



## CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL (DTSC) HUMAN AND ECOLOGICAL RISK OFFICE (HERO)

HERO is pleased to announce our fourth “Quarterly Updates from HERO” – March 2016

1. Revised Human Health Risk Assessment (HHRA) Note 3 – DTSC-Modified Screening Levels (DTSC-SLs), January 2016. The update to HHRA Note is described below with a link to the entire HHRA Note:

HHRA Note 3 – DTSC has developed modified screening levels based on the U.S. EPA Regional Screening Levels (RSLs) for use in the human health risk assessment process at hazardous waste sites and permitted facilities. This revision of HHRA Note 3 incorporates HERO recommendations based on review of the November 2015 releases of the RSL tables for soil, tapwater, and ambient air. HHRA Note 3 presents recommended screening levels (derived using DTSC-modified exposure and toxicity factors) for constituents in soil and tap water for which the DTSC-SL is at least three-fold more protective than the corresponding RSL. For ambient air, HHRA Note 3 presents screening levels for volatile compounds with a DTSC-SL that is more protective than the corresponding RSL, regardless of degree. For analytes that have at least one DTSC-SL for a specific medium, available RSLs are also included in the tables for completeness when the combination of receptor and endpoint doesn't warrant a DTSC-SL. A link is provided for download of the HHRA Note 3 narrative and screening-level document, as well as a link to supporting Appendices that provide computational details for the derivation of the screening levels. An additional link is provided to spreadsheet-based versions of the screening-level tables for users' convenience. The updated HHRA Note 3 can be found at:

<http://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-2016-01.pdf>,

<http://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-Appendices-2016-01.pdf>, and

<http://www.dtsc.ca.gov/assessingrisk/humanrisk2.cfm>.

2. Revised Preliminary Endangerment Assessment Guidance Manual (PEA Guidance Manual) with a link below to the document:

The Revised PEA Guidance Manual was posted on DTSC's website in October 2015. This version of the PEA Guidance Manual incorporates: 1) comments received since releasing the October 2013 Interim version; 2) revisions to the exposure equations that incorporate the 2014 recommended EPA exposure parameters; and 3) inclusion of certain human-health-risk-based environmental screening levels (ESLs) published by the San Francisco Bay Regional Water Quality Control Board (SF RWQCB) that were considered, at the time, acceptable screening levels for use in a PEA. Since the release of the October PEA, the SF RWQCB updated the ESLs and released revised screening levels, in particular screening levels for subslab soil gas (February 2016). HERO is currently reviewing the revised ESLs and we recommend contacting your site toxicologist prior to use of any ESL until that review is completed. The revised PEA guidance can be found at:

[https://www.dtsc.ca.gov/PublicationsForms/upload/PEA\\_Guidance\\_Manual.pdf](https://www.dtsc.ca.gov/PublicationsForms/upload/PEA_Guidance_Manual.pdf).

3. November 2015 and January 2016 USEPA Regional Screening Levels (RSLs).

The USEPA released the latest version of the RSLs. The RSL tables can be found at:

<http://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables-november-2015>. In addition to the list below of *What's New* in the RSL tables, in January 2016 toluidine, o- (Methylaniline, 2-) was added to the calculator pick list and the toxicity values for toluidine, o- will appear in the Spring update. Below is a list of *What's New* in the November 2015 version of the RSLs:

- Chemicals with toxicity value changes due to [Cal EPA](#) updates are:

