

CECRA
Stakeholders
Meeting

April 18, 2018



Introductions & Emergency Procedures



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Emergency evacuation procedures
Restrooms
Refreshments
Room Introductions
Roll call for phone participants

AGENDA

- New Database Update
- Laboratory Data Qualifier Issue
- Redevelopment & Cleanup Issues
- Groundwater Sampling Guidance Update
- Risk-based Corrective Action (RBCA) Guidance Update
- Voluntary Cleanup & Redevelopment Act (VCRA) Guide Update
- Legislative Proposals
- Closing

New Database Status



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As you may recall from our last meeting, there was a shift in the project schedule. Some state superfund unit staff will be conducting the first round of user acceptance testing the week of May 7, 2018. The first release of the new database will rollout at the end of August 2018, and we will be asking for stakeholder input at appropriate times in the process. The first release will include management of site-specific information, environmental data management (laboratory and field results) via Equis, and an electronic document management system. Following the release of the new database in August 2018, DEQ's online data search tool feature associated with programs served by the new database (including SSU) will not be available for approximately three months. During this timeframe, the online web mapper will be available, but the information portion provided through the data search tool will not. Information on the sites will have to be requested through DEQ's Just FOIA system during this timeframe.

Pace Analytical Laboratory Qualifiers



- N2 Qualifier Applied to Some VPH/EPH and 8260B Samples
- MN Qualifier Applied to Some 8260 Samples



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Two issues that occurred in the recent past had to do with Pace Analytical Services. DEQ has a contract with Pace to perform certain sample analyses, and we know that some stakeholders also use the laboratory on some projects. We want to share our experience with you so that you can plan appropriately.

NELAC Certification - NELAC/TNI accreditation applies to national methods such as EPA Method 8260B. VPH and EPH methods are state methods that were originally developed by the Massachusetts Department of Environmental Protection (MADEP). DEQ adopted the VPH and EPH methods and have modified them for our needs and we now refer to them as the "Montana Method". Pace had qualified some DEQ data with "N2" because of a

qualifier does not affect the usability of the VPH and EPH data.

Pace also qualified two compounds in its VOC analysis due to lack of NELAC certification. This occurred at the Minnesota lab for a limited number of soil samples. Fortunately, the two compounds were not suspected to be present at the site given the operational history, and other soil analyses from the same site did not identify the presence of these two compounds. The Minnesota lab has since gone through their proficiency testing and are expecting recertification from the health department soon. DEQ requested that Pace not send 8260B samples to its Minnesota lab until the lab is recertified. Instead, samples are being run in Pace's Billings lab.

MN Qualifier - The Pace lab in Billings sent some DEQ samples to its Minnesota lab for VOCs analyses via EPA Method 8260. Minnesota statutes 4740.2100 Subpart 8 C, D were applied to the data even though the work was for an out-of-state client. When calibrating the instruments, labs typically use 5 or more concentrations of the target analytes to determine the linear range and response for the analytical method. The low standard is typically near or at the reporting limit for the analytes, but it is not specified in the methods. The Minnesota statute requires that the low standard is "at or below the reporting limit". If there is indication that an analyte response at the reporting limit is not accurate (verification standard recovery > 40% from true value), the reporting limit is raised to the next highest concentration standard that meets the 40% limit. This approach resulted in a "MN" flag being applied to some of the DEQ data and reporting limits were raised to where they were above DEQ-7 levels, thus rendering the data unusable for decision making.

Please take this into account for project planning purposes. If you encounter these qualifiers in your data packages, please make sure they are addressed in the data validation report and summarized in the data quality section of your document.

Redevelopment & Cleanup Issues

- Revegetation
- Monitoring Points
- Institutional Controls
- Options?



DEQ is noticing some issues at sites where cleanup is complete or underway. In one instance, a developer setup a storage area in a recently revegetated area that resulted in significant damage that will require repair and reseeding. In another instance, a new business owner remodeled the inside of a commercial building and destroyed vapor points that were part of the performance monitoring for the cleanup system. At another site, a developer moved soil in a contaminated area prior to the cleanup occurring and additional sampling was needed to redefine the contaminated area. DEQ is also noting that institutional controls are not observed at some sites. Do you have ideas for steps that could be taken to minimize the occurrence of these situations in the future?

