead Contamination on Transpiration and Photosynthesis of Loblolly Pine and Autumn Olive. For.Sci. 21[1], 33-35
Mix	Sadiq, M. 1985. Uptake of Cadmium, Lead, and Nickel by Corn Grown in Contaminated Soils. Water Air Soil Pollut 26, 185-190
FL	Salama, F. S. A., Abuzid, M. M., and Obukhov, A. I. 1993. Effect of Organic Fertilizers on the Lead Mobility in Soils and on Its Uptake by Plants. Vestn.Mosk.Univ.Ser.17 Pochvoved. 45-51
OM, pH	Salim, R., Hagemeyer, J., Al Subu, M. M., Atallah, A., and Chenavier, L. 1992. Effects, on Growth and Uptake Distribution, of Root and Foliar Treatments of Marrow Plants with

Published literature that reported soil toxicity to terrestrial invertebrates and plants was identified, retrieved and screened. Published literature was deemed Acceptable if it met all 11 study acceptance criteria (Fig. 3.3 in section 3 "DERIVATION OF PLANT AND SOIL INVERTEBRATE ECO-SSLs" and ATTACHMENT J in Standard Operating Procedure #1: Plant and Soil Invertebrate Literature Search and Acquisition). Each study was further screened through nine specific study evaluation criteria (Table 3.2 Summary of Nine Study Evaluation Criteria for Plant and Soil Invertebrate Literature Evaluation and ATTACHMENT A in Standard Operating Procedure #2: Plant and Soil Invertebrate Literature Evaluation and Data Extraction, Eco-SSL Derivation, Quality Assurance Review, and Technical Write-up.) Publications identified as Not Acceptable did not meet one or more of these criteria. All Not Acceptable publications have been assigned one or more keywords categorizing the reasons for rejection (Table 1. Literature Rejection Categories in Standard Operating Procedure #4: Wildlife TRV Literature Review, Data Extraction and Coding).

Cadmium and Lead Solutions. J.Environ.Sci.Health 27A[8], 2173-2190

ОМ, рН	Salim, R., Al-Subu, M. M., Douleh, A., Chenavier, L., and Hagemeyer, J. 1992. Effects of Root and Foliar Treatments of Carrot Plants with Lead and Cadmium on the Growth Uptake and the Distribution of Uptake of Metals in Treated Plants. J.Environ.Sci.Health Part A Environ.Sci.Eng. 27[7], 1739-1758
рН	Salim, R., Isa, M., Al Subu, M. M., Sayrafi, S. A., and Sayrafi, O. 1995. Effect of Irrigation With Lead and Cadmium on the Growth and on the Metal Uptake of Cauliflower, Spinach and Parsley. J Environ Sci Health Part A A30[4], 831-849
Mix	Sanchez, A. G., Moyano, A., and Munez, C. 1999. Forms of Cadmium, Lead, and Zinc in Polluted Mining Soils and Uptake by Plants (Soria province, Spain). Commun.Soil Sci.Plant Anal. 30[9/10], 1385-1402
Species	Sanok, William J., Ebel, Joseph G. J., Manzell, Kerry L., Gutenmann, Walterh, and Lisk, Donald J. 1995. Residues of arsenic and lead in potato soils on Long Island. Chemosphere 30[4], 803-806
No Dur	Santos, P. L., Gouvea, R. C., and Dutra, I. R. 1993. Lead-210 in Vegetables and Soils from an Area of High Natural Radioactivity in Brazil. Sci.Total Environ. 138[1-3], 37-46
ОМ	Scaps, P., Grelle, C., and Descamps, M. 1997. Cadmium And Lead Accumulation In The Earthworm Eisenia fetida (Savigny) And Its Impact On Cholinesterase And Metabolic Pathway Enzyme Activity. Comp Biochem Physiol 116C[3], 233-238
Mix	Schaefer, J., Hannker, D., Eckhardt, J. D., and Stueben, D. 1998. Uptake of traffic-related heavy metals and platinum group elements (PGE) by plants. Science of the Total Environment 215[1/2], 59-67
Media	Schaeffer, H. J. and Walton, J. D. 1990. Aluminum Ions Induce Oat Protoplasts to Produce an Extracellular (1 Leads to 3) Beta-d-Glucan. Plant Physiology. 94[1], 13-19
Rev	Scheuhammer, A. M. 1991. Acidification-Related Changes in the Biogeochemistry and Ecotoxicology of Mercury, Cadmium, Lead and Aluminum: Overview. Environ Pollut 71, 87-90
FL	Schlote, F. 1990. Beteiligung Von Schwermetallen, Bes. Cadmium Und Blei, An Der Entstehung Der 'neuartigen' Waldschaeden. (Are Immitted Heavy Metals, Is Lead Another

