

ALASKA

Name: Jill Taylor

Contact_Title: Environmental Program Specialist III

Organization: Alaska DEC Contaminated Sites Program

Address / City: 410 Willoughby Avenue, Suite 303, Juneau, 99801

Email: Jill_Taylor@dec.state.ak.us

Contact_Phone: (907) 465-5209

Regulatory

Soil

Direct Contact (Dermal)

Basis:

Citation_Location: "18 AAC 75.325 (g) and (h) for Cumulative Risk. <http://www.dec.state.ak.us/regulations/index.htm> Cleanup Levels Guidance - Method 2 Standard Tables"

Contact_Info: Jill_Taylor@dec.state.ak.us

Comments:

Ingestion

Basis:

Citation_Location: "18 AAC 75.325 (g) and (h) for Cumulative Risk. <http://www.dec.state.ak.us/regulations/index.htm> Cleanup Levels Guidance - Method 2 Standard Tables"

Contact_Info: Jill_Taylor@dec.state.ak.us

Comments:

Inhalation

Basis: Jill_Taylor@dec.state.ak.us

Citation_Location: 18 AAC 75.325 (g) and (h) for Cumulative Risk. <http://www.dec.state.ak.us/regulations/index.htm> Cleanup Levels Guidance - Method 2 Standard Tables

Contact_Info:

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Groundwater

Direct Contact (Dermal)

Basis:

Citation_Location: "18 AAC 75.325 (g) and (h) for Cumulative Risk. Cleanup levels are based on drinking water MCL's. Not necessarily risk based. Cleanup Levels Guidance - Method 2 Standard Tables"

Contact_Info: Jill_Taylor@dec.state.ak.us

Comments:

Discharge to Surface Water

Basis:

Citation_Location: Groundwater must meet surface water standards at point of compliance adjacent to surface water body.

Contact_Info:

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: "18 AAC 75.325 (g) and (h) for Cumulative Risk. Cleanup levels are based on drinking water MCL's. Not necessarily risk based. Cleanup Levels Guidance - Method 2 Standard Tables"

Contact_Info: Jill_Taylor@dec.state.ak.us

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

ALASKA

Name: Jill Taylor

Contact_Title: Environmental Program Specialist III

Organization: Alaska DEC Contaminated Sites Program

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Email: Jill_Taylor@dec.state.ak.us

Contact_Phone: (907) 465-5209

Regulatory

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: Surface water must meet 18 AAC 70 Water Quality Standards which are protective for all use classes. (Drinking, aquaculture, aquatic life, etc.)

Contact_Info: Jill_Taylor@dec.state.ak.us

Comments:

Ecological Risk

Basis:

Citation_Location: Surface water must meet 18 AAC 70 Water Quality Standards which are protective for all use classes. (Drinking, aquaculture, aquatic life, etc.)

Contact_Info:

Comments:

Fish Consumption

Basis:

Citation_Location: Surface water must meet 18 AAC 70 Water Quality Standards which are protective for all use classes. (Drinking, aquaculture, aquatic life, etc.)

Contact_Info:

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Vapor Intrusion

Inhalation

Basis:

Citation_Location: Cleanup levels are developed on a site specific basis to handle both human health and ecological receptors.

Contact_Info: Jill_Taylor@dec.state.ak.us

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Sediment

Human Health Risk

Basis:

Citation_Location: Cleanup levels are developed on a site specific basis to handle both human health and ecological receptors.

Contact_Info: Jill_Taylor@dec.state.ak.us

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
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 UST
 WetlandsProgram
 Other

ALASKA

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Email: Jill_Taylor@dec.state.ak.us

Contact_Phone: (907) 465-5209

Guidelines

Soil

Ecological Risk

Basis:

Citation_Location: Risk Assessment Procedures Manual (this document is adopted by reference in 18 AAC 75)

Contact_Info: Jill_Taylor@dec.state.ak.us

Comments:

Impact to Surface Water

Basis:

Citation_Location: Risk Assessment Procedures Manual (this document is adopted by reference in 18 AAC 75)

Contact_Info: Jill_Taylor@dec.state.ak.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis:

Citation_Location: Risk Assessment Procedures Manual (this document is adopted by reference in 18 AAC 75)

Contact_Info: Jill_Taylor@dec.state.ak.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Human Health Risk

Basis:

Citation_Location: Risk Assessment Procedures Manual (this document is adopted by reference in 18 AAC 75)

Contact_Info: Jill_Taylor@dec.state.ak.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

ARKANSAS

Name: Ashley Whitlow Contact_Title: Senior Epidemiologist
 Organization: Arkansas Department of Environmental Quality - Hazardous Waste Division
 Address / City: 8001 National Drive, Little Rock, 722198913
 Email: whitlow@adeq.state.ar.us Contact_Phone: (501) 682-0689

Regulatory

Soil

Impact to Groundwater

Basis:

Citation_Location: Arkansas Pollution Control and Ecology Commission Regulation 2 (<http://www.adeq.state.ar.us/regs/default.htm>) and ADEQ Ground Water Remediation Level Interim Policy and Technical Guidance

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated soils.

Impact to Surface Water

Basis: Site-specific soil standards may be developed to prevent constituent exceedances of surface water risk-based criteria.

Citation_Location: None. Soil remediation standards are developed on a case-by-case basis (according to site-specific circumstances).

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated soils.

Basis:

Citation_Location: Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation 2 (<http://www.adeq.state.ar.us/regs/default.htm>)

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated soils.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Direct Contact (Dermal)

Basis:

Citation_Location: Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation 2 and ADEQ Ground Water Remediation Level Interim Policy and Technical Guidance

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated groundwater. A remedial action pursuant to subdivision (e)(3) of this section shall eliminate unacceptable risks and prevent degradation of groundwaters and surface waters.

Discharge to Surface Water

Basis:

Citation_Location: Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation 2 (<http://www.adeq.state.ar.us/regs/default.htm>) and ADEQ Ground Water Remediation Level Interim Policy and Technical Guidance

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated groundwater. A remedial action pursuant to subdivision (e)(3) of this section shall eliminate unacceptable risks and prevent degradation of groundwaters and surface waters.

Drinking (Ingestion)

ARKANSAS

Name: Ashley Whitlow Contact_Title: Senior Epidemiologist
 Organization: Arkansas Department of Environmental Quality - Hazardous Waste Division
 Address / City: 8001 National Drive, Little Rock, 722198913
 Email: whitlow@adeq.state.ar.us Contact_Phone: (501) 682-0689

Regulatory

Basis:

Citation_Location: Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation 2 (<http://www.adeq.state.ar.us/regs/default.htm>) ADEQ Ground Water Remediation Level Interim Policy and Technical Guidance

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated groundwater. A remedial action pursuant to subdivision (e)(3) of this section shall eliminate unacceptable risks and prevent degradation of groundwaters and surface waters.

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation 2 § 508 (Water Quality Standards for Surface Waters of the State). (<http://www.adeq.state.ar.us/regs/default.htm>)

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated surface water. A remedial action pursuant to subdivision (e)(3) of this section shall eliminate unacceptable risks and prevent degradation of groundwaters and surface waters.

Ecological Risk

Basis:

Citation_Location: Arkansas Pollution Control and Ecology Commission Regulation 2 (<http://www.adeq.state.ar.us/regs/default.htm>)

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated surface water. A remedial action pursuant to subdivision (e)(3) of this section shall eliminate unacceptable risks and prevent degradation of groundwaters and surface waters.

Fish Consumption

Basis:

Citation_Location: The Arkansas Department of Health and Human Services (DHHS) health section is consulted for elevated levels of contaminants of concern (COCs) in water bodies, and it is their jurisdiction to issue fish advisories.

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated surface water. A remedial action pursuant to subdivision (e)(3) of this section shall eliminate unacceptable risks and prevent degradation of groundwaters and surface waters.

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

ARKANSAS

Name: Ashley Whitlow Contact_Title: Senior Epidemiologist
 Organization: Arkansas Department of Environmental Quality - Hazardous Waste Division
 Address / City: 8001 National Drive, Little Rock, 722198913
 Email: whitlow@adeq.state.ar.us Contact_Phone: (501) 682-0689

Guidelines

Soil

Direct Contact (Dermal)

Basis: U.S. EPA. 2001. RAGS, Volume I: Human Health Evaluation Manual, Part E, Supplemental Guidance for Dermal Risk Assessment. Final. OSWER 9285.7-02EP. PB99-963312

Citation_Location: None. Soil remediation standards are developed on a case-by-case basis (according to site-specific circumstances). Soil contaminants are initially screened using the screening levels presented in the EPA Region 6 HHMSSLs table: http://www.epa.gov/earth1r6/6pd/rcra_c/pd-n/screenvalues.pdf. Dermal toxicity values (for COCs that failed the screening process) for use in risk-based development of remediation goals are extrapolated from oral or inhalation toxicity values that are also presented in the HHMSSLs table.

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated soils.

Ecological Risk

Basis: U.S. EPA, Ecological Risk Assessment Guidance for Superfund, <http://www.epa.gov/oswer/riskassessment/ecorisk/ecorisk.htm>

Citation_Location: "None. Soil remediation standards are developed on a case-by-case basis (according to site-specific circumstances). Soil contaminants are initially screened for ecological concerns using the following: USEPA.2001.Supplemental Guidance to RAGS: Region 4 Bulletins, Ecological Risk Assessment. <http://www.epa.gov/Region4/waste/ots/ecolbul.htm> "

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated soils.

Impact to Groundwater

Basis: U.S. EPA. 1996. Soil Screening Guidance: User's Guide, April 1996. EPA/540/R-96/018.

Citation_Location: None. Soil remediation levels are developed on case-by-case basis (according to site-specific circumstances) with the aim of preventing contaminant migration to groundwater above Federal Maximum Contaminant Levels (MCLs), Maximum Contaminant Level Goals (MCLGs), or other protective, risk-based criteria. Soil contaminants are initially screened for groundwater migration concerns using screening values provided in: U.S. EPA. 1996. Soil Screening Guidance: Technical Background Document, May 1996. EPA/540/R95/128.

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated soils.

Ingestion

Basis: U.S. EPA, RAGS, U.S. EPA http://www.epa.gov/oswer/riskassessment/risk_superfund.htm

Citation_Location: None. Soil remediation standards are developed on a case-by-case basis (according to site-specific circumstances). Soil contaminants are initially screened using the screening levels presented in the EPA Region 6 HHMSSLs table: http://www.epa.gov/earth1r6/6pd/rcra_c/pd-n/screenvalues.pdf. Oral toxicity values for use in a risk-based development of remediation goals for COCs that failed the screening process are obtained from the HHMSSLs table.

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated soils.

Inhalation

ARKANSAS

Name: Ashley Whitlow Contact_Title: Senior Epidemiologist
 Organization: Arkansas Department of Environmental Quality - Hazardous Waste Division
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 Email: whitlow@adeq.state.ar.us Contact_Phone: (501) 682-0689

Guidelines

Basis: U.S. EPA, Risk Assessment Guidance for Superfund (RAGS), U.S. EPA http://www.epa.gov/oswer/riskassessment/risk_superfund.htm

Citation_Location: None. Soil remediation standards are developed on a case-by-case basis (according to site-specific circumstances). Soil contaminants are initially screened using the screening levels presented in the EPA Region 6 Human Health Medium Specific Screening Levels (HHMSSLs) table: http://www.epa.gov/earth1r6/6pd/rcra_c/pd-n/screenvalues.pdf. Inhalation toxicity values for use in the risk-based development of remediation goals for chemicals of concern (COCs) that failed the screening process are also obtained from the HHMSSLs table.