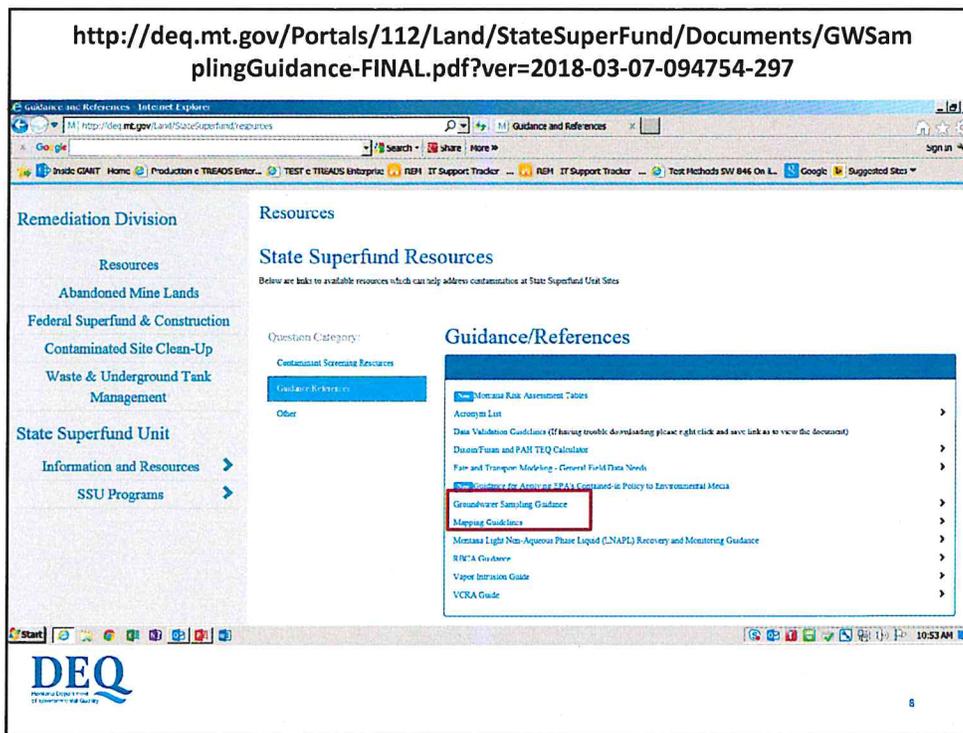


Groundwater Monitoring Guidance Update

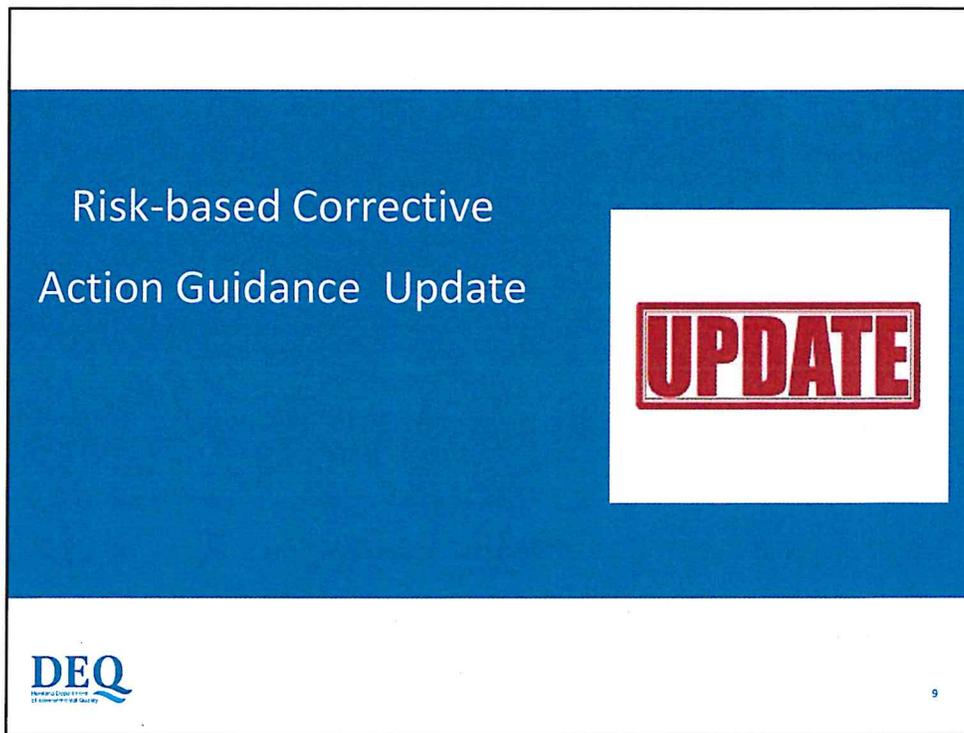


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The Contaminated Site Cleanup Bureau consolidated various program guidance documents into one bureau-wide groundwater monitoring guidance document. The guidance document was updated to reflect new methodologies, and identifies obstacles that some people encountered (i.e., submittal of well logs to MBMG by licensed monitoring well installers). The guidance is available at <http://deq.mt.gov/Portals/112/Land/StateSuperFund/Documents/GWSamplingGuidance-FINAL.pdf?ver=2018-03-07-094754-297>.



The new guidance is available on the State Superfund Unit website under “Information and Resources” on the “Guidance/References” tab. You can directly link to the document at <http://deq.mt.gov/Portals/112/Land/StateSuperFund/Documents/GWSamplingGuidance-FINAL.pdf?ver=2018-03-07-094754-297>. We plan to review this document every three years to determine if updates are needed. Please also note that other guidance documents are also located here, including the guidance documents discussed later in this meeting.



Laura Alvey works in the State Superfund Unit and oversees the investigation and cleanup of sites under Montana's Water Quality Act; she is a one-person program called the Groundwater Remediation Program.

- Montana Risk-Based Corrective Action Guidance for Petroleum Releases, September 2016
- “RBCA”
- Risk-based Screening Levels: “RBSLs”
- Executive Summary



The updates to RBCA are summarized in the RBCA 2018 “Executive Summary”

Why update Risk-Based Corrective Action (RBCA) Guide?

- **January 2017:** U.S. Environmental Protection Agency released the Integrated Risk Information System Toxicological Review for benzo(a)pyrene