	Reason For Forest Decline - Investigations By Means Of Multielement Analysis). Govt- Reports-Announcements-&-Index-(GRA&I) [24]
Media	Schmidt, G. H., N.M.M.Ibrahim, and Abdallah, M. D. 1992. Long-Term Effects of Heavy Metals in Food on Developmental Stages of Aiolopus thalassinus (Saltatoria: Acrididae). Arch.Environ.Contam.Toxicol. 23[3], 375-382
Media	Schulman, R. N., Salt, D. E., and Raskin, I. 1999. Isolation and Partial Characterization of a Lead-Accumulating Brassica juncea Mutant. Theor.Appl.Genet. 99[3/4], 398-404
Media	Schwab, A. P., Tomecek, M. B., and Ohlenbusch, P. D. 1991. Plant availability of lead, cadmium and boron in amended coal ash. Water Air Soil Pollut. 57-58, 297-306
OM, pH	Sharaf, Abd El-Monem. 1996. Effects of Cadmium and Lead on Cabbage Plants Grown in Soils Treated with Cyanobacteria. Al-Azhar Bull.Sci. 7[1], 423-433
No Dur	Sheppard, S. C. and Sheppard, M. I. Lead in boreal soils and food plants. International Conference on Metals in Soils, Waters, Plants and Animals, Orlando, Florida, Usa, April 30-May 3, 1990.Water Air Soil Pollut.57-58 (0).1991.79-92.
Mix	Shetty, K. G., Hetrick, B. A. D., Figge, D. A. H., and Schwab, A. P. 1994. Effects of mycorrhizae and other soil microbes on revegetation of heavy metal contaminated mine spoil. Environmental Pollution 86[2], 181-188
In Vit	Siegel, S. M. 1977. The Cytotoxic Response of Nicotiana Protoplast to Metal Ions: A Survey of the Chemical Elements. Water Air Soil Pollut 8[1-4], 293-304
Media	Siepel, H. 1995. Are Some Mites More Ecologically Exposed To Pollution With Lead Than Others? Exp Appl Acarol 19[7], 391-398
Media	Simon, E. 1977. Cadmium Tolerance in Populations of Agrostis tenuis and Festuca ovina. Nature 265, 328-330
No Control	Simon, S. L. and Fraley, L., Jr. 1986. Uptake by Sagebrush orf Uranium Progeny Injected In Situ. J Environ Qual 15[4], 345-350
OM, pH	Singh, B. R. and Steinnes, E. 1976. Uptake of Trace Elements by Barley in Zinc-Polluted Soils: 2. Lead, Cadmium, Mercury, Selenium, Arsenic, Chromium, and Vanadium in Barley. Soil Sci. 121[1], 38-43

Mix	Singh, N., Pandey, V., Misra, J., Yunus, M., and Ahmad, K. J. 1997. Atmospheric lead pollution from vehicular emissions. Measurements in plants, soil and milk samples. Environmental Monitoring and Assessment 45[1], 9-19
Media	Singh, R. P., Maheshwari, R., and Sinha, S. K. 1994. Recovery of Lead Caused Decrease in Biomass Accumulation of Mungbean (Vigna radiata L.) Seedlings of K2HPO4 and CaCl2. Indian J.Exp.Biol. 32, 507-510
Media	Singh, R. P., Bharti, N., and Kumar, G. 1994. Differential Toxicity of Heavy Metals to Growth and Nitrate Reductase Activity of Sesamum indicum Seedlings. Phytochemistry 35[5], 1153-1156
Rev	Singh, R. P., Tripathi, R. D., Maheshwari, R., and Srivastava, H. S. 1997. Response of Higher Plants to Lead Contaminated Environment 9961. Chemosphere 34[11], 2467-2493
Media	Singh, Rana P., Dabas, Sushila, and Choudhary, Anil. 1996. Recovery of Pb2+ caused inhibition of chlorophyll biosynthesis in leaves of Vigna radiata (L.) Wilczek by inorganic salts. Indian J.Exp.Biol. 34[11], 1129-1132
Media	Singh, S. K., Singh, R. P., and Singh, V. 1993. Influence of Exchangeable Pb on Yield and Pb Accumulation by Cabbage and Spinach. Model., Meas.Control 36[1], 13-18
Media	Sinha, S. K., Srivastava, H. S., and Mishra, S. N. 1988. Nitrate Assimilation in Intact and Excised Maize Leaves in the Presence of Lead. Bull.Environ.Contam.Toxicol. 41[3], 419-426
Media	Sinha, S. K., Srivastava, H. S., and Mishra, S. N. 1988. Effect of Lead on Nitrate Reductase Activity and Nitrate Assimilation in Pea Leaves. Acta Soc.Bot.Pol. 57[4], 457-463
Media	Sinha, S. K., Srivastava, H. S., and Tripathi, R. D. 1993. Influence of some growth regulators and cations on inhibition of chlorophyll biosynthesis by lead in maize. Bulletin of Environmental Contamination and Toxicology 51[2], 241-246
Media	Sinha, S. K., Srivastava, H. S., and Tripathi, R. D. 1994. Influence of Some Growth Regulators Divalent Cations on the Inhibition of Nitrate Reductase Activity by Lead in Maize Leaves. Chemosphere 29[8], 1775-1782
No Toxicant	Sloof, J. E., Woittiez, J. R. W., and Woroniecka, U. 1996. Determination of Lead in