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated soils.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Direct Contact (Dermal)

Basis: U.S. EPA. 2001. RAGS, Volume I: Human Health Evaluation Manual, Part E, Supplemental Guidance for Dermal Risk Assessment. Final. OSWER 9285.7-02EP. PB99-963312

Citation_Location: EPA MCLs, MCLGs, or risk-based tap water screening values (presented in the EPA Region 6 HHMSSLs table: http://www.epa.gov/earth1r6/6pd/rcra_c/pd-n/screenvalues.pdf) are used as baseline remediation goals for groundwater contamination. However, on a site-specific basis, risk-based remediation goals may be calculated based on groundwater use(s) and exposure(s) at and near the site.

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated groundwater. A remedial action pursuant to subdivision (e)(3) of this section shall eliminate unacceptable risks and prevent degradation of groundwaters and surface waters.

Discharge to Surface Water

Basis: U.S. EPA Risk Assessment Guidance for Superfund (RAGS), http://www.epa.gov/oswer/riskassessment/risk_superfund.htm

Citation_Location: EPA Maximum Contaminant Levels (MCLs), Maximum Contaminant Level Goals (MCLGs), or risk-based tap water screening values (presented in the EPA Region 6 Human Health Medium Specific Screening Levels (HHMSSLs) table: http://www.epa.gov/earth1r6/6pd/rcra_c/pd-n/screenvalues.pdf) are typically used as baseline remediation goals for groundwater contamination. However, on a site-specific basis, risk-based remediation goals may be calculated based on groundwater use(s) and exposure(s) at and near the site.

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated groundwater. A remedial action pursuant to subdivision (e)(3) of this section shall eliminate unacceptable risks and prevent degradation of groundwaters and surface waters.

Drinking (Ingestion)

Basis: U.S. EPA (Federal) MCLs

Citation_Location: EPA MCLs, MCLGs, or risk-based tap water screening values (presented in the EPA Region 6 HHMSSLs table: http://www.epa.gov/earth1r6/6pd/rcra_c/pd-n/screenvalues.pdf).

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated groundwater. A remedial action pursuant to subdivision (e)(3) of this section shall eliminate unacceptable risks and prevent degradation of groundwaters and surface waters.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

ARKANSAS

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 Organization: Arkansas Department of Environmental Quality - Hazardous Waste Division
 Address / City: 8001 National Drive, Little Rock, 722198913
 Email: whitlow@adeq.state.ar.us Contact_Phone: (501) 682-0689

Guidelines

Surface Water

Direct Contact (Dermal)

Basis: U.S. EPA Risk Assessment Guidance for Superfund (RAGS), U.S. EPA
http://www.epa.gov/oswer/riskassessment/risk_superfund.htm

Citation_Location: EPA Maximum Contaminant Levels (MCLs), Maximum Contaminant Level Goals (MCLGs), or risk-based tap water screening values (presented in the EPA Region 6 Human Health Medium Specific Screening Levels (HHMSSLs) table: http://www.epa.gov/earth1r6/6pd/rcra_c/pd-n/screenvalues.pdf) are typically used as baseline remediation goals for surface water contamination. However, on a site-specific basis, risk-based remediation goals may be calculated based on surface water use(s) and exposure(s) at and near the site.

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated surface water. A remedial action pursuant to subdivision (e)(3) of this section shall eliminate unacceptable risks and prevent degradation of groundwaters and surface waters.

Ecological Risk

Basis: U.S. EPA, Ecological Risk Assessment Guidance for Superfund, <http://www.epa.gov/oswer/riskassessment/ecorisk/ecorisk.htm>

Citation_Location: "None. Ecological remediation standards for surface water are developed on a case-by-case basis (according to site-specific circumstances). Surface water contaminants are initially screened for ecological concerns using the following: USEPA.2001.Supplemental Guidance to RAGS: Region 4 Bulletins, Ecological Risk Assessment. <http://www.epa.gov/Region4/waste/ots/ecolbul.htm> "

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated surface water. A remedial action pursuant to subdivision (e)(3) of this section shall eliminate unacceptable risks and prevent degradation of groundwaters and surface waters.

Fish Consumption

Basis: U.S. EPA Risk Assessment Guidance for Superfund (EPA RAGS), U.S. EPA
http://www.epa.gov/oswer/riskassessment/risk_superfund.htm

Citation_Location: EPA Maximum Contaminant Levels (MCLs), Maximum Contaminant Level Goals (MCLGs), or risk-based tap water screening values (presented in the EPA Region 6 Human Health Medium Specific Screening Levels (HHMSSLs) table: http://www.epa.gov/earth1r6/6pd/rcra_c/pd-n/screenvalues.pdf) are typically used as baseline remediation goals for surface water contamination. However, on a site-specific basis, risk-based remediation goals may be calculated based on surface water use(s) and exposure(s) at and near the site.

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments: The Arkansas Voluntary Cleanup Act at A.C.A. § 8-7-1104 (<http://170.94.58.9/NXT/gateway.dll?f=templates&fn=default.htm&vid=blr.code>), sets up the performance-based concept of eliminating "unacceptable risk" in contaminated surface water. A remedial action pursuant to subdivision (e)(3) of this section shall eliminate unacceptable risks and prevent degradation of groundwaters and surface waters.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

ARKANSAS

Name: Ashley Whitlow Contact_Title: Senior Epidemiologist
 Organization: Arkansas Department of Environmental Quality - Hazardous Waste Division
 Address / City: 8001 National Drive, Little Rock, 722198913
 Email: whitlow@adeq.state.ar.us Contact_Phone: (501) 682-0689

Guidelines

Vapor Intrusion

Inhalation

Basis: U.S. EPA Users Guide for Evaluating Subsurface Vapor Intrusion into Buildings, http://www.epa.gov/oswer/riskassessment/airmodel/pdf/2004_0222_3phase_users_guide.pdf. February 2004. Based on Johnson Ettinger Model; risk levels are chosen site specifically.

Citation_Location: None. Remediation standards to prevent harmful vapor intrusion are developed on a case-by-case basis (according to site-specific circumstances). Vapor intrusion is typically addressed according to EPA Subsurface Vapor Intrusion Guidance: <http://www.epa.gov/correctiveaction/eis/vapor.htm>

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis: U.S. EPA, Ecological Risk Assessment Guidance for Superfund, <http://www.epa.gov/oswer/riskassessment/ecorisk/ecorisk.htm>

Citation_Location: "None. Sediment remediation standards are developed on a case-by-case basis (according to site-specific circumstances). Sediment contaminants are initially screened for ecological concerns using the following: USEPA.2001.Supplemental Guidance to RAGS: Region 4 Bulletins, Ecological Risk Assessment. <http://www.epa.gov/Region4/waste/ots/ecolbul.htm> "

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments:

Human Health Risk

Basis: U.S. EPA, Risk Assessment Guidance for Superfund (RAGS), U.S. EPA http://www.epa.gov/oswer/riskassessment/risk_superfund.htm

Citation_Location: None. Sediment remediation standards are developed on a case-by-case basis (according to site-specific circumstances). For human exposure, sediment is addressed as surface soil, and sediment contaminants are initially screened using the residential screening levels presented in the EPA Region 6 Human Health Medium Specific Screening Levels (HHMSSLs) table: http://www.epa.gov/earth1r6/6pd/rcra_c/pd-n/screenvalues.pdf. Toxicity values for use in the risk-based development of remediation goals for chemicals of concern (COCs) that failed the screening process are also obtained from the HHMSSLs table.

Contact_Info: Ashley Whitlow; 501-682-0869; whitlow@adeq.state.ar.us

Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

ARIZONA

Name: Richard Olm Contact_Title: Senior Environmental Engineer
Organization: Arizona Dept. of Environmental Quality, Remedial Projects
Address / City: 1110 West Washington Street, , AZ, Phoenix, 850072952
Email: rco@azdeq.gov Contact_Phone: (480) 367-0249

Regulatory

Soil

Direct Contact (Dermal)

Basis:

Citation_Location: http://www.azsos.gov/public_services/Title_18/18-07.htm,
<http://www.azleg.state.az.us/FormatDocument.asp?inDoc=/ars/49/00152.htm&Title=49&DocType=ARS>

Contact_Info: Jeanene Hanley, jph@azdeq.gov

Comments: Arizona has default insitu residential and non-residential soil clean up standards that are protective of human health based upon the inhalation, ingestion, and dermal pathways. The allowable risk level is between 1×10^{-6} and 1×10^{-4} . Groundwater protection from soil contamination is evaluated by a procedure described in the document "A screening method to determine soil concentrations protective of groundwater quality". Ecological risk is not included in the soil clean-up standards. No specific guidance has been developed to evaluate ecological risk.

Ecological Risk

Basis:

Citation_Location: http://www.azsos.gov/public_services/Title_18/18-07.htm

Contact_Info:

Comments: Arizona has default insitu residential and non-residential soil clean up standards that are protective of human health based upon the inhalation, ingestion, and dermal pathways. The allowable risk level is between 1×10^{-6} and 1×10^{-4} . Groundwater protection from soil contamination is evaluated by a procedure described in the document "A screening method to determine soil concentrations protective of groundwater quality". Ecological risk is not included in the soil clean-up standards. No specific guidance has been developed to evaluate ecological risk.

Impact to Groundwater

Basis:

Citation_Location: http://www.azsos.gov/public_services/Title_18/18-07.htm,

Contact_Info:

Comments: Arizona has default insitu residential and non-residential soil clean up standards that are protective of human health based upon the inhalation, ingestion, and dermal pathways. The allowable risk level is between 1×10^{-6} and 1×10^{-4} . Groundwater protection from soil contamination is evaluated by a procedure described in the document "A screening method to determine soil concentrations protective of groundwater quality". Ecological risk is not included in the soil clean-up standards. No specific guidance has been developed to evaluate ecological risk.

Ingestion

Basis:

Citation_Location: http://www.azsos.gov/public_services/Title_18/18-07.htm,
<http://www.azleg.state.az.us/FormatDocument.asp?inDoc=/ars/49/00152.htm&Title=49&DocType=ARS>

Contact_Info: Jeanene Hanley, jph@azdeq.gov

Comments: Arizona has default insitu residential and non-residential soil clean up standards that are protective of human health based upon the inhalation, ingestion, and dermal pathways. The allowable risk level is between 1×10^{-6} and 1×10^{-4} . Groundwater protection from soil contamination is evaluated by a procedure described in the document "A screening method to determine soil concentrations protective of groundwater quality". Ecological risk is not included in the soil clean-up standards. No specific guidance has been developed to evaluate ecological risk.

Inhalation

ARIZONA

Name: Richard Olm Contact_Title: Senior Environmental Engineer
 Organization: Arizona Dept. of Environmental Quality, Remedial Projects
 Address / City: 1110 West Washington Street, , AZ, Phoenix, 850072952
 Email: rco@azdeq.gov Contact_Phone: (480) 367-0249

Regulatory

Basis:

Citation_Location: http://www.azsos.gov/public_services/Title_18/18-07.htm,
<http://www.azleg.state.az.us/FormatDocument.asp?inDoc=/ars/49/00152.htm&Title=49&DocType=ARS>

Contact_Info: Jeanene Hanley, jph@azdeq.gov

Comments: Arizona has default insitu residential and non-residential soil clean up standards that are protective of human health based upon the inhalation, ingestion, and dermal pathways. The allowable risk level is between 1 x10-6 and 1x10-4. Groundwater protection from soil contamination is evaluated by a procedure described in the document "A screening method to determine soil concentrations protective of groundwater quality". Ecological risk is not included in the soil clean-up standards. No specific guidance has been developed to evaluate ecological risk.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Direct Contact (Dermal)

Basis:

Citation_Location: <http://www.azleg.state.az.us/ArizonaRevisedStatutes.asp?Title=49>

Contact_Info:

Comments: All groundwater in the state is protected for drinking water purposes. The standards are the aquifer water quality standards which are equivalent to maximum contaminant levels (MCLs).