- **May 2017:** DEQ updated the October 2012 version of Circular DEQ-7 Montana Numeric Water Quality Standards



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The EPA IRIS review for benzo(a)pyrene (BAP) and the changes to DEQ-7 Standards prompted the need to update certain risk-based screening levels.

Why update Risk-Based Corrective Action (RBCA) Guide?

- DEQ recognized the need to update RBSLs
- May 30, 2017: DEQ issued a memo summarizing the changes, and provided revised RBSL tables



DEQ
DEPARTMENT OF ENVIRONMENTAL QUALITY

The EPA IRIS review for BAP and the changes to DEQ-7 Standards prompted the need to update certain risk-based screening levels.

MT RBCA Update: benzo(a)pyrene

- January 2017:
 - New toxicity information: oral cancer slope factor, inhalation unit risk, reference dose, and reference concentration
 - Carcinogenicity of other polycyclic aromatic hydrocarbons (PAHs) is relative to that of benzo(a)pyrene
 - Soil RBSLs for direct-contact increased



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These are all specific parameters that go into the calculation of the screening levels.

MT RBCA Update: RBSL changes as results of changes to benzo(a)pyrene toxicological values

Comparison of Residential Soil Direct Contact RBSLs

	RBCA Sept 2016 RBSLs (mg/kg)	RBCA April 2018 RBSLs (mg/kg)
Benzo(a)anthracene	0.18	1.3
Benzo(a)pyrene	0.018	0.13
Benzo(b)fluoranthene	0.18	1.3
Benzo(k)fluoranthene	1.8	13
Chrysene	18	130
Dibenzo(a,h)anthracene	0.018	0.13
Indeno(1,2,3-cd)pyrene	0.18	1.3



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This table shows the residential direct contact RBSLs for which there were changes. There were no changes to the volatile petroleum hydrocarbon direct contact RBSLs.