Published literature that reported soil toxicity to terrestrial invertebrates and plants was identified, retrieved and screened. Published literature was deemed Acceptable if it met all 11 study acceptance criteria (Fig. 3.3 in section 3 "DERIVATION OF PLANT AND SOIL INVERTEBRATE ECO-SSLs" and ATTACHMENT J in Standard Operating Procedure #1: Plant and Soil Invertebrate Literature Search and Acquisition). Each study was further screened through nine specific study evaluation criteria (Table 3.2 Summary of Nine Study Evaluation Criteria for Plant and Soil Invertebrate Literature Evaluation and Data Extraction, Eco-SSL Derivation, Quality Assurance Review, and Technical Write-up.) Publications identified as Not Acceptable did not meet one or more of these criteria. All Not Acceptable publications have been assigned one or more keywords categorizing the reasons for rejection (Table 1. Literature Rejection Categories in Standard Operating Procedure #4: Wildlife TRV Literature Review, Data Extraction and Coding).

Phosphate Ore and Phosphogypsum. Fresenius' J.Anal.Chem. 354[1], 16-20 Species Smith, C. J., Hopmans, P., and Cook, F. J. 1996. Accumulation of Cr, Pb, Cu, Ni, Zn and Cd in soil following irrigation with treated urban effluent in Australia. Environmental Pollution 94[3], 317-323 Media Sobotik, M., Ivanov, V. B., Obroucheva, N. V., Seregin, I. V., Martin, M. L., Antipova, O. V., and Bergmann, H. 1998. Barrier Role of Root System in Lead-Exposed Plants. Angew.Bot. 72[3/4], 144-147 OM, pH Spittler, T. M. and Feder, W. A. 1979. A Study of Soil Contamination and Plant Lead Uptake in Boston Urban Gardens. Commun.Soil Sci.Plant Anal. 10[9], 1195-1210 Mix Stefanov, K., Seizova, K., Yanishlieva, N., Marinova, E., and Popov, S. 1995. Accumulation of lead, zinc and cadmium in plant seeds growing in metalliferous habitats in bulgaria. Food Chemistry 54[3], 311-313 Species Stevenson, F. J. and Welch, L. F. 1979. Migratin of Applied Lead in a Field Soil. Environ Sci & Technol 13[10], 1255-1259 Stijve, T. and Besson, R. 1976. Mercury, Cadmium, Lead and Selenium Content of No Dur Mushroom Species Belonging to the Genus Agaricus. Chemosphere 5[2], 151-158 **OM** Sudhakar, C., Syamalabai, L., and Veeranjanevulu, K. 1992. Lead Tolerance of Certain Legume Species Grown on Lead Ore Tailings. Agric. Ecosyst. Environ. 41[3/4], 253-261 Species Tao, Shu. 1995. Spatial structures of copper, lead and mercury contents in surface soil in the shenzhen area. Water Air and Soil Pollution 82[3-4], 583-591 FL Tasev, Hr, Georgieva, V., and Sengalevich, G. 1997. Effect of single and combined soil pollution with lead, zinc and cadmium on the productivity and their content in some cultivated plants. II. Zinc. Pochvozn., Agrokhim. Ekol., V32, N1, P20-28 FL Tasev, Hr, Georgieva, V., and Sengalevich, G. 1997. Effect of single and combined soil pollution with lead, zinc and cadmium on the productivity and their content in some cultivated plants. I. Lead. Pochvozn., Agrokhim. Ekol., V32, N1, P3-11 FL Teissedre, P. L., Cabanis, M. T., Champagnol, F., and Cabanis, J. C. 1993. Study of the Lead Content of Leaves and Some Organs of Vine Plant (Etude de la Teneur en Plomb des

Published literature that reported soil toxicity to terrestrial invertebrates and plants was identified, retrieved and screened. Published literature was deemed Acceptable if it met all 11 study acceptance criteria (Fig. 3.3 in section 3 "DERIVATION OF PLANT AND SOIL INVERTEBRATE ECO-SSLs" and ATTACHMENT J in Standard Operating Procedure #1: Plant and Soil Invertebrate Literature Search and Acquisition). Each study was further screened through nine specific study evaluation criteria (Table 3.2 Summary of Nine Study Evaluation Criteria for Plant and Soil Invertebrate Literature Evaluation and ATTACHMENT A in Standard Operating Procedure #2: Plant and Soil Invertebrate Literature Evaluation and Data Extraction, Eco-SSL Derivation, Quality Assurance Review, and Technical Write-up.) Publications identified as Not Acceptable did not meet one or more of these criteria. All Not Acceptable publications have been assigned one or more keywords categorizing the reasons for rejection (Table 1. Literature Rejection Categories in Standard Operating Procedure #4: Wildlife TRV Literature Review, Data Extraction and Coding).