Discharge to Surface Water

Basis: http://www.azsos.gov/public_services/Title_18/18-11.htm

Citation_Location: <http://www.azleg.state.az.us/ArizonaRevisedStatutes.asp?Title=49>

Contact_Info: Chris Varga, crv@azdeq.gov

Comments: All groundwater in the state is protected for drinking water purposes. The standards are the aquifer water quality standards which are equivalent to maximum contaminant levels (MCLs).

Drinking (Ingestion)

Basis:

Citation_Location: <http://www.azleg.state.az.us/ArizonaRevisedStatutes.asp?Title=49>

Contact_Info:

Comments: All groundwater in the state is protected for drinking water purposes. The standards are the aquifer water quality standards which are equivalent to maximum contaminant levels (MCLs).

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: http://www.azsos.gov/public_services/Title_18/18-11.htm

Contact_Info: Chris Varga, crv@azdeq.gov

Comments:

Fish Consumption

ARIZONA

Name: Richard Olm Contact_Title: Senior Environmental Engineer
 Organization: Arizona Dept. of Environmental Quality, Remedial Projects
 Address / City: 1110 West Washington Street, , AZ, Phoenix, 850072952
 Email: rco@azdeq.gov Contact_Phone: (480) 367-0249

Regulatory

Basis:

Citation_Location: http://www.azsos.gov/public_services/Title_18/18-11.htm

Contact_Info:

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis:

Citation_Location: http://www.azsos.gov/public_services/Title_18/18-07.htm

Contact_Info:

Comments: State statutes and rules do not directly address vapor intrusion. Moreover, the soil cleanup standards were derived assuming an outdoor air exposure. Consideration of the vapor intrusion pathway is linked to statute and rule language that requires protection of public health and the environment. Vapor intrusion is evaluated on a site specific basis. The Johnson/Ettinger model is used in the LUST Tier 2 analysis.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Guidelines

Soil

Impact to Groundwater

Basis:

Citation_Location: A Screening Method to Determine Soil Concentrations protective of Groundwater Quality

Contact_Info: Richard Olm,rco@azdeq.gov

Comments: Arizona has default insitu residential and non-residential soil clean up standards that are protective of human health based upon the inhalation, ingestion, and dermal pathways. The allowable risk level is between 1 x10-6 and 1x10-4. Groundwater protection from soil contamination is evaluated by a procedure described in the document "A screening method to determine soil concentrations protective of groundwater quality". Ecological risk is not included in the soil clean-up standards. No specific guidance has been developed to evaluate ecological risk.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

CALIFORNIA

Name: Mike Sorensen

Contact_Title: Branch Chief

Organization: Site Mitigation and Brownfields Reuse Program

Address / City:

Email: msorensen@dtsc.ca.gov

Contact_Phone: (916) 255-6660

Regulatory

Soil

Direct Contact (Dermal)

Basis:

Citation_Location: CA Health and Safety Code, Div 20, Chapter 6.5 and 6.8. (see <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20>) requires cleanups be consistent with the NCP. Risk range of 1.E-06 to 1.E-04 is utilized to establish cleanup levels and considers 9 criteria analysis.

Contact_Info: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>)

Comments:

Ecological Risk

Basis:

Citation_Location: CA Health and Safety Code, Div 20, Chapter 6.5 and 6.8. (see <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20>) requires cleanups be consistent with the NCP. Risk range of 1.E-06 to 1.E-04 is utilized to establish cleanup levels and considers 9 criteria analysis.

Contact_Info: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>)

Comments:

Impact to Groundwater

Basis:

Citation_Location: "Cleanup criteria can established based on human health risk or beneficial use of the resource. Statute relating to human health risk is CA Health and Safety Code, Div 20, Chapter 6.5 and 6.8. (see <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20>) requires cleanups be consistent with the NCP. Risk range of 1.E-06 to 1.E-04 is utilized to establish cleanup levels and considers 9 criteria analysis. Statute relating to beneficial use is California Water Code, Division 7. Water Quality (see http://www.waterboards.ca.gov/water_laws/docs/portercologne.pdf). Section 13050(f) defines ""Beneficial uses"" of the waters of the state that may be protected against water quality degradation include, but are not necessarily limited to, domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Water quality goals are established in regional basin plans; for examples see <http://www.waterboards.ca.gov/plnspols/index.html>."

Contact_Info: "For human health risk, contact: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>) For beneficial use, contact: State Water Resources Control Board, Division of Water Quality (916) 341-5250 (<http://www.waterboards.ca.gov/quality.html?counter=85>)"

Comments:

Impact to Surface Water

Basis:

Citation_Location: "Cleanup criteria can established based on human health risk, ecological impact, or beneficial use of the resource. Statute relating to human health risk or ecological impact is CA Health and Safety Code, Div 20, Chapter 6.5 and 6.8. (see <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20>) requires cleanups be consistent with the NCP. Risk range of 1.E-06 to 1.E-04 is utilized to establish cleanup levels and considers 9 criteria analysis. Statute relating to beneficial use is California Water Code, Division 7. Water Quality. (see http://www.waterboards.ca.gov/water_laws/docs/portercologne.pdf) Section 13050(f) defines ""Beneficial uses"" of the waters of the state that may be protected against water quality degradation include, but are not necessarily limited to, domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Water quality goals are established in regional basin plans; for examples see <http://www.waterboards.ca.gov/plnspols/index.html>."

Contact_Info: "For human health risk, contact: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>) For beneficial use, contact: State Water Resources Control Board, Division of Water Quality (916) 341-5250 (<http://www.waterboards.ca.gov/quality.html?counter=85>)"

Comments:

Ingestion

CALIFORNIA

Name: Mike Sorensen

Contact_Title: Branch Chief

Organization: Site Mitigation and Brownfields Reuse Program

Address / City:

Email: msorensen@dtsc.ca.gov

Contact_Phone: (916) 255-6660

Regulatory

Basis:

Citation_Location: CA Health and Safety Code, Div 20, Chapter 6.5 and 6.8. (see <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20>) requires cleanups be consistent with the NCP. Risk range of 1.E-06 to 1.E-04 is utilized to establish cleanup levels and considers 9 criteria analysis.

Contact_Info: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>)

Comments:

Inhalation

Basis:

Citation_Location: CA Health and Safety Code, Div 20, Chapter 6.5 and 6.8. (see <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20>) requires cleanups be consistent with the NCP. Risk range of 1.E-06 to 1.E-04 is utilized to establish cleanup levels and considers 9 criteria analysis.

Contact_Info: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>)

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Groundwater

Direct Contact (Dermal)

Basis:

Citation_Location: CA Health and Safety Code, Div 20, Chapter 6.5 and 6.8. (see <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20>) requires cleanups be consistent with the NCP. Risk range of 1.E-06 to 1.E-04 is utilized to establish cleanup levels and considers 9 criteria analysis.

Contact_Info: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>)

Comments:

Discharge to Surface Water

Basis:

Citation_Location: "Cleanup criteria can established based on human health risk, ecological impact, or beneficial use of the resource. Statute relating to human health risk or ecological impact is CA Health and Safety Code, Div 20, Chapter 6.5 and 6.8. (see <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20>) requires cleanups be consistent with the NCP. Risk range of 1.E-06 to 1.E-04 is utilized to establish cleanup levels and considers 9 criteria analysis. Statute relating to beneficial use is California Water Code, Division 7. Water Quality. (see http://www.waterboards.ca.gov/water_laws/docs/portercologne.pdf) Section 13050(f) defines ""Beneficial uses"" of the waters of the state that may be protected against water quality degradation include, but are not necessarily limited to, domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Water quality goals are established in regional basin plans; for examples see <http://www.waterboards.ca.gov/plnspols/index.html>. "

Contact_Info: "For human health risk, contact: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>) For beneficial use, contact: State Water Resources Control Board, Division of Water Quality (916) 341-5250 (<http://www.waterboards.ca.gov/quality.html?counter=85>)"

Comments:

Drinking (Ingestion)

CALIFORNIA

Name: Mike Sorensen

Contact_Title: Branch Chief

Organization: Site Mitigation and Brownfields Reuse Program

Address / City:

Email: msorensen@dtsc.ca.gov

Contact_Phone: (916) 255-6660

Regulatory

Basis:

Citation_Location: "Cleanup criteria can established based on human health risk or utilize MCLs depending on whether the groundwater is being utilized as a public water supply. For human health risk, CA Health and Safety Code, Div 20, Chapter 6.5 and 6.8. (see <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20>) requires cleanups be consistent with the NCP. Risk range of 1.E-06 to 1.E-04 is utilized to establish cleanup levels and considers 9 criteria analysis. For public water supply, cleanup levels are maximum contaminant levels (MCLs) which take into account not only chemicals' health risks but also factors such as their detectability and treatability, as well as the costs of treatment. Statute: CA Health and Safety Code, Div 104, Part 4, Chapter 12 (see <http://www.dhs.ca.gov/ps/ddwem/publications/lawbook/dwregulations-06-01-04.pdf>) Regulations: Title 22 of the California Code of Regulations, Division 4, Chapters 15 , 16 and 17. (see <http://www.dhs.ca.gov/ps/ddwem/publications/lawbook/dwregulations-02-27-06.pdf>) See <http://www.dhs.ca.gov/ps/ddwem/chemicals/chemindex.htm> for more information on California MCLs and the process to establish these levels. "

Contact_Info: "For human health risk, contact: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>) For Drinking Water Supply, contact: California Department of Health Services, Division of Drinking Water and Environmental Management, (916) 341-5615. (see <http://www.dhs.ca.gov/ps/ddwem/chemicals/chemindex.htm>)"

Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: CA Health and Safety Code, Div 20, Chapter 6.5 and 6.8. (see <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20>) requires cleanups be consistent with the NCP. Risk range of 1.E-06 to 1.E-04 is utilized to establish cleanup levels and considers 9 criteria analysis.

Contact_Info: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>)

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: "Cleanup criteria can established based on human health risk or utilize MCLs if the surface water is being utilized as a public water supply. For human health risk, CA Health and Safety Code, Div 20, Chapter 6.5 and 6.8. (see <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20>) requires cleanups be consistent with the NCP. Risk range of 1.E-06 to 1.E-04 is utilized to establish cleanup levels and considers 9 criteria analysis. For public water supply, cleanup levels are maximum contaminant levels (MCLs) which take into account not only chemicals' health risks but also factors such as their detectability and treatability, as well as the costs of treatment. Statute: CA Health and Safety Code, Div 104, Part 4, Chapter 12 (see <http://www.dhs.ca.gov/ps/ddwem/publications/lawbook/dwregulations-06-01-04.pdf>) Regulations: Title 22 of the California Code of Regulations, Division 4, Chapters 15 , 16 and 17. (see <http://www.dhs.ca.gov/ps/ddwem/publications/lawbook/dwregulations-02-27-06.pdf>) See <http://www.dhs.ca.gov/ps/ddwem/chemicals/chemindex.htm> for more information on California MCLs and the process to establish these levels. "

Contact_Info: "For human health risk, contact: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>) For Drinking Water Supply, contact: California Department of Health Services, Division of Drinking Water and Environmental Management, (916) 341-5615. (see <http://www.dhs.ca.gov/ps/ddwem/chemicals/chemindex.htm>)"

Comments:

Ecological Risk

CALIFORNIA

Name: Mike Sorensen Contact_Title: Branch Chief
 Organization: Site Mitigation and Brownfields Reuse Program
 Address / City:
 Email: msorensen@dtsc.ca.gov Contact_Phone: (916) 255-6660

Regulatory

Basis:

Citation_Location: CA Health and Safety Code, Div 20, Chapter 6.5 and 6.8. (see <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20>) requires cleanups be consistent with the NCP. Risk range of 1.E-06 to 1.E-04 is utilized to establish cleanup levels and considers 9 criteria analysis.