MT RBCA Update: RBSL changes as results of changes to benzo(a)pyrene toxicological values

Comparison of Commercial Soil Direct Contact RBSLs

	RBCA Sept 2016 RBSLs (mg/kg)	RBCA April 2018 RBSLs (mg/kg)
Benzo(a)anthracene	3.2	24
Benzo(a)pyrene	0.32	2.4
Benzo(b)fluoranthene	3.2	24
Benzo(k)fluoranthene	32	240
Chrysene	320	2400
Dibenzo(a,h)anthracene	0.32	2.4
Indeno(1,2,3-cd)pyrene	3.2	24



MT RBCA Update: RBSL changes as results of changes to benzo(a)pyrene toxicological values

Comparison of Construction Worker Direct Contact RBSLs

	RBCA Sept 2016 RBSLs (mg/kg)	RBCA April 2018 RBSLs (mg/kg)
Benzo(a)anthracene	54	390
Benzo(a)pyrene	5.4	39
Benzo(b)fluoranthene	54	390
Benzo(k)fluoranthene	540	3900
Chrysene	5400	39000
Dibenzo(a,h)anthracene	5.4	39
Indeno(1,2,3-cd)pyrene	54	390



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Remember that construction workers are exposed to surface soil and subsurface soil.

RBSL updates due to changes to DEQ-7 Standards

Comparison of Circular DEQ-7 Montana Numeric Water Quality Standards (DEQ-7 Standards) for groundwater

	DEQ-7 Oct 2012 (µg/L)	DEQ-7 May 2017 (µg/L)
1,2-dibromoethane (ethylene dibromide or EDB)	0.004	.017
Acenaphthene	670	70
Fluoranthene	130	20
Fluorene	1100	50
Pyrene	830	20



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Note there is NO OVERLAP between the compounds affected by the benzo(a)pyrene update and the compounds affected by the DEQ-7 updates.

The DEQ-7 Standard for EDB increased, so the RBSLs that protect leaching to groundwater increased.

The DEQ-7 Standards for the four PAH compounds shown in the table DECREASED, so the corresponding RBSLs that protect leaching also decreased.

These changes in DEQ-7 are reflected in the RBCA table of groundwater RBSLs

RBSL updates due to changes to DEQ-7 Standards

Comparison of soil RBSLs for protection of leaching where contamination is 0-10 feet from groundwater

	RBSLs Sept 2016 (mg/kg)	RBSLs April 2018 (mg/kg)	
1,2-dibromoethane (ethylene dibromide or EDB)	0.00002	0.000086	Increase
Acenaphthene	260	27	Decrease
Fluoranthene	550	85	Decrease
Fluorene	770	35	Decrease
Pyrene	3400	83	Decrease



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Other Changes to RBCA

- Executive Summary of 2018 Changes:
 - RBSLs for soil and groundwater not designed to protect the vapor intrusion pathway
 - DEQ has not adopted the EPA Petroleum Vapor Intrusion Guidance or the EPA Vapor Intrusion Screening Level Calculator



Other Changes to RBCA

- Clarification regarding “Tier 2” procedures: mostly rewording for clarity
- Minor edits

- RBCA April 2018 will be available on DEQ's website by the end of the month.

Questions?

Voluntary Cleanup and
Redevelopment Act
(VCRA) Guide
Update



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Kate Fry works in the State Superfund Unit and oversees the investigation and cleanup of contaminated sites under CE CRA.

VCRA Guide

- Assists Voluntary Cleanup Plan (VCP)
- 2016 Survey
- Reduce preparation time
- Reduce number of submittals
- Invitation to review and comment on the 2018 draft



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The Guide is intended to **assist** VCP applicants in meeting the **requirements** outlined in VCRA.

Provides **information** to applicants or potential applicants regarding the **VCRA Process**. Identifies **requirements** and **suggests format** for VCPs to ensure elements are **not left out**.

In a **2016 Survey**, DEQ asked previous VCRA applicants **what worked and didn't work in the VCRA process**.

The results were **previously provided** so I won't go over them in detail.

Survey comments included **reduce the time** to go through the VCRA process; **reduce submittals**.

Using **feedback** from the 2016 Survey and other things we've seen while reviewing VCPs and construction completion reports, DEQ made **enhancements and clarifications** to the Guide.

On **March 14th**, DEQ sent email to **stakeholders, consultants, & previous applicants** **inviting** them to **review and comment** on the draft 2018 Guide

DEQ requested **comments back** by **April 13th** – last Friday.