Feuilles et de Quelques Organes du cep de Vigne). Bull.O.I.V. 66, 843-854

Media	Ter Haar, G. 1970. Air as a Source of Lead in Edible Crops. Environ Sci & Technol 4[3], 226-229
No Dose	Ter Haar, G. L., Dedolph, R. R., Holtzman, R. B., and Lucas, H. F. 1969. The Lead Uptake by Perennial Ryegrass and Radishes from Air, Water and Soil. Environ.Res. 2, 267-271
No Dose	Terhivuo, J., Pankakoski, E., Hyvaerinen, H., and Koivisto, I. 1994. Pb Uptake By Ecologically Dissimilar Earthworm (Lumbricidae) Species Near A Lead Smelter In South Finland. Environ Pollut 85[1], 87-96
Not Avail	Thapa, D., Srivastava, H. S., and Ormrod, D. P. 1988. Physiological and Biochemical Effect of Lead on Higher Plants 49593. Vegetas 1, 107-109
No ERE	Thomson, W. 1972. The Problem of Lead. Nurs Times, 104-105
Media	Titov, A. F., Talanova, V. V., Boeba, N. P., Minaeva, S. V., and Soldatov, S. E. 1995. The effect of lead ions on the growth of wheat, barley, and cucumber seedlings. Russ.J.Plant Physiol.(Transl.of Fiziol.Rast.(Moscow)) 42[3], 403-407
Mix	Tlustos, P., Balik, J., Pavlikova, D., and Szakova, J. 1997. The uptake of cadmium, zinc, arsenic and lead by chosen crops. Rostl.Vyroba 43[10], 487-494
Media	Toker, M. Cihat. 1988. Uptake of lead by barley (Hordeum distichon L.) roots and its relation to potassium. Doga: Turk Biyol.Derg 12[2], 128-133
Mix	Tolle, Duane A., Arthur, Mickey F., Chesson, Jean, and Van Voris, Peter. 1985. Comparison of pots versus microcosms for predicting agroecosystem effects due to waste amendment. Environ.Toxicol.Chem. 4[4], 501-509
ОМ	Triebskorn, R. and Kohler, H. R. 1996. The impact of heavy metals on the grey garden slug, Deroceras reticulatum (Muller): metal storage, cellular effects and semi-quantitative evaluation of metal toxicity 48094. Environmental Pollution. 93[3], 327-343
No COC	Tsao, R., Lee, S., Rice, P. J., Jensen, C., and Coats, J. R. Monoterpenoids and Their Synthetic Derivatives as Lead for New Insect Control Agents. To be Published in: ACS

September, 2002

	Symp.Ser.No.584, Synthesis and Chemistry of Agrochemicals, Chapter 28, 15
Media	Tso, T. C., Sorokin, T. P., and Engelhaupt, M. E. 1973. Effects of Some Rare Elements on Nicotine Content of the Tobacco Plant. Plant Physiol 51, 805-806
Media	Tung, G. and Temple, P. J. 1996. Histochemical Detection of Lead in Plant Tissues. Environmental Toxicology and Chemistry 15[6], 906-914
Mix	Turcsanyi, Gabor and Fangmeier, Andreas. 1990. Lead and cadmium content of beech (Fagus silvatica) roots in the stem and interstem areas. Z.Pflanzenernahr.Bodenkd. 153[3], 197-200
Media	Turner, A. P., Dickinson, N. M., and Lepp, N. W. Indices of metal tolerance in trees. International Conference on Metals in Soils, Waters, Plants and Animals, Orlando, Florida, Usa, April 30-May 3, 1990.Water Air Soil Pollut.57-58 (0).1991.617-626.
FL	Uccelli, Raffaella, Angelone, Massimo, Cima, Maria Grazia, Ferrandi, Luigi, Pompei, Franco, Stronati, Laura, and Triolo, Lucio. 1992. Air pollution on the territory of the Tarquinia Agricultural University. Concentrations of nickel, chromium, lead, and cadmium in soil and in some plant and animal species. Inquinamento 34[10], 64-74
Media	Urquhart, C. 1971. Genetics of Lead Tolerance in Festuca ovina. Heredity 26, 19-33
FL	Uzunova, A., Angelov, M., Tungarov, G., and Plugchieva, M. 1988. Leaf photosynthetic rate and pigment content in lime trees (Tilia argentea) on soil with enhanced lead content. Fiziol.Rast.(Sofia) 14[3], 3-8
Rev	Vallee, B. L. and Ulmer, D. D. 1972. Biochemical Effects of Mercury, Cadmium, and Lead. Ann.Rev.Biochem. 41, 91-128
No Toxicant	Van Beek, T. A., Blaakmeer, A., Griepink, F., Van Loon, J. J. A., Visser, J. H., De Groot, A. E., and Briggs, G. G. 1994. Chemical Ecology as a Lead for the Development of Environmentally Safe Insect Control Agents. Royal Society of Chemistry Special Publication, Advances in the Chemistry of Insect Control III, 52-69
Mix	Van Hook, R. I. 1974. Cadmium, Lead, and Zinc Distrribution Between Earthworms and Soils: Potentials for Biological Accumulation. Bull Environ Contam Toxicol 12[4], 509-512
No Dur	Van Saan, Beatrice, Krause, Katrin, and Emmerling, Christoph. 1995. Ferns, earthworms,