Contact_Info: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>)

Comments:

Fish Consumption

Basis:

Citation_Location: Pertinent statute: To protect public health - California Health and Safety Code (CHSC), Section 59009. To advise local health authorities - CHSC, Section 59011. To issue health advisories - the California Water Code Section 13177.5.

Contact_Info: California Office of Environmental Health Hazard Assessment, Fish and Water Quality Evaluation Unit, (916) 324-2831. (see <http://www.oehha.ca.gov/fish.html>)

Comments:

Other

Basis:

Citation_Location: Cleanup criteria could also be established based on beneficial use of the resource. Statute relating to beneficial use is California Water Code, Division 7. Water Quality. (see http://www.waterboards.ca.gov/water_laws/docs/portercologne.pdf) Section 13050(f) defines "Beneficial uses" of the waters of the state that may be protected against water quality degradation include, but are not necessarily limited to, domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Water quality goals are established in regional basin plans; for examples see <http://www.waterboards.ca.gov/plnspols/index.html>.

Contact_Info: "State Water Resources Control Board, Division of Water Quality (916) 341-5250 (<http://www.waterboards.ca.gov/quality.html?counter=85>) "

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis:

Citation_Location: CA Health and Safety Code, Div 20, Chapter 6.5 and 6.8. (see <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20>) requires cleanups be consistent with the NCP. Risk range of 1.E-06 to 1.E-04 is utilized to establish cleanup levels and considers 9 criteria analysis.

Contact_Info: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>)

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis:

Citation_Location: CA Health and Safety Code, Div 20, Chapter 6.5 and 6.8. (see <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20>) requires cleanups be consistent with the NCP. Risk range of 1.E-06 to 1.E-04 is utilized to establish cleanup levels and considers 9 criteria analysis.

Contact_Info: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>)

Comments:

CALIFORNIA

Name: Mike Sorensen Contact_Title: Branch Chief
Organization: Site Mitigation and Brownfields Reuse Program
Address / City:
Email: msorensen@dtsc.ca.gov Contact_Phone: (916) 255-6660

Regulatory

Human Health Risk

Basis:

Citation_Location: CA Health and Safety Code, Div 20, Chapter 6.5 and 6.8. (see <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20>) requires cleanups be consistent with the NCP. Risk range of 1.E-06 to 1.E-04 is utilized to establish cleanup levels and considers 9 criteria analysis.

Contact_Info: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>)

Comments:

Other

Basis:

Citation_Location: Cleanup criteria could also be established based on beneficial use of the resource. Statute relating to beneficial use is California Water Code, Division 7. Water Quality. (see http://www.waterboards.ca.gov/water_laws/docs/portercologne.pdf) Section 13050(f) defines "Beneficial uses" of the waters of the state that may be protected against water quality degradation include, but are not necessarily limited to, domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Water quality goals are established in regional basin plans; for examples see <http://www.waterboards.ca.gov/plnspols/index.html>.

Contact_Info: "State Water Resources Control Board, Division of Water Quality (916) 341-5250 (<http://www.waterboards.ca.gov/quality.html?counter=85>) "

Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

CALIFORNIA

Name: Mike Sorensen

Contact_Title: Branch Chief

Organization: Site Mitigation and Brownfields Reuse Program

Address / City:

Email: msorensen@dtsc.ca.gov

Contact_Phone: (916) 255-6660

Guidelines

Soil

Direct Contact (Dermal)

Basis:

Citation_Location: "1. Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities (see http://www.dtsc.ca.gov/AssessingRisk/Supplemental_Guidance.cfm). This DTSC guidance manual supplements the U.S. Environmental Protection Agency manual for performing human health risk assessments (Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A), Interim Final (EPA/540/1-89/002, December 1989)) and OSWER directives by providing recommendations on specific technical or scientific issues that may be encountered when preparing multimedia risk assessment reports for submittal and review by the DTSC. 2. CalTOX (see <http://www.dtsc.ca.gov/AssessingRisk/caltoc.cfm>). CalTOX is an innovative spreadsheet model that relates the concentration of a chemical in soil to the risk of an adverse health effect for a person living or working on or near the contaminated soil. CalTOX computes site-specific health-based soil clean-up concentrations given target risk levels or human health risks given soil concentrations at the site. 3. Preliminary Endangerment Assessment Guidance Manual (see http://www.dtsc.ca.gov/SiteCleanup/Brownfields/upload/SMP_REP_PEA_CH1.pdf - note, this is only chapter one of the guidance manual, other chapters can be found at http://www.dtsc.ca.gov/PublicationsForms/prog_pubs.cfm?prog=Site%20). The Preliminary Endangerment Assessment (PEA) provides basic information for determining if there has been a release of a hazardous substance that presents a risk to human health or the environment. "

Contact_Info:

Comments:

Ecological Risk

Basis:

Citation_Location: Guidance for Ecological Risk Assessments (see <http://www.dtsc.ca.gov/AssessingRisk/eco.cfm>). This document contains the description of the DTSC-recommended phased method for conducting an ecological risk assessment. Outlined are the contents of a Scoping Assessment, a Phase I Predictive Assessment, a Phase II Validation Study and a Phase III Impact Assessment. More detailed guidance for each of these components will be available in a series of additional documents. Also included are flow charts describing the process with a text description of the decision points and work products contained in the flow charts.

Contact_Info:

Comments:

Impact to Groundwater

Basis:

Citation_Location: Compilation Of Existing Guidance For The Development Of Site-Specific Water Quality Objectives In The State Of California (see <http://www.waterboards.ca.gov/docs/sitespec/sitespecificwqo.pdf>) This document provides the State of California, United States Environmental Protection Agency (USEPA) Region 9, other stakeholders and the general public with a compilation of existing guidance and information on the development of site-specific water quality objectives (SSOs). The document presents background information on default national aquatic life criteria, including their strengths and limitations. Published and unpublished methodologies for the derivation of site-specific objectives are described with links, references and case examples provided for greater detail.

Contact_Info:

Comments:

Impact to Surface Water

Basis:

Citation_Location: Compilation Of Existing Guidance For The Development Of Site-Specific Water Quality Objectives In The State Of California (see <http://www.waterboards.ca.gov/docs/sitespec/sitespecificwqo.pdf>) This document provides the State of California, United States Environmental Protection Agency (USEPA) Region 9, other stakeholders and the general public with a compilation of existing guidance and information on the development of site-specific water quality objectives (SSOs). The document presents background information on default national aquatic life criteria, including their strengths and limitations. Published and unpublished methodologies for the derivation of site-specific objectives are described with links, references and case examples provided for greater detail.

Contact_Info:

Comments:

CALIFORNIA

Name: Mike Sorensen

Contact_Title: Branch Chief

Organization: Site Mitigation and Brownfields Reuse Program

Address / City:

Email: msorensen@dtsc.ca.gov

Contact_Phone: (916) 255-6660

Guidelines

Ingestion

Basis:

Citation_Location: "1. Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities (see http://www.dtsc.ca.gov/AssessingRisk/Supplemental_Guidance.cfm). This DTSC guidance manual supplements the U.S. Environmental Protection Agency manual for performing human health risk assessments (Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A), Interim Final (EPA/540/1-89/002, December 1989)) and OSWER directives by providing recommendations on specific technical or scientific issues that may be encountered when preparing multimedia risk assessment reports for submittal and review by the DTSC. 2. CalTOX (see <http://www.dtsc.ca.gov/AssessingRisk/caltox.cfm>). CalTOX is an innovative spreadsheet model that relates the concentration of a chemical in soil to the risk of an adverse health effect for a person living or working on or near the contaminated soil. CalTOX computes site-specific health-based soil clean-up concentrations given target risk levels or human health risks given soil concentrations at the site. 3. Preliminary Endangerment Assessment Guidance Manual (see http://www.dtsc.ca.gov/SiteCleanup/Brownfields/upload/SMP_REP_PEA_CH1.pdf - note, this is only chapter one of the guidance manual, other chapters can be found at http://www.dtsc.ca.gov/PublicationsForms/prog_pubs.cfm?prog=Site%20). The Preliminary Endangerment Assessment (PEA) provides basic information for determining if there has been a release of a hazardous substance that presents a risk to human health or the environment. "

Contact_Info:

Comments:

Inhalation

Basis:

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Contact_Info: Deputy Director, Site Mitigation and Brownfields Reuse Program, (916) 322-0504. (see <http://www.dtsc.ca.gov/index.cfm>)

Comments:

Other

CALIFORNIA

Name: Mike Sorensen

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Guidelines

Basis:

Citation_Location: "1. For risk assessment of lead exposures, see LeadSpread. (see <http://www.dtsc.ca.gov/AssessingRisk/leadsread.cfm>). LeadSpread is a tool that can be used to estimate blood lead concentrations resulting from exposure to lead via dietary intake, drinking water, soil and dust ingestion, inhalation, and dermal contact. 2. Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (Interim Final - February 2005) (see <http://www.waterboards.ca.gov/sanfranciscobay/esl.htm>) The document Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (4th edition, February 2005) is a technical report prepared by staff of the California Regional Water Quality Board, San Francisco Bay Region. Information provided in the document is not intended to establish policy or regulation. Volume 1 of the document presents lookup tables of conservative Environmental Screening Levels ("ESLs") for over 100 chemicals commonly found at sites with contaminated soil and groundwater. Volume 2 describes how the ESLs were developed and provides detailed tables and appendices in support of the summary lookup tables. 3. California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties (see <http://www.calepa.ca.gov/Brownfields/documents/2005/CHHSLsGuide.pdf>). The California Human Health Screening Levels (CHHSLs or "Chisels") are concentrations of 54 hazardous chemicals in soil or soil gas that the California Environmental Protection Agency (Cal/EPA) considers to be below thresholds of concern for risks to human health. The CHHSLs can be used to screen sites for potential human health concerns where releases of hazardous chemicals to soils have occurred. Under most circumstances, and within the limitations described in this document, the presence of a chemical in soil, soil gas or indoor air at concentrations below the corresponding CHHSLs can be assumed to not pose a significant health risk to people who may live (residential CHHSLs) or work (commercial/industrial CHHSLs) at the site. However, evaluation of other potential environmental concerns must also be addressed. The presence of a chemical at concentrations in excess of a CHHSL does not indicate that adverse impacts to human health are occurring or will occur but suggests that further evaluation of potential human health concerns is warranted. 4. USEPA Region 9 Preliminary Remediation Goals (PRGs). PRGs are tools for evaluating and cleaning up contaminated sites. They are risk-based concentrations that are intended to assist risk assessors and others in initial screening-level evaluations of environmental measurements. The PRGs contained in the Region 9 PRG Table are generic; they are calculated without site specific information. However, they may be re-calculated using site specific data. PRGs should be viewed as Agency guidelines, not legally enforceable standards. They are used for site "screening" and as initial cleanup goals if applicable. PRGs are not de facto cleanup standards and should not be applied as such. However, they are helpful in providing long-term targets to use during the analysis of different remedial alternatives. By developing PRGs early in the decision-making process, design staff may be able to streamline the consideration of remedial alternatives. (see <http://www.epa.gov/region09/waste/sfund/prg/index.html>) "

Contact_Info:

Comments:

RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Groundwater

Direct Contact (Dermal)

Basis:

Citation_Location: Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities (see http://www.dtsc.ca.gov/AssessingRisk/Supplemental_Guidance.cfm). This DTSC guidance manual supplements the U.S. Environmental Protection Agency manual for performing human health risk assessments (Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A), Interim Final (EPA/540/1-89/002, December 1989)) and OSWER directives by providing recommendations on specific technical or scientific issues that may be encountered when preparing multimedia risk assessment reports for submittal and review by the DTSC.