VCRA Guide Updates

- Previous Guide Updates:
 - 1997 – Original VCRA Checklist
 - 2002 – Guidance document
 - 2012 – Legislative change (2009)
environmental assessment (EA) & remediation proposal (RP)
 - 2018 – General Information and Clarification Update



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VCRA created in 1995

To assist VCP applicants in meeting the requirements outlined in VCRA.

1997 – Bare bones checklist

2002 – Developed guidance document – **USED FOR A LONG TIME**

Described VCRA process

Described requirements

Provided a suggested format for VCPs to ensure elements are not left out.

2009 – VCRA Split into two: environmental assessment (EA) and remediation proposal (RP).

2012 – Guide revised to describe elements of the EA; and elements of the RP.

2018 - General Information and Clarification in response to 2016 survey comments and DEQ's own experience.

VCRA Guide Update - Changes

- Submittal Information
 - 2 hard copies
 - Compiled PDF
 - Modifiable electronic format copy
- Letter of Intent to Submit a VCP
 - Agree to pay DEQ's costs
 - More DEQ assistance with facility-specific questions



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SUBMITTAL INFORMATION

Used to be **3 hard copies and a compiled PDF for each component**. Revised to 2 hard copies, compiled PDF, and a modifiable electronic copy.

Modifiable files allows DEQ to insert comments within the document. Electronic comments are easier to find. Electronic comments allow applicants to understand where/what additional information is needed.

Expedites DEQ's review and minimizes cost to the applicant.

LETTER OF INTENT TO SUBMIT A VCP

Survey comments – helpful to have **DEQ input prior to submitting VCP**

Because state superfund is a cost recovery program, it is difficult for DEQ to provide upfront assistance to applicants. **Up-front assistance would result in better document, easier review, shorter timeframe.** Dependent on what information is available.

- **Applicant may submit a letter** to DEQ stating its **intent to submit a VCP and agree to pay DEQ's costs** prior to submittal of a VCP
- DEQ may be able to develop a greater understanding of the facility specifics (assuming information is available to develop that understanding)
- Provide more assistance with facility-specific questions...

VCRA Guide Update - Clarifications

- All or Some Cleanup has Already Occurred
 - Describe work conducted
 - Demonstrate protectiveness and meets ERCLs
 - Evaluate protectiveness and meets ERCLs
- “No Further Action” VCPs
 - Describe work conducted
 - Describe current conditions (confirmation sampling)
 - Protectiveness and meets ERCLs



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Guide provides **clarifications** on what information to provide and where in the documents for those sites that have **had all or some cleanup** or for **No Further Action**.

ALL OR SOME CLEANUP – wording changed to clarify where to talk about cleanup levels;

If **previous interim remedial actions** were performed, the EA should provide **enough information** to demonstrate that the previous activities are **protective** of human health and the environment and **comply** with environmental **regulations**. For example, if the interim remedial actions included a repository, the EA should include a description of the repository (capping, lining, how is it protective and meets regulations). This information then will be evaluated in the RP for protectiveness and meets ERCLs.

Another example: EA describes previous excavation activities. Maybe still exceeds generic screening levels, but not site-specific. RP will evaluate protectiveness and compliance to ERCLs to determine final remedy – site-specific cleanup levels, additional excavation, ICs.

NO FURTHER ACTION VCPs

Previous clean up has occurred and no exceedances. Again, describe the work, explain the current conditions (provide results confirmation sampling).

VCRA Guide Update - Clarifications

- Written Consent (Section 75-10-733(2)(c), MCA)
 - EA: Access (e.g., sampling)
 - RP: Implementation (e.g., cleanup)
- Remedial Alternative Comparison Discussions
 - Required by Section 75-10-734(3)(b), MCA.
 - Attachment D (example text and table)



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WRITTEN CONSENT – from current owners for access and implementation has **always been required**

Some VCRA applicants have had difficulty obtaining the consent for implementation of the VCP in the EA because RP has not been developed. Owners don't know what cleanup is being proposed.

Revised to allow the **consent for access** (and any sampling or other activities necessary for completion of the EA) **include in EA**

Consent for implementing the remedy included in RP

REMEDIAL ALTERNATIVES ANALYSIS – Remediation Proposal

VCRA requires remedial alternative to be compared against the CECRA

DEQ clarified how to evaluate if NFA or when remedial actions have already been conducted.