	and soils as indicators for heavy metals under varying distances to the lead smelter in Braubach, Germany. Verh.Ges.Oekol. 24, 653-656
Media	Van Straalen, N. M., Burghouts, T. B. A., and Doornhof, M. J. 1985. Dynamics of Heavy Metals in Populations of Collembola in a Contaminated Pine Forest Soil. Int Conf on Heavy Metals in the Environment, Athens, Volume 1, CEP Consultants, Edinburgh , 613-615
Media	Van Straalen, N. M. and Van Meerendonk, J. H. 1987. Biological Half-Lives of Lead in Orchesella cincta (L.) (Collembola). Bull Environ Contam Toxicol 38, 213-219
Rev	Van Straalen, N. M. and Bergema, W. F. 1995. Ecological Risks Of Increased Bioavailability Of Metals Under Soil Acidification. Pedobiologia 39[1], 1-9
Media	Van, Straalen Nm, Burghouts, T. Ba, Doornhof, M. J., Groot, G. M., Janssen, M. Pm, Joosse, E. Ng, Van, Meerendonk Jh, Theeuwen, J. P. J., Verhoef, H. A., and Zoomer, H. R. 1987. Efficiency Of Lead And Cadmium Excretion In Populations Of Orchesella-Cincta Collembola From Various Contaminated Forest Soils. J Appl Ecol 24[3], 953-968
Mix	Vandecaveye, S. C., Horner, G. M., and Keaton, C. M. 1936. Unproductiveness of certain orchard soils as related to lead arsenate spray accumulations. Soil Sci 42, 203-213
Media	Vandenbulcke, F., Grelle, C., Fabre, M. C., and Descamps, M. 1998. Implication of the Midgut of the Centepede Lithobius forficatus in the Heavy Metal Detoxification Process. Ecotoxicol Environ Saf 41[3], 258-268
No Control	Veavington, F. 1975. Heavy Metal Contamination of Vegetables and Soil in Domestic Gardens Around a Smelting Complex. Environ Pollut 9[3], 211-217
Mix	Versluijs, C. W., Aalbers, T. G., Adema, D. Mm, Assink, J. W., Van, Gestel C. A., and Anthonissen, I. H. 1988. Comparison Of Leaching Behavior And Bioavailability Of Heavy Metals In Contaminated Soils And Soils Cleaned Up With Several Extractive And Thermal Methods. Wolf, K., W.J.Van Den Brink And F.J.Colon (Ed.).Contaminated Soil '88 Second International Netherlands Organization For Applied Scientific Research/Federal Ministry Of Research And Technology Conference, Hamburg, West Germany, April 11-15, 1988. Xxxvi+1009p.(Vol. 1); Xxv+683p.(Vol. 2). Kluwer Academic Publishers: Dordrecht,[0], 11-22
ОМ	Vodnik, D., Bozic, M., Gogala, N., and Gabrovsek, K. 1996. Growth Response of Ectomycorrhizal Norway Spruce Seedlings Transplanted on Lead-Polluted Soil. Phyton.

Published literature that reported soil toxicity to terrestrial invertebrates and plants was identified, retrieved and screened. Published literature was deemed Acceptable if it met all 11 study acceptance criteria (Fig. 3.3 in section 3 "DERIVATION OF PLANT AND SOIL INVERTEBRATE ECO-SSLs" and ATTACHMENT J in Standard Operating Procedure #1: Plant and Soil Invertebrate Literature Search and Acquisition). Each study was further screened through nine specific study evaluation criteria (Table 3.2 Summary of Nine Study Evaluation Criteria for Plant and Soil Invertebrate Literature Evaluation and ATTACHMENT A in Standard Operating Procedure #2: Plant and Soil Invertebrate Literature Evaluation and Data Extraction, Eco-SSL Derivation, Quality Assurance Review, and Technical Write-up.) Publications identified as Not Acceptable did not meet one or more of these criteria. All Not Acceptable publications have been assigned one or more keywords categorizing the reasons for rejection (Table 1. Literature Rejection Categories in Standard Operating Procedure #4: Wildlife TRV Literature Review, Data Extraction and Coding).