- Dibromochloromethane
- Chemicals with new toxicity values due to PPRTV updates are:
  - Picric Acid (2,4,6-Trinitrophenol),
  - Trimethylpentene, 2,4,4-,
  - Tungsten,
  - Sodium Tungstate,
  - Sodium Tungstate Dihydrate,
  - Ethanol, 2-(2-methoxyethoxy)-,
  - Lewisite,
  - Carbonyl Sulfide, and
  - Trifluoroethane, 1,1,1-.
- Chemicals from HEAST that have lost toxicity values due to PPRTV updates are:
  - Dibromomethane (Methylene Bromide),
  - Trichlorofluoromethane,
  - Methyl Acrylate,
  - Ethyl Methacrylate,
  - Methyl Isobutyl Ketone (4-methyl-2-pentanone),
  - Bis(2-chloro-1-methylethyl) ether,
  - Hexane, N-,
  - Ethyl Acrylate,
  - Antimony Potassium Tartrate,
  - Propylene Glycol Monoethyl Ether, and
  - Chloroacetic Acid.
- The RSL workgroup coordinated with the Vapor Intrusion Screening Level ([VISL](#)) workgroup to add [Physprop](#) has a new source of chemical parameters. Parameters were extracted from Physprop and categorized as experimental or estimated. See section 2.4 for details of Physprop inclusion in the hierarchy. Also SSL was removed as a source for  $D_{ia}$ ,  $D_{iw}$ , MP, HLC, H' and S.
- Common chemical names were replaced with technical names for the following:
  - Express (101200-48-0) changed to Tribenuron-methyl,
  - Baygon (114-26-1) changed to Propanediol, 1,2-
  - Aramite (140-57-8) changed to Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester,
  - Bidrin (141-66-2) changed to Dicrotophos,
  - ALAR (1596-84-5) changed to Daminozide,
  - Dacthal (1861-32-1) changed to Chlorthal-dimethyl,
  - Kerb (23950-58-5) changed to Propyzamide,
  - Goal (42874-03-3) changed to Oxyfluorfen,
  - Bayleton (43121-43-3) changed to Triadimefon,
  - Pydrin (51630-58-1) changed to Fenvalerate,
  - Amdro (67485-29-4) changed to Hydramethylnon,
  - Cyhalothrin/karate (68085-85-8) changed to Cyhalothrin,
  - Baythroid (68359-37-5) changed to Cyfluthrin,
  - Apollo (74115-24-5) changed to Clofentezine,
  - Ally (74223-64-6) changed to Metsulfuron-methyl,
  - Assure (76578-14-8) changed to Quizalofop-ethyl,
  - Savey (78587-05-0) changed to Hexythiazox,
  - Harmony (79277-27-3) changed to Thifensulfuron-methyl,
  - Pursuit (81335-77-5) changed to Imazethapyr,
  - Londax (83055-99-6) changed to Bensulfuron methyl,
  - Nustar (85509-19-9) changed to Flusilazole,

- Guthion (86-50-0) changed to Azinphos-methyl,
- Systhane (88671-89-0) changed to Myclobutanil, and
- Benefin (1861-40-1) changed to Benfluralin
- Melting Point values added to the parameters table.
- Corrections were posted to the [OSWER Directive](#) for child surface area available for water contact. A [FAQ](#) has been provided. [Items 22 and 23](#) are the source of the documentation.
- A [FQ](#) was added to guide users requesting previous versions of tables.
- The variable names in the equation images and user guide were updated to be consistent with the [radionuclide PRG calculator](#) and other similar projects. Also the RBA variable was added to the soil ingestion equation images.

#### 4. ITRC Environmental Molecular Diagnostic (EMD) guidance.

Environmental Molecular Diagnostic is another tool that can be used at cleanup sites. EMD describes a group of advanced and emerging techniques used to analyze biological and chemical characteristics of soils, sediments, groundwater, and surface water. Over the last decade, great advances have been made in adapting and applying EMDs for site characterization, remediation, monitoring, and closure. EMDs are important and valuable because they can provide key information not available using traditional analytical methods (e.g., groundwater analysis for volatile organic compounds). While they are intended to complement these traditional methods, EMDs can bring a new perspective to all stages in the environmental management decision - making processes.

In particular, EMDs can provide the following benefits:

- improve the management of contaminated sites
- determine whether biotic or abiotic degradation is occurring at a site
- reveal whether multiple sources of contamination are present
- help decide what remediation strategy will work
- help determine when enhancements such as chemical amendments or bioaugmentation are necessary
- aid in reducing or optimizing a monitoring program
- provide complementary data to support site closure

If anyone is interested in learning more about the use of EMDs the following are available:

- a. The EMD web-based guidance can be found at: <http://www.itrcweb.org/emd-2/>.
- b. Introductory collection of factsheets can be found at: <http://www.itrcweb.org/GuidanceDocuments/EMD1.pdf>.
- c. Online training is available through ITRC. The next training will be held on November 3, 2016 from 1:00 pm to 3:15 pm Eastern Time (10:00 am to 12:15 pm Pacific Time).
- d. A recording of the February 4, 2016 training is archived and can be found at: [https://clu-in.org/conf/itrc/EMD\\_020416/](https://clu-in.org/conf/itrc/EMD_020416/).

Please contact your site toxicologist if you have any questions.

Thank you,

HERO