Contact_Info:

Comments:

Discharge to Surface Water

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Guidelines

Basis:

Citation_Location: "1. Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities (see http://www.dtsc.ca.gov/AssessingRisk/Supplemental_Guidance.cfm). This DTSC guidance manual supplements the U.S. Environmental Protection Agency manual for performing human health risk assessments (Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A), Interim Final (EPA/540/1-89/002, December 1989)) and OSWER directives by providing recommendations on specific technical or scientific issues that may be encountered when preparing multimedia risk assessment reports for submittal and review by the DTSC. 2. Compilation Of Existing Guidance For The Development Of Site-Specific Water Quality Objectives In The State Of California (see <http://www.waterboards.ca.gov/docs/sitespec/sitespecificwqo.pdf>) This document provides the State of California, United States Environmental Protection Agency (USEPA) Region 9, other stakeholders and the general public with a compilation of existing guidance and information on the development of site-specific water quality objectives (SSOs). The document presents background information on default national aquatic life criteria, including their strengths and limitations. Published and unpublished methodologies for the derivation of site-specific objectives are described with links, references and case examples provided for greater detail."

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Comments:

Drinking (Ingestion)

Basis:

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Contact_Info:

Comments:

Other

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Guidelines

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Contact_Info:

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
- SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:

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Contact_Info:

Comments:

Drinking (Ingestion)

CALIFORNIA

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Guidelines

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Contact_Info:

Comments:

Ecological Risk

Basis:

Citation_Location: Guidance for Ecological Risk Assessments (see <http://www.dtsc.ca.gov/AssessingRisk/eco.cfm>). This document contains the description of the DTSC-recommended phased method for conducting an ecological risk assessment. Outlined are the contents of a Scoping Assessment, a Phase I Predictive Assessment, a Phase II Validation Study and a Phase III Impact Assessment. More detailed guidance for each of these components will be available in a series of additional documents. Also included are flow charts describing the process with a text description of the decision points and work products contained in the flow charts.

Contact_Info:

Comments:

Fish Consumption

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Guidelines

Basis:

Citation_Location: Draft Development of Guidance Tissue Levels and Screening Values for Common Contaminants in California Sport Fish: Chlordane, DDTs, Dieldrin, Methylmercury, PCBs, Selenium, and Toxaphene. The California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA) announces the availability of the draft report entitled "Development of guidance tissue levels and screening values for common contaminants in sport fish: Chlordane, DDTs dieldrin, methylmercury, PCBs, selenium, and toxaphene." Guidance tissue levels (GTLs) are designed to provide a number of recommended fish meals that correspond to the range of contaminant concentrations found in fish. GTLs are used to provide meal consumption advice to prevent consumers from being exposed to more than the average daily reference dose for non-carcinogens or to a risk level greater than 1x10⁻⁴ for carcinogens. Screening values are specific guidance tissue levels used to identify situations where contaminant concentrations in fish are of potential health concern and further action (e.g., additional sampling or developing consumption advice) is recommended.

Contact_Info:

Comments:

Other

Basis:

Citation_Location: Compilation Of Existing Guidance For The Development Of Site-Specific Water Quality Objectives In The State Of California (see <http://www.waterboards.ca.gov/docs/sitespec/sitespecificwqo.pdf>) This document provides the State of California, United States Environmental Protection Agency (USEPA) Region 9, other stakeholders and the general public with a compilation of existing guidance and information on the development of site-specific water quality objectives (SSOs). The document presents background information on default national aquatic life criteria, including their strengths and limitations. Published and unpublished methodologies for the derivation of site-specific objectives are described with links, references and case examples provided for greater detail.

Contact_Info:

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Vapor Intrusion

Inhalation

Basis:

Citation_Location: "1. Guidance For The Evaluation And Mitigation Of Subsurface Vapor Intrusion To Indoor Air. (See http://www.dtsc.ca.gov/AssessingRisk/upload/HERD_POL_Eval_Subsurface_Vapor_Intrusion_interim_final.pdf) The intrusion of subsurface vapors into buildings is one of many exposure pathways that must be considered in assessing the risk posed by releases of hazardous chemicals into the environment. The Department of Toxic Substances Control (DTSC) in this guidance document recommends an approach for evaluating vapor intrusion into buildings and its subsequent impact on indoor air quality. Approaches for the mitigation of vapor intrusion are also discussed. 2. Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities (see http://www.dtsc.ca.gov/AssessingRisk/Supplemental_Guidance.cfm). This DTSC guidance manual supplements the U.S. Environmental Protection Agency manual for performing human health risk assessments (Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A), Interim Final (EPA/540/1-89/002, December 1989)) and OSWER directives by providing recommendations on specific technical or scientific issues that may be encountered when preparing multimedia risk assessment reports for submittal and review by the DTSC."

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Comments:

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Guidelines

Basis:

Citation_Location: "1. Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (Interim Final - February 2005) (see <http://www.waterboards.ca.gov/sanfranciscobay/esl.htm>) The document Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (4th edition, February 2005) is a technical report prepared by staff of the California Regional Water Quality Board, San Francisco Bay Region. Information provided in the document is not intended to establish policy or regulation. Volume 1 of the document presents lookup tables of conservative Environmental Screening Levels ("ESLs") for over 100 chemicals commonly found at sites with contaminated soil and groundwater. Volume 2 describes how the ESLs were developed and provides detailed tables and appendices in support of the summary lookup tables. 2. California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties (see <http://www.calepa.ca.gov/Brownfields/documents/2005/CHHSLsGuide.pdf>). The California Human Health Screening Levels (CHHSLs or "Chisels") are concentrations of 54 hazardous chemicals in soil or soil gas that the California Environmental Protection Agency (Cal/EPA) considers to be below thresholds of concern for risks to human health. The CHHSLs can be used to screen sites for potential human health concerns where releases of hazardous chemicals to soils have occurred. Under most circumstances, and within the limitations described in this document, the presence of a chemical in soil, soil gas or indoor air at concentrations below the corresponding CHHSLs can be assumed to not pose a significant health risk to people who may live (residential CHHSLs) or work (commercial/industrial CHHSLs) at the site. However, evaluation of other potential environmental concerns must also be addressed. The presence of a chemical at concentrations in excess of a CHHSL does not indicate that adverse impacts to human health are occurring or will occur but suggests that further evaluation of potential human health concerns is warranted. 3. USEPA Region 9 Preliminary Remediation Goals (PRGs). PRGs are tools for evaluating and cleaning up contaminated sites. They are risk-based concentrations that are intended to assist risk assessors and others in initial screening-level evaluations of environmental measurements. The PRGs contained in the Region 9 PRG Table are generic; they are calculated without site specific information. However, they may be re-calculated using site specific data. PRGs should be viewed as Agency guidelines, not legally enforceable standards. They are used for site "screening" and as initial cleanup goals if applicable. PRGs are not de facto cleanup standards and should not be applied as such. However, they are helpful in providing long-term targets to use during the analysis of different remedial alternatives. By developing PRGs early in the decision-making process, design staff may be able to streamline the consideration of remedial alternatives. (see <http://www.epa.gov/region09/waste/sfund/prg/index.html>) "

Contact_Info:

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
- SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis:

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Contact_Info:

Comments:

Human Health Risk

Basis:

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Comments:

Other

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Guidelines

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Contact_Info:

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

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Regulatory

Groundwater

Direct Contact (Dermal)

Basis:

Citation_Location: <http://www.cdphe.state.co.us/op/regs/waterregs/100241basicstandardsforgroundwater.pdf>,
<http://www.cdphe.state.co.us/op/regs/waterregs/100242sitespecificclassgroundwater.pdf>

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Comments:

Discharge to Surface Water

Basis:

Citation_Location: <http://www.cdphe.state.co.us/op/regs/waterregs/100241basicstandardsforgroundwater.pdf>,
<http://www.cdphe.state.co.us/op/regs/waterregs/100242sitespecificclassgroundwater.pdf>

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Comments:

Drinking (Ingestion)

Basis:

Citation_Location: <http://www.cdphe.state.co.us/op/regs/waterregs/100242sitespecificclassgroundwater.pdf>
<http://www.cdphe.state.co.us/op/regs/waterqualitycontroldivision/100301primarydrinkingwater.pdf>
<http://www.cdphe.state.co.us/op/regs/waterregs/100241basicstandardsforgroundwater.pdf>

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Comments:

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 Brownfields
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 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: <http://www.cdphe.state.co.us/op/regs/waterregs/100231basicstandards1205and1207.pdf>
<http://www.cdphe.state.co.us/wq/Assessment/TMDL/TMDLs.html>

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<http://www.cdphe.state.co.us/wq/Assessment/TMDL/TMDLs.html>

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Comments:

COLORADO

Name: Barbara O'Grady

Contact_Title: Environmental Protection Specialist III

Organization: Remedial Programs/Hazardous Materials and Waste Menegement

Address / City: 4300 Cherry Creek Drive South, Denver, 80246

Email: barbara.ogrady@state.co.us

Contact_Phone: (303) 692-3395

Regulatory

- | | | | | | |
|--|--|---|--|---|--------------------------------|
| <input checked="" type="checkbox"/> RCRA_CA | <input checked="" type="checkbox"/> Brownfields | <input type="checkbox"/> DrinkingWater | <input checked="" type="checkbox"/> SurfaceWater | <input type="checkbox"/> AirQuality (Clean Air Act) | |
| <input checked="" type="checkbox"/> SolidWsteLndfill | <input checked="" type="checkbox"/> VoluntaryClnUp | <input type="checkbox"/> SafeDrinkingWaterAct | <input type="checkbox"/> UST | <input checked="" type="checkbox"/> WetlandsProgram | <input type="checkbox"/> Other |

COLORADO

Name: Barbara O'Grady Contact_Title: Environmental Protection Specialist III
 Organization: Remedial Programs/Hazardous Materials and Waste Menegement
 Address / City: 4300 Cherry Creek Drive South, Denver, 80246
 Email: barbara.ogrady@state.co.us Contact_Phone: (303) 692-3395

Guidelines

Soil

Direct Contact (Dermal)

Basis:

Citation_Location: <http://www.cdphe.state.co.us/hm/soilplcydraft.pdf>

Contact_Info: Walter Avramenko 303-692-3362 walter.avramenko@state.co.us

Comments: The guidance outlines a tiered approach ranging from Tier 1 Background/Method Detection Limits; Tier 2 using a conservative risk-based approach to calculate levels protective of human health and groundwater quality; Tier 3 allows for site specific information to modify Tier 2 values and Tier 4 set forth a flexible framework to allow a more detailed evaluation of site information.