36[3], 77-80

FL	Vogel, W. R. 1988. Lead and cadmium burden in arthropods from forest areas with different levels of exposure to airborne pollution. Mitt Schweiz Entomol Ges 61[3-4], 205-216
FL	Von Scharrer, K. and Schropp, W. 1936. The Effect of Lead Upon Plant Growth (Uber die Wirkung des Bleis aud das Pflanzenwachstum.). Z.Pflanzenernaehr.Dung.Bodenkd. 43, 34-43
Mix	Wadge, A. and Hutton, M. 1986. The Uptake of Cadmium, Lead and Selenium by Barley and Cabbage Grown on Soils Amended with Refuse Incinerator Fly Ash. Plant Soil 96, 407-412
ОМ	Walker, W. M., Miller, J. E., and Hassett, J. J. 1977. Effect of Lead and Cadmium upon the Calcium, Magnesium, Potassium, and Phosphorus Concentration in Young Corn Plants. Soil Sci 124[3], 145-151
No Control	Wallace, A., Romney, E. M., and Patel, P. M. 1978. Role of Synthetic Chelating Agents in Trace Metal Uptake by Plants. In: D.C.Adriano and I.L.Brisbin,Jr.(Eds.), Environmental Cemistry and Cycling Processes, Proc.Symp.Held at Augusta, Georgia, April 18-May 1, 1976, Tech.Info.Center, U.S.Dep of Energy (U.S.NTIS CONF-760429), 645-657
Media	Wang, W. 1994. Rice Seed Toxicity Tests for Organic and Inorganic Substances. Environ.Monit.Assess. 29, 101-107
FL	Wang, Y. P. and Chao, C. C. 1992. Effects of vesicular-arbuscular mycorrhizae and heavy metals on the growth of soybean and phosphate and heavy metal uptake by soybean in major soil groups of taiwan. J AGRIC ASSOC CHINA NEW SER [157], 6-20
Mix	Wang, Zhenzhong, Zhang, Youmei, Hu, Juelian, Zheng, Yunyou, Hu, Zhaoyang, Guo, Yongcan, Lai, Qing, Yan, Hengmei, and Deng, Jifu. 1994. Effect of heavy metals in soil on earthworms (Opisthopora). Huanjing Kexue Xuebao 14[2], 236-243
Species	Ward, N. I., Roberts, E., and Brooks, R. R. 1979. Seasonal Variation in the Lead Content of Soils and Pasture Species Adjacent to a New Zealand Highway Carrying Medium Density Traffic. N Z J Exp Agric 7, 347-351
No Control	Warren, H. V. and Delavault, R. E. 1962. Lead in Some Food Crops and Trees. J.Sci.Food

Published literature that reported soil toxicity to terrestrial invertebrates and plants was identified, retrieved and screened. Published literature was deemed Acceptable if it met all 11 study acceptance criteria (Fig. 3.3 in section 3 "DERIVATION OF PLANT AND SOIL INVERTEBRATE ECO-SSLs" and ATTACHMENT J in Standard Operating Procedure #1: Plant and Soil Invertebrate Literature Search and Acquisition). Each study was further screened through nine specific study evaluation criteria (Table 3.2 Summary of Nine Study Evaluation Criteria for Plant and Soil Invertebrate Literature Evaluation and ATTACHMENT A in Standard Operating Procedure #2: Plant and Soil Invertebrate Literature Evaluation and Data Extraction, Eco-SSL Derivation, Quality Assurance Review, and Technical Write-up.) Publications identified as Not Acceptable did not meet one or more of these criteria. All Not Acceptable publications have been assigned one or more keywords categorizing the reasons for rejection (Table 1. Literature Rejection Categories in Standard Operating Procedure #4: Wildlife TRV Literature Review, Data Extraction and Coding).

Agric. 13, 96-98

No Dur	Watmough, S. A. and Dickinson, N. M. 1995. Dispersal and mobility of heavy metals in relation to tree survival in an aerially contaminated woodland soil. Environmental Pollution. 90[2], 135-142
No Dose	Weatherford, Jason, Hammond, Angie, and Ratliff, Judy. 1997. Investigation of the ability of plants found in western kentucky to hyperaccumulate lead and aluminum from soils. Microchemical Journal 56[1], 93-102
No Dur	Weisenfeld, P. 1988. Cadmium And Lead In Earthworms (Lumbricidae) From Allotment Gardens And Similar Sites Influenced By Industrial Immissions In Berlin (West) (West Germany). Zool Beitr 32[2], 301-320
FL	Weisenfeld, P. 1989. Cadmium And Lead Content Of Earthworms In Cultivated Soils Of Industrial Areas Of Berlin West. Kuttler, W.(Ed.). Verhandlungen Gesellschaft Fuer Oekologie, Band 18 (Proceedings Of The Society For Ecology, Vol. 18); Meeting, Essen, Germany, September 25-October 1, 1988. 920p. Gesellschaft Fuer Oekologie: Goettingen, Germany.; 0[0], 285-287
Mix	Weltje, L. 1998. Mixture Toxicity and Tissue Interactions of Cd, Cu, Pb and Zn in Earthworms (Oligochaeta) in Laboratory and Field Soils: A Critical Evaluation of Data. Chemosphere 36[12], 2643-2660
Media	Wettlaufer, S. H., Osmeloski, J., and Weinstein, L. H. 1991. Response of polyamines to heavy metal stress in oat seedlings. Environ Toxicol Chem 10[8], 1083-1088
Media	Wetzel, A. and Werner, D. 1995. Ecotoxicological Evaluation of Contaminated Soil Using the Legume Root Nodule Symbiosis as Effect Parameter. Environ.Toxicol.Water Qual. 10[2], 127-133
FL	Wieler, A. 1938. The Action of Lead and Zinc Compounds on the Growth and Development of Plant Cultures (Ueber die Einwirkung von Blei- und Zinkverbindungen auf Wachstum und Entwicklung von Kulturpflanzen). Mitt.Forstwirtsch.Forstwiss.(Hanover) 9, 175-191
No Data	Wielgus-Scratinska, E. 1979. Influence of Lead Poisoning and Ultrastructural Changes int he Body Wall of Eisenia foetida (Savigny). Oligochaeta. 1. Short Action of Different Concentrations of Lead and Ultrastructural Changes in the Cells of the body Wall. Folia