VCRA Guide Update - Clarifications

- Revegetation in Relation to Redevelopment



WALL-E – Pixar (2008)



Conceptual drawing from Missoula Sawmill



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REVEGETATION REQUIREMENTS AND RELATIONSHIP TO REDEVELOPMENT ACTIVITIES;

Revegetation is one of the **requirements after remediation**.

Revegetation is generally the **last to occur** before DEQ can determine the **VCP is complete**.

If **redevelopment** construction is **planned** on the heels of remediation, does it make sense to spend the money for revegetation when it will just get ripped up again (in a short amount of time)?

If this is the case, the **applicant can state** in the VCP that the **property will be redeveloped immediately upon completion** of remedial activities so **revegetation won't be conducted**.

Important to remember

REDEVELOPMENT SPECIFIC INFORMATION SHOULD NOT BE INCLUDED IN THE VCP.

Other VCRA Guide Updates

- Hyperlinks – statutory citations, DEQ program information
- Checklist (Appendix A)
- Environmental Requirements, Criteria, or Limitations (ERCLS) (Attachment F)
- Soil Screening Flowchart Hyperlink



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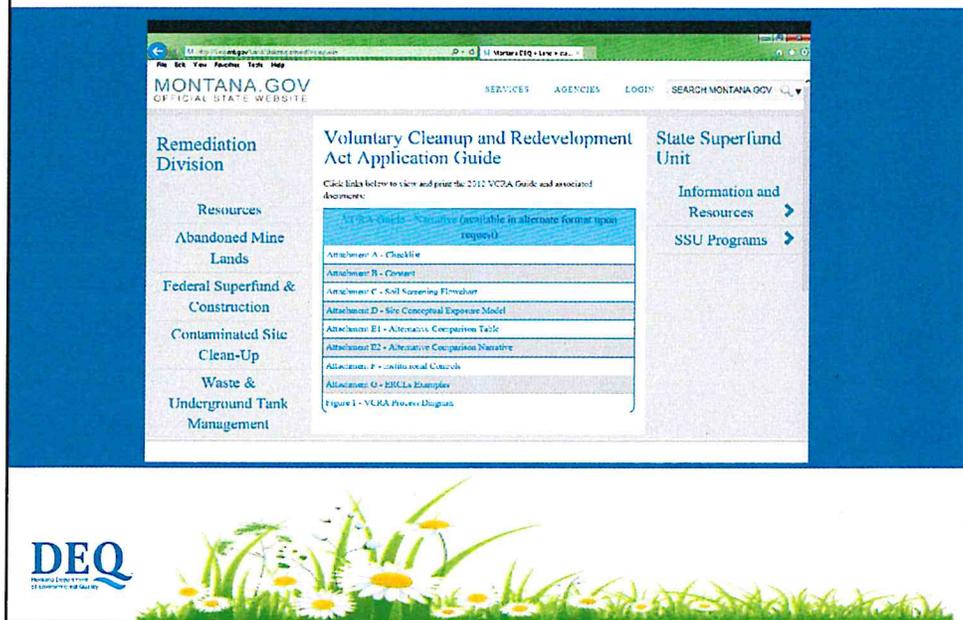
Hyperlinks to statutory citations, other DEQ program information (FAQs, screening/other guidance documents)

VCP checklist to reflect previously identified changes;

Updated the model environmental requirements, criteria, or limitations (**ERCLs**); and

Removed the **soil screening flowchart** and **replaced** with **hyperlink** to where most current version can be found online.

2018 VCRA Guide



DEQ inviting stakeholders, previous applicants and consultants to review and comment on the draft 2018 VCRA Guide;
DEQ requested comments be submitted by Friday 4/13.

Our intent is take make the **process clearer** and more **straightforward - reduce preparation time, number of submittals**, resulting in a more **streamlined and shorter** process.

Legislative Proposals ?



Closing

Action Items

Contact Information:

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Denise Martin 406-444-6578



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We anticipate another meeting in fall 2018. We plan to share with you helpful hints for successful completion of a voluntary cleanup plan. Please let us know if you have other topics you would like for us to include.

We are looking forward to a productive field season. Please let us know if you have an urgent need that requires sampling, and we will do our best to review sampling plans in a timely manner that allows for completion of the work this field season.