Impact to Groundwater

Basis:

Citation_Location: <http://www.cdphe.state.co.us/hm/soilplcydraft.pdf>

Contact_Info: Walter Avramenko 303-692-3362 walter.avramenko@state.co.us

Comments: The guidance outlines a tiered approach ranging from Tier 1 Background/Method Detection Limits; Tier 2 using a conservative risk-based approach to calculate levels protective of human health and groundwater quality; Tier 3 allows for site specific information to modify Tier 2 values and Tier 4 set forth a flexible framework to allow a more detailed evaluation of site information.

Impact to Surface Water

Basis:

Citation_Location: <http://www.cdphe.state.co.us/hm/soilplcydraft.pdf>

Contact_Info: Walter Avramenko 303-692-3362 walter.avramenko@state.co.us

Comments: The guidance outlines a tiered approach ranging from Tier 1 Background/Method Detection Limits; Tier 2 using a conservative risk-based approach to calculate levels protective of human health and groundwater quality; Tier 3 allows for site specific information to modify Tier 2 values and Tier 4 set forth a flexible framework to allow a more detailed evaluation of site information.

Ingestion

Basis:

Citation_Location: <http://www.cdphe.state.co.us/hm/soilplcydraft.pdf>

Contact_Info: Walter Avramenko 303-692-3362 walter.avramenko@state.co.us

Comments: The guidance outlines a tiered approach ranging from Tier 1 Background/Method Detection Limits; Tier 2 using a conservative risk-based approach to calculate levels protective of human health and groundwater quality; Tier 3 allows for site specific information to modify Tier 2 values and Tier 4 set forth a flexible framework to allow a more detailed evaluation of site information.

Inhalation

Basis:

Citation_Location: <http://www.cdphe.state.co.us/hm/soilplcydraft.asp>

Contact_Info: Walter Avramenko 303-692-3362 walter.avramenko@state.co.us

Comments: The guidance outlines a tiered approach ranging from Tier 1 Background/Method Detection Limits; Tier 2 using a conservative risk-based approach to calculate levels protective of human health and groundwater quality; Tier 3 allows for site specific information to modify Tier 2 values and Tier 4 set forth a flexible framework to allow a more detailed evaluation of site information.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

COLORADO

Name: Barbara O'Grady Contact_Title: Environmental Protection Specialist III
Organization: Remedial Programs/Hazardous Materials and Waste Menegement
Address / City: 4300 Cherry Creek Drive South, Denver, 80246
Email: barbara.ogrady@state.co.us Contact_Phone: (303) 692-3395

Guidelines

Vapor Intrusion

Inhalation

Basis: U.S. EPA 2005. "Human Health Risk Assessment, Risk-Based Concentration Table, October 2005 update".
<http://www.epa.gov/reg3hwmd/risk/human/index.htm>
Citation_Location: <http://www.cdphe.state.co.us/hm/indoorair.pdf>
Contact_Info: Walter Avramenko 303-692-3362 walter.avramenko@state.co.us
Comments:

Other

Basis:
Citation_Location: <http://www.cdphe.state.co.us/hm/indoorair.pdf>
Contact_Info: Walter Avramenko 303-692-3362 walter.avramenko@state.co.us
Comments: * Other: Groundwater Screening Concentrations are listed in table form. The document provides guidance for calculating health-based remediation goals.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

CONNECTICUT

Name: Traci Lott Contact_Title: Environmental Analyst III
 Organization: CT DEP/Remediation
 Address / City: 79 Elm St., Hartford, 06106
 Email: traci.iott@po.state.ct.us Contact_Phone: (860) 424-3082

Regulatory

Soil

Direct Contact (Dermal)

Basis:
 Citation_Location: Dermal absorption is not considered in the Direct Exposure Criteria contained in 22z-133k-2 RCSA
 Contact_Info: Traci lott at traci.iott@po.state.ct.us
 Comments:

Ecological Risk

Basis: The Regulations are currently being revised. Look to the CTDEP web site (<http://www.dep.state.ct.us/wtr/remediation/index.htm>) in the future for proposed revisions to the Regulations
 Citation_Location: 22a-133k-2 RCSA Standards for Soil Remediation See subsection (i) Additional Remediation of Soil
 Contact_Info: Traci lott at traci.iott@po.state.ct.us
 Comments:

Impact to Groundwater

Basis: The Regulations are currently being revised. Expect the criteria to be updated to reflect current toxicity values. Look to the CTDEP web site (<http://www.dep.state.ct.us/wtr/remediation/index.htm>) in the future for proposed revisions to the Regulations
 Citation_Location: 22a-133k-2 RCSA Standards for Soil Remediation See subsections (c) Pollutant Mobility Criteria as well as (d) Alternative Soil Criteria and (e) Applying the Direct Exposure Criteria and Pollutant Mobility Criteria
 Contact_Info: Traci lott at traci.iott@po.state.ct.us
 Comments:

Impact to Surface Water

Basis: The Regulations are currently being revised. Look to the CTDEP web site (<http://www.dep.state.ct.us/wtr/remediation/index.htm>) in the future for proposed revisions to the Regulations
 Citation_Location: 22a-133k-2 RCSA Standards for Soil Remediation See subsection (i) Additional Remediation of Soil
 Contact_Info: Traci lott at traci.iott@po.state.ct.us
 Comments:

Ingestion

Basis: The Regulations are currently being revised. Expect the criteria to be updated to reflect current toxicity values. Look to the CTDEP web site (<http://www.dep.state.ct.us/wtr/remediation/index.htm>) in the future for proposed revisions to the Regulations
 Citation_Location: 22a-133k-2 RCSA Standards for Soil Remediation See subsections (b) Direct Exposure Criteria as well as (d) Alternative Soil Criteria and (e) Applying the Direct Exposure Criteria and Pollutant Mobility Criteria
 Contact_Info: Traci lott at traci.iott@po.state.ct.us
 Comments:

Inhalation

Basis: The regulations are currently being revised and the existing numbers are expected to be replaced by the proposed values in the document listed under Guidelines (next column to the right)
 Citation_Location: 22a-133k-3 RCSA (Regulations of Connecticut State Agencies) - Groundwater Remediation Standards. See subsections (c) Volatilization Criteria and (f) Applying the Criteria for Groundwater. Volatilization standards based on soil vapor are included in the ground-water portion of the regulations.
 Contact_Info: Traci lott at traci.iott@po.state.ct.us
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

CONNECTICUT

Name: Traci Lott Contact_Title: Environmental Analyst III
 Organization: CT DEP/Remediation
 Address / City: 79 Elm St., Hartford, 06106
 Email: traci.iott@po.state.ct.us Contact_Phone: (860) 424-3082

Regulatory

Groundwater

Discharge to Surface Water

Basis: The Surface Water Protection Criteria are based on the Connecticut Water Quality Standards (<http://www.dep.state.ct.us/wtr/wq/wqs.pdf>). The Regulations provide for special consideration of wetlands and intermittent waterbodies as well as the ability to develop site-specific criteria. The Surface Water Protection Criteria will be updated in the revised regulations and additional guidance on implementation will be provided. Look to the CTDEP web site (<http://www.dep.state.ct.us/wtr/remediation/index.htm>) in the future for proposed revisions to the Regulations

Citation_Location: 22a-133k-3 RCSA Ground-water Remediation Standards See (b) Surface Water Protection Criteria and (f) Applying the Criteria for Groundwater

Contact_Info: Traci lott at traci.iott@po.state.ct.us

Comments:

Drinking (Ingestion)

Basis: The Ground-water Protection Criteria are based on either risk calculations or State/Federal Drinking Water values (MCLs etc). The criteria will be updated during the revisions to the regulations. Look to the CTDEP web site (<http://www.dep.state.ct.us/wtr/remediation/index.htm>) in the future for proposed revisions to the Regulations

Citation_Location: 22a-133k-3 RCSA Ground-water Remediation Standards See (d) Applicability of Ground-water Protection Criteria, (f) Applying the Criteria for Ground Water and (h) Additional Polluting Substances

Contact_Info: Traci lott at traci.iott@po.state.ct.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Drinking (Ingestion)

Basis: The WQS include ambient criteria for protection of Human Health from exposures due to drinking surface water. The criteria are based on the federal water quality criteria. The WQS are expected to revised in 2006

Citation_Location: Connecticut Water Quality Standards (<http://www.dep.state.ct.us/wtr/wq/wqs.pdf>)

Contact_Info: Traci lott @ traci.iott@po.state.ct.us

Comments:

Ecological Risk

Basis: The WQS include ambient criteria for protection of Aquatic Life from Acute and Chronic impacts. The criteria are based on the federal water quality criteria with some State-specific additions. The WQS are expected to revised in 2006

Citation_Location: Connecticut Water Quality Standards (<http://www.dep.state.ct.us/wtr/wq/wqs.pdf>)

Contact_Info: Traci lott @ traci.iott@po.state.ct.us

Comments:

Fish Consumption

Basis: The WQS include ambient criteria for protection of Human Health from exposures due to fish consumption. The criteria are based on the federal water quality criteria. The WQS are expected to revised in 2006

Citation_Location: Connecticut Water Quality Standards (<http://www.dep.state.ct.us/wtr/wq/wqs.pdf>)

Contact_Info: Traci lott @ traci.iott@po.state.ct.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

CONNECTICUT

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Address / City: 79 Elm St., Hartford, 06106
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Regulatory

Vapor Intrusion

Inhalation

Basis:

Citation_Location: 22a-133k-3 RCSA Ground-water Remediation Standards contain an allowance for considering indoor air monitoring, see subsection (c)(5)(B)

Contact_Info: Traci lott at traci.iott@po.state.ct.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis:

General provisions to allow the Commissioner to take any action necessary to prevent or abate any threat to human health or the environment are currently in the regulations. More detail regarding the evaluation and remediation of sediments is expected to be included in the the proposed revisions to the Remediation Standard Regulations. Look to the CTDEP web site (<http://www.dep.state.ct.us/wtr/remediation/index.htm>) in the future for proposed revisions to the Regulations.

Citation_Location: 22a-133k-1 through 22a-133k-3 RCSA, Remedation Standard Regulations

Contact_Info: Traci lott at traci.iott@po.state.ct.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

CONNECTICUT

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Contact_Title: Environmental Analyst III
 Contact_Phone: (860) 424-3082

Not Specified

Soil

Impact to Surface Water

Basis:

Citation_Location: No guidance is available. The potential impact of polluted soil on a waterbody is currently handled on a case by case basis

Contact_Info: Traci lott at traci.iott@po.state.ct.us

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Groundwater

Discharge to Surface Water

Basis:

Citation_Location: No additional guidance has been developed. However, future guidance is expected as the regulations are revised.

Contact_Info: Traci lott at traci.iott@po.state.ct.us

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Vapor Intrusion

Inhalation

Basis:

Citation_Location: None - handled on a case by case basis

Contact_Info: Traci lott at traci.iott@po.state.ct.us

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Sediment

Ecological Risk

Basis:

Citation_Location: Ecological Risk is handled on a case by case basis. No detailed guidance is available.

Contact_Info: Traci lott at traci.iott@po.state.ct.us

Comments:

Human Health Risk

Basis:

Citation_Location: Human Health Risk is handled on a case by case basis. No detailed guidance is available.

Contact_Info: Traci lott at traci.iott@po.state.ct.us

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

CONNECTICUT

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 Organization: CT DEP/Remediation
 Address / City: 79 Elm St., Hartford, 06106
 Email: traci.iott@po.state.ct.us Contact_Phone: (860) 424-3082

Guidelines

Soil

Ecological Risk

Basis:

Citation_Location: Currently Ecological Risk is currently evaluated on a case by case basis. General Guidance is available at <http://www.dep.state.ct.us/wst/remediation/risk/eraindex.htm>. See <http://www.dep.state.ct.us/wst/remediation/risk/eraandremediation.pdf> for more information on the approach CTDEP is proposing Ecological Risk Assessment as it pertains to Remediation Programs. CT specific guidance is currently under development for Ecological Risk Assessments.