Published literature that reported soil toxicity to terrestrial invertebrates and plants was identified, retrieved and screened. Published literature was deemed Acceptable if it met all 11 study acceptance criteria (Fig. 3.3 in section 3 "DERIVATION OF PLANT AND SOIL INVERTEBRATE ECO-SSLs" and ATTACHMENT J in Standard Operating Procedure #1: Plant and Soil Invertebrate Literature Search and Acquisition). Each study was further screened through nine specific study evaluation criteria (Table 3.2 Summary of Nine Study Evaluation Criteria for Plant and Soil Invertebrate Literature Evaluation and Data Extraction, Eco-SSL Derivation, Quality Assurance Review, and Technical Write-up.) Publications identified as Not Acceptable did not meet one or more of these criteria. All Not Acceptable publications have been assigned one or more keywords categorizing the reasons for rejection (Table 1. Literature Rejection Categories in Standard Operating Procedure #4: Wildlife TRV Literature Review, Data Extraction and Coding).

Histochem Cytochem 17[2], 181-188

Media	Wielgus-Serafinska, E. and Kawka, E. 1976. Accumulation and Localization of Lead in Eisenia foetida (Oligochaeta) Tissues. Folia Histochem Cytochem 14, 315-320
Mix	Wiersma, D., Van Goor, B. J., and Van der Veen, N. G. 1986. Cadmium, Lead, Mercury, and Arsenic Concentrations in Crops and Corresponding Soils in The Netherlands. J.Agric.Food Chem. 34, 1067-1074
Media	Wierzbicka, M. 1987. Lead Accumulation and Its Translocation Barriers in Roots of Allium cepa LAutoradiographic and Ultrastructural Studies. Plant Cell Environ. 10, 17-26
Media	Wierzbicka, M. and Antosiewicz, D. 1993. How lead can easily enter the food chain - a study of plant roots. Sci.Total Environ. NSuppl[1], 423-429
Media	Wierzbicka, M. 1999. Comparison of Lead Tolerance in Allium cepa with Other Plant Species. Environ Pollut 104[1], 41-52
Mix	Wijn, M., Duives, P., Herber, R., and Brunekreef, B. 1983. Lead Uptake from Vegetables Grown Along Highways. Int.Arch.Occup.Environ.Health 52, 263-270
Media	Wilkins, D. A. 1957. A Technique for the Measurement of Lead Tolerance in Plants. Nature 180[4575], 37-38
Media	Wilkins, D. A. 1960. The Measurement and Genetical Analysis of Lead Tolerance in Festuca ovina. Rep.Scott.Plant Breed.Stn. 85-98
Mix	Williamson, P. 1980. Variables Affecting Body Burden of Lead, Zinc, and Cadmium in a Roadside Population of the Snail, Cepaea hortensis Muller. Oecologia 44, 213-220
Species	Willoughby, R. A. and Thawley, D. G. 1975. Lead, Cadmium, Zinc, Calcium and Vitamin D Interactions in Animals. In: Proc.Int.Conf.on Heavy Metals in the Environment, Oct.27-31, 1975, Toronto, Canada , 143-154
Mix	Winters, C. and Morgan, A. J. 1988. Quantitative Electron Probe X-Ray Microanalysis Of Lead-Sequestering Organelles In Earthworms Technical Appraisal Of Air-Dried Smears And Freeze-Dried Cryosections. Scanning Microsc. 2[2], 947-958
Media	Wong, M. H. and Bradshaw, A. D. 1982. A Comparison of the Toxicity of Heavy Metals,