Contact_Info: Traci lott at traci.iott@po.state.ct.us

Comments:

Impact to Groundwater

Basis:

Citation_Location: See the Comprehensive List of Approved Additional and Alternative Criteria for additional values (http://www.dep.state.ct.us/wtr/regs/remediation/alternative_and_approved_criteria.pdf)

Contact_Info: Traci lott at traci.iott@po.state.ct.us

Comments:

Ingestion

Basis:

Citation_Location: See the Comprehensive List of Approved Additional and Alternative Criteria for additional values (http://www.dep.state.ct.us/wtr/regs/remediation/alternative_and_approved_criteria.pdf)

Contact_Info: Traci lott at traci.iott@po.state.ct.us

Comments:

Inhalation

Basis:

The proposed revisions include an update to the model used to develop the criteria, along with an update of toxicity values, quantification levels, addition of new chemical as well as the consideration of exposure for children. Changes to the application of the criteria are also proposed.

Citation_Location: Proposed revisions to CT Volatilization Criteria can be found at <http://www.dep.state.ct.us/wtr/regs/RvVolCri.pdf>

Contact_Info: Traci lott at traci.iott@po.state.ct.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Drinking (Ingestion)

Basis:

Citation_Location: See the Comprehensive List of Approved Additional and Alternative Criteria (http://www.dep.state.ct.us/wtr/regs/remediation/alternative_and_approved_criteria.pdf). These values will be updated during the revisions to the regulations. No additional guidance has been developed.

Contact_Info: Traci lott at traci.iott@po.state.ct.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

CONNECTICUT

Name: Traci Lott Contact_Title: Environmental Analyst III
Organization: CT DEP/Remediation
Address / City: 79 Elm St., Hartford, 06106
Email: traci.iott@po.state.ct.us Contact_Phone: (860) 424-3082

Guidelines

Surface Water

Ecological Risk

Basis:

Citation_Location: Additional water quality benchmarks are derived on a case by case basis as needed using the procedures established by EPA in the Great Lakes Water Quality Initiative. No CT specific guidance has been developed. However, additional guidance is likely to be included in the revision to the Remediation Standard Regulations.

Contact_Info: Traci lott @ traci.iott@po.state.ct.us

Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Human Health Risk

Basis: General provisions to allow the Commissioner to take any action necessary to prevent or abate any threat to human health or the environment are currently in the regulations. More detail regarding the evaluation and remediation of sediments is expected to be included in the the proposed revisions to the Remediation Standard Regulations. Look to the CTDEP web site (<http://www.dep.state.ct.us/wtr/remediation/index.htm>) in the future for proposed revisions to the Regulations

Citation_Location: 22a-133k-1 through 22a-133k-3 RCSA, Remedation Standard Regulations

Contact_Info: Traci lott at traci.iott@po.state.ct.us

Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

DELAWARE

Name: Stephen Johnson

Contact_Title: Environmental Engineer

Organization: Site Investigation and Restoration Branch

Address / City:

Email:

Contact_Phone: (302) 395-2600

Regulatory

Soil

Direct Contact (Dermal)

Basis: Human health--not greater than 1E-5 excess cancer, cumulative risk for all media, all analytes

Citation_Location: DE Regulations Gov Haz Substance Cleanup Section 9

Contact_Info: Qazi Salahudin

Comments:

Ecological Risk

Basis: Surface Water Quality Standards

Citation_Location: DE Regulations Gov Haz Substance Cleanup Section 9

Contact_Info: Qazi Salahudin

Comments:

Impact to Groundwater

Basis: Risk based or MCL

Citation_Location: DE Regulations Gov Haz Substance Cleanup Section 9.2

Contact_Info: Qazi Salahudin

Comments:

Impact to Surface Water

Basis: Surface Water Quality Standards

Citation_Location: DE Regulations Gov Haz Substance Cleanup Section 9.3

Contact_Info: Qazi Salahudin

Comments:

Ingestion

Basis: Human health--not greater than 1E-5 excess cancer, cumulative risk for all media, all analytes

Citation_Location: DE Regulations Gov Haz Substance Cleanup Section 9

Contact_Info: Qazi Salahudin

Comments:

Inhalation

Basis: Human health--not greater than 1E-5 excess cancer, cumulative risk for all media, all analytes

Citation_Location: DE Regulations Gov Haz Substance Cleanup Section 9

Contact_Info: Qazi Salahudin (for all)

Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)

SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Discharge to Surface Water

Basis: Surface Water Quality Standards

Citation_Location: DE Regulations Gov Haz Substance Cleanup Section 9.2

Contact_Info: Qazi Salahudin

Comments:

DELAWARE

Name: Stephen Johnson

Contact_Title: Environmental Engineer

Organization: Site Investigation and Restoration Branch

Address / City:

Email:

Contact_Phone: (302) 395-2600

Regulatory

Drinking (Ingestion)

Basis: Uniform Riskbased Standards

Citation_Location: DE Regulations Gov Haz Substance Cleanup Section 9.2

Contact_Info: Qazi Salahudin

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis: varies according to surface water body designation

Citation_Location: Surface Water Quality Standards

Contact_Info: Qazi Salahudin

Comments:

Drinking (Ingestion)

Basis: varies according to surface water body designation

Citation_Location: Surface Water Quality Standards

Contact_Info: Qazi Salahudin

Comments:

Ecological Risk

Basis: varies according to surface water body designation

Citation_Location: Surface Water Quality Standards

Contact_Info: Qazi Salahudin

Comments:

Fish Consumption

Basis: varies according to surface water body designation

Citation_Location: Surface Water Quality Standards

Contact_Info: Qazi Salahudin

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

DELAWARE

Name: Stephen Johnson

Contact_Title: Environmental Engineer

Organization: Site Investigation and Restoration Branch

Address / City:

Email:

Contact_Phone: (302) 395-2600

Guidelines

Soil

Ecological Risk

Basis:

Citation_Location: Uniform Riskbased Standards --Eco

Contact_Info: Qazi Salahudin

Comments:

Impact to Groundwater

Basis:

Citation_Location: Uniform Riskbased Standards

Contact_Info:

Comments:

Impact to Surface Water

Basis:

Citation_Location: Uniform Riskbased Standards

Contact_Info:

Comments:

Ingestion

Basis: 1E-6 risk concentrations for individual analytes

Citation_Location: Uniform Riskbased Standards

Contact_Info:

Comments:

Inhalation

Basis:

Citation_Location: In development following EPA guidance

Contact_Info:

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
- SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Groundwater

Discharge to Surface Water

Basis:

Citation_Location: Uniform Riskbased Standards

Contact_Info: Qazi Salahudin

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: Uniform Riskbased Standards

Contact_Info: Uniform Riskbased Standards

Comments:

DELAWARE

Name: Stephen Johnson

Contact_Title: Environmental Engineer

Organization: Site Investigation and Restoration Branch

Address / City:

Email:

Contact_Phone: (302) 395-2600

Guidelines

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis: EPA guidance

Citation_Location: under development--

Contact_Info: Qazi Salahudin

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis: various--Oak Ridge Lab, EPA, NOAA

Citation_Location: Uniform Riskbased Standards-Eco

Contact_Info:

Comments:

Human Health Risk

Basis:

Citation_Location: Uniform Riskbased Standards--Human Health

Contact_Info:

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

FLORIDA

Name: Bheem R. Kothur Contact_Title: PE III
Organization: DWM/S&HWR/RCRA/HSWA
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Email: Bheem.Kothur@dep.state.fl.us Contact_Phone: (850) 245-8781

Regulatory

Soil

Direct Contact (Dermal)

Basis:

Citation_Location: Soil Cleanup Target Levels, Chapter 62-777, F.A.C.

Contact_Info:

Comments: FYI we have web site: [www.dep.state.fl.us/legal/rules/main rule list.htm](http://www.dep.state.fl.us/legal/rules/main_rule_list.htm); click on rules under complete listing; Choose, Rules in numerical order or rule by proper area. If you need any further help, please let me know. FYI, no standards for VI and Sediment Standards.Thanks.

Impact to Groundwater

Basis:

Citation_Location: Groundwater Cleanup Target Levels, Chapter 62-777, F.A.C. and Groundwater Protection Standards.

Contact_Info:

Comments: FYI we have web site: [www.dep.state.fl.us/legal/rules/main rule list.htm](http://www.dep.state.fl.us/legal/rules/main_rule_list.htm); click on rules under complete listing; Choose, Rules in numerical order or rule by proper area. If you need any further help, please let me know. FYI, no standards for VI and Sediment Standards.Thanks.

Ingestion

Basis:

Citation_Location: Soil Cleanup Target Levels, Chapter 62-777, F.A.C.

Contact_Info:

Comments: FYI we have web site: [www.dep.state.fl.us/legal/rules/main rule list.htm](http://www.dep.state.fl.us/legal/rules/main_rule_list.htm); click on rules under complete listing; Choose, Rules in numerical order or rule by proper area. If you need any further help, please let me know. FYI, no standards for VI and Sediment Standards.Thanks.

Inhalation

Basis:

Citation_Location: Soil Cleanup Target Levels, Chapter 62-777, F.A.C.

Contact_Info:

Comments: FYI we have web site: [www.dep.state.fl.us/legal/rules/main rule list.htm](http://www.dep.state.fl.us/legal/rules/main_rule_list.htm); click on rules under complete listing; Choose, Rules in numerical order or rule by proper area. If you need any further help, please let me know. FYI, no standards for VI and Sediment Standards.Thanks.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

GEORGIA

Name: David Brownlee Contact_Title: Unit Coordinator
 Organization: Hazardous Site Response Program
 Address / City: 2 MLK Jr Drive, Suite 1462, Atlanta, 30334
 Email: david_brownlee@dnr.state.ga.us Contact_Phone: (404) 657-6800

Regulatory

Soil

Direct Contact (Dermal)

Basis:
 Citation_Location: Rules for Hazardous Site Response does not factor in dermal contact in risk calculations.
 Contact_Info: david_brownlee@dnr.state.ga.us
 Comments:

Ecological Risk

Basis: Determined on a site-specific basis.
 Citation_Location: If an ecological risk assessment is required it should follow the process described in ERAGS or the Georgia SWMU guidance document (see right for both).
 Contact_Info: jim_brown@dnr.state.ga.us
 Comments:

Impact to Groundwater

Basis: Soil cleanup values are calculated such that exceedances of groundwater remediation standards will not occur.
 Citation_Location: Rules for Hazardous Site Response 391-3-19 can be found at http://www.gaepd.org/Documents/rules_exist.html
 Contact_Info: david_brownlee@dnr.state.ga.us
 Comments:

Impact to Surface Water

Basis: Site specific soil cleanup values are calculated such that exceedances of in-stream water quality standards will not occur.
 Citation_Location: Rules for Hazardous Site Response 391-3-19 and Rules for Water Quality Control 391-3-6 can be found at http://www.gaepd.org/Documents/rules_exist.html
 Contact_Info: david_brownlee@dnr.state.ga.us
 Comments:

Ingestion

Basis:
 Citation_Location: Rules for Hazardous Site Response 391-3-19 can be found at http://www.gaepd.org/Documents/rules_exist.html
 Contact_Info: david_brownlee@dnr.state.ga.us
 Comments:

Inhalation

Basis:
 Citation_Location: Rules for Hazardous Site Response 391-3-19 can be found at http://www.gaepd.org/Documents/rules_exist.html
 Contact_Info: david_brownlee@dnr.state.ga.us
 Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