Published literature that reported soil toxicity to terrestrial invertebrates and plants was identified, retrieved and screened. Published literature was deemed Acceptable if it met all 11 study acceptance criteria (Fig. 3.3 in section 3 "DERIVATION OF PLANT AND SOIL INVERTEBRATE ECO-SSLs" and ATTACHMENT J in Standard Operating Procedure #1: Plant and Soil Invertebrate Literature Search and Acquisition). Each study was further screened through nine specific study evaluation criteria (Table 3.2 Summary of Nine Study Evaluation Criteria for Plant and Soil Invertebrate Literature Evaluation and ATTACHMENT A in Standard Operating Procedure #2: Plant and Soil Invertebrate Literature Evaluation and Data Extraction, Eco-SSL Derivation, Quality Assurance Review, and Technical Write-up.) Publications identified as Not Acceptable did not meet one or more of these criteria. All Not Acceptable publications have been assigned one or more keywords categorizing the reasons for rejection (Table 1. Literature Rejection Categories in Standard Operating Procedure #4: Wildlife TRV Literature Review, Data Extraction and Coding).

Using Root Elongation of Rye Grass, Lolium perenne. New Phytol. 91, 255-261

- Media Wong, M. H. and Lau, W. M. 1985. Root Growth of Cynodon and Eleusine indica Collected from Motorways at Different Concentrations of Lead. Environ Res 36[2], 257-267
- No Dose Wu, J., Hsu, F. C., and Cunningham, S. D. 1999. Chelate-assisted pb phytoextraction: pb availability, uptake, and translocation constraints. Environ.Sci.Technol. 33[11], 1898-1904
- Media Wu, L. and Antonovics, J. 1976. Experimental Ecological Genetics in Plantago II. Lead Tolerance in Plantago lanceolata and Cynodon dactylon from a Roadside. Ecology 57[3], 205-208
- **FL** Xi, Yuying, Guo, Dongsheng, Cheng, Jie, and Song, Yuxian. 1994. Effect of calcium and zinc on the contents of cadmium and lead in corn seedling. Shanxi Daxue Xuebao, Ziran Kexueban 17[1], 101-103
- Mix Xian, X. 1989. Response of kidney bean to concentration and chemical form of cadmium, zinc, and lead in polluted soils. Environmental Pollution. 57[2], 127-137
- MixXian, X. 1989. Effect of Chemical Forms of Cadmium, Zinc, and Lead in Polluted Soils on
Their Uptake by Cabbage Plants. Plant Soil 113, 257-264
- MediaXiong, Z. T. 1998. Lead Uptake and Effects on Seed Germination and Plant Growth in a Pb
Hyperaccumulator Brassica pekinensis Rupr. Bull Environ Contam Toxicol 60, 285-291
- FL Yagodin, B. A., Govorina, V. V., Vinogradova, S. B., Zamaraev, A. G., and Chapovskaya,
 G. V. 1995. Accumulation of Cadmium and Lead by Some Farm Crops on Soddy-Podzolic
 Soils with Different Levels of Cultivation. Izv.Timiryazevsk.S-kh.Akad. [2], 85-100
- OM, pH Yan, C., Shunzhen, F., Xianke, Y., Zhong, Z., and Chen, R. 1997. Effects of Pb and Hg on Anti-oxidation Enzymes in Tobacco Leaves. Acra Scientiae Circumstantiae (Huanjing Kexue Xuebao) 17[4], 469-473
- No Control Zawadzka, T., Mazur, H., Wojciechowska Mazurek, M., Starska, K., Brulinska Ostrowska, E., Cwiek, K., Uminska, R., and Bichniewicz, A. 1990. [Content Of Metals In Vegetables From Various Regions Of Poland In The Years 1986-1988. I. Content Of Lead, Cadmium And Mercury]. Rocz-Panstw-Zakl-Hig 41[3-4], 111-131

Rev	Zimdahl, R. L. and Arvik, J. H. 1973. Lead in Soils and Plants: A Literature Review. CRC Crit.Rev.Environ.Control 3[2], 213-224
No Control	Zimdahl, R. L. and Foster, J. M. 1976. The Influence of Applied Phosphorus, Manure, or Lime on Uptake of Lead from Soil. J.Environ.Qual. 5[1], 31-34
FL	Zommer Urbanska, S., Bojarowicz, H., and Kuczynska, I. 1994. [Fluorine And Lead Content In Selected Vegetables Grown Within The Range Of Emission Of Compounds Containing These Elements By The Glass Plant'Irena' In Wroclaw]. Rocz-Panstw-Zakl-Hig 45[1-2], 13-18
Mix	Zullini, A. and Peretii, E. 1986. Lead Pollutoin and Moss-Inihabiting Nematodes of an Industrial Area. Water Air Soil Pollut 27[3/4], 403-410
No Dose	Zupan, M., Hudnik, V., Lobnik, F., and Kadunc, V. 1997. Accumulation of lead, cadmium and zinc from contaminated soil in various plants and evaluation of soil remediation with indicator plant (Plantago lanceolata L.). Colloq Inst.Natl.Rech.Agron., Contaminated Soils, 85, 325-335