GEORGIA

Name: David Brownlee Contact_Title: Unit Coordinator
 Organization: Hazardous Site Response Program
 Address / City: 2 MLK Jr Drive, Suite 1462, Atlanta, 30334
 Email: david_brownlee@dnr.state.ga.us Contact_Phone: (404) 657-6800

Regulatory

Groundwater

Direct Contact (Dermal)

Basis:
 Citation_Location: Rules for Hazardous Site Response does not factor in dermal contact in risk calculations.
 Contact_Info: david_brownlee@dnr.state.ga.us
 Comments:

Discharge to Surface Water

Basis: Site specific groundwater cleanup values are calculated such that exceedances of in-stream water quality standards will not occur.
 Citation_Location: Rules for Hazardous Site Response 391-3-19 and Rules for Water Quality Control 391-3-6 can be found at http://www.gaepd.org/Documents/rules_exist.html
 Contact_Info: david_brownlee@dnr.state.ga.us
 Comments:

Drinking (Ingestion)

Basis: Default groundwater values equivalent to MCLs may be used or site specific risk based levels based on ingestion and inhalation (for volatiles) using an ICLR of 1.E-05 or HI=1.
 Citation_Location: Rules for Hazardous Site Response 391-3-19 can be found at http://www.gaepd.org/Documents/rules_exist.html
 Contact_Info: david_brownlee@dnr.state.ga.us
 Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Surface Water

Direct Contact (Dermal)

Basis: Determined on a site-specific basis.
 Citation_Location: Rules for Hazardous Site Response 391-3-19 and Rules for Water Quality Control 391-3-6 can be found at http://www.gaepd.org/Documents/rules_exist.html
 Contact_Info:
 Comments:

Drinking (Ingestion)

Basis: Determined on a site-specific basis.
 Citation_Location: Rules for Hazardous Site Response 391-3-19 and Rules for Water Quality Control 391-3-6 can be found at http://www.gaepd.org/Documents/rules_exist.html
 Contact_Info:
 Comments:

Ecological Risk

Basis: Determined on a site-specific basis.
 Citation_Location: If an ecological risk assessment is required it should follow the process described in ERAGS or the Georgia SWMU guidance document (see right for both).
 Contact_Info: jim_brown@dnr.state.ga.us
 Comments:

Fish Consumption

GEORGIA

Name: David Brownlee Contact_Title: Unit Coordinator
Organization: Hazardous Site Response Program
Address / City: 2 MLK Jr Drive, Suite 1462, Atlanta, 30334
Email: david_brownlee@dnr.state.ga.us Contact_Phone: (404) 657-6800

Regulatory

Basis: Determined on a site-specific basis.
Citation_Location: Rules for Hazardous Site Response 391-3-19 and Rules for Water Quality Control 391-3-6 can be found at http://www.gaepd.org/Documents/rules_exist.html
Contact_Info:
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis: If required the Johnson & Ettinger model should be used to demonstrate compliance with indoor air/vapor intrusion requirements. Other methods may be approved on a site-specific basis.
Citation_Location: Rules for Hazardous Site Response 391-3-19 can be found at http://www.gaepd.org/Documents/rules_exist.html
Contact_Info: jim_brown@dnr.state.ga.us
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis: Determined on a site-specific basis.
Citation_Location: If an ecological risk assessment is required it should follow the process described in ERAGS or the Georgia SWMU guidance document (see right for both).
Contact_Info: jim_brown@dnr.state.ga.us
Comments:

Human Health Risk

Basis:
Citation_Location: Rules for Hazardous Site Response 391-3-19 can be found at http://www.gaepd.org/Documents/rules_exist.html
Contact_Info: david_brownlee@dnr.state.ga.us
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

GEORGIA

Name: David Brownlee Contact_Title: Unit Coordinator
 Organization: Hazardous Site Response Program
 Address / City: 2 MLK Jr Drive, Suite 1462, Atlanta, 30334
 Email: david_brownlee@dnr.state.ga.us Contact_Phone: (404) 657-6800

Guidelines

Soil

Ecological Risk

Basis: Determined on a site-specific basis.
 Citation_Location: 1. Ecological Risk Assessment Guidance for Superfund (ERAGS), EPA 1997 (EPA 540-R-97-006); 2. Georgia EPD Guidance for Selecting Media Remediation Levels of RCRA Solid Waste Management Units. This can be found at http://www.gaepd.org/Files_PDF/techguide/hwb/swmurisk.pdf
 Contact_Info: jim_brown@dnr.state.ga.us
 Comments:

Other

Basis:
 Citation_Location: Cleanup levels are established by a hierarchy that includes a comparison of default values to generic residential and non-residential risk based levels, or by using site-specific risk based levels.
 Contact_Info:
 Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Surface Water

Ecological Risk

Basis:
 Citation_Location: 1. Ecological Risk Assessment Guidance for Superfund (ERAGS), EPA 1997 (EPA 540-R-97-006); 2. Georgia EPD Guidance for Selecting Media Remediation Levels of RCRA Solid Waste Management Units. This can be found at http://www.gaepd.org/Files_PDF/techguide/hwb/swmurisk.pdf
 Contact_Info: jim_brown@dnr.state.ga.us
 Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Sediment

Ecological Risk

Basis:
 Citation_Location: 1. Ecological Risk Assessment Guidance for Superfund (ERAGS), EPA 1997 (EPA 540-R-97-006); 2. Georgia EPD Guidance for Selecting Media Remediation Levels of RCRA Solid Waste Management Units. This can be found at http://www.gaepd.org/Files_PDF/techguide/hwb/swmurisk.pdf
 Contact_Info: jim_brown@dnr.state.ga.us
 Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

IOWA

Name: Bob Drustrup Contact_Title: Environmental Engineer
 Organization: Iowa Department of Natural Resources, Land Recycling Program (a VCP)
 Address / City: 502 E. 9th Street, Des Moines, 503190034
 Email: bob.drustrup@dnr.state.ia.us Contact_Phone: (515) 281-8900

Regulatory

Soil

Direct Contact (Dermal)

Basis: Larger of 5E-06 or HI = 0.1 for Group C that have a slope factor
 Citation_Location: Rule 567 IAC 137.5, <http://www.iowadnr.com/land/consites/index.html>
 Contact_Info: Bob Drustrup, (515) 281-8900, bob.drustrup@dnr.state.ia.us
 Comments: Regulations shown are for the voluntary cleanup program. Statewide (i.e., residential) soil standards are addressed above. Site-specific, non-residential soil standards are based on 1 E-04 cancer risk and HI = 1 and less exposure. Cumulative risk requirements (cancer = 1 E-04 and HQ = 1 by target organ) apply regardless of the standard. Soil standards are based on direct exposure to soil by ingestion and dermal contact. Standards do not address cross-media contamination from soil. Instead standards apply only to the medium in which exposure occurs. For example, if non-compliance of groundwater standards occurs due to contaminants in soil, soil must be addressed even if soil standards are attained. An on-line cumulative risk calculator will be available in April from the referenced Internet address.

Ingestion

Basis: Larger of 5E-06 or HI = 0.1 for Group C that have a slope factor
 Citation_Location: Rule 567 IAC 137.5, <http://www.iowadnr.com/land/consites/index.html>
 Contact_Info: Bob Drustrup, (515) 281-8900, bob.drustrup@dnr.state.ia.us
 Comments: Regulations shown are for the voluntary cleanup program. Statewide (i.e., residential) soil standards are addressed above. Site-specific, non-residential soil standards are based on 1 E-04 cancer risk and HI = 1 and less exposure. Cumulative risk requirements (cancer = 1 E-04 and HQ = 1 by target organ) apply regardless of the standard. Soil standards are based on direct exposure to soil by ingestion and dermal contact. Standards do not address cross-media contamination from soil. Instead standards apply only to the medium in which exposure occurs. For example, if non-compliance of groundwater standards occurs due to contaminants in soil, soil must be addressed even if soil standards are attained. An on-line cumulative risk calculator will be available in April from the referenced Internet address.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Drinking (Ingestion)

Basis: HI = 0.02 for Group C
 Citation_Location: Rule 567 IAC 137.5, <http://www.iowadnr.com/land/consites/index.html>
 Contact_Info: Bob Drustrup, (515) 281-8900, bob.drustrup@dnr.state.ia.us
 Comments: Regulations shown are for the voluntary cleanup program. Statewide groundwater standards are set for protected and nonprotected groundwater source. (K < 0.44m/day or TDS > 2,500 for nonprotected) Protected groundwater standards are MCLs, HAL, or risk-based if no MCL or HAL exists. Nonprotected standards based on cancer = 1 E-04 and HQ = 1, or the larger of HI = 0.1 or cancer = 1 E-04 for Group C that have a slope factor. Cumulative risk requirements (cancer = 1 E-04 and HQ = 1 by target organ) apply regardless of the standard. Groundwater standards are based on direct exposure to groundwater by ingestion only, comparable to drinking water standards. As with soil, standands apply only to the medium in which exposure occurs. An on-line cumulative risk calculator will be available in April from the referenced Internet address.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:
 Citation_Location: Chapter 567 IAC 61, <http://www.iowadnr.com/water/standards/index.html>
 Contact_Info: Connie Dou, (515) 281-3350 connie.dou@dnr.state.ia.us
 Comments:

IOWA

Name: Bob Drustrup Contact_Title: Environmental Engineer
Organization: Iowa Department of Natural Resources, Land Recycling Program (a VCP)
Address / City: 502 E. 9th Street, Des Moines, 503190034
Email: bob.drustrup@dnr.state.ia.us Contact_Phone: (515) 281-8900

Regulatory

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis:

Citation_Location: Subrule 567 IAC 137.6(9) <http://www.iowadnr.com/land/consites/index.html>

Contact_Info: Bob Drustrup, (515) 281-8900, bob.drustrup@dnr.state.ia.us

Comments: Promulgated ambient air quality standards are statewide standards in the voluntary cleanup program. OSHA standards apply if the contaminant is used in the workplace. Normal background levels can be considered. Use of soil-gas samples extrapolated to indoor air can be used. Cumulative risk requirements apply.

Other

Basis:

Citation_Location: Chapter 567 IAC 28 <http://www.iowadnr.com/air/prof/progdev/rules.html>

Contact_Info: Christine Paulson (515) 242-5154 christine.paulson@dnr.state.ia.us

Comments: Promulgated ambient air quality standards are statewide standards in the voluntary cleanup program. OSHA standards apply if the contaminant is used in the workplace. Normal background levels can be considered. Use of soil-gas samples extrapolated to indoor air can be used. Cumulative risk requirements apply.

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

IOWA

Name: Bob Drustrup Contact_Title: Environmental Engineer
 Organization: Iowa Department of Natural Resources, Land Recycling Program (a VCP)
 Address / City: 502 E. 9th Street, Des Moines, 503190034
 Email: bob.drustrup@dnr.state.ia.us Contact_Phone: (515) 281-8900

Not Specified

Soil

Ecological Risk

Basis: Addressed on a site-specific basis
 Citation_Location:
 Contact_Info: Regulations shown are for the voluntary cleanup program. Statewide (i.e., residential) soil standards are addressed above. Site-specific, non-residential soil standards are based on 1 E-04 cancer risk and HI = 1 and less exposure. Cumulative risk requirements (cancer = 1 E-04 and HQ = 1 by target organ) apply regardless of the standard. Soil standards are based on direct exposure to soil by ingestion and dermal contact. Standards do not address cross-media contamination from soil. Instead standards apply only to the medium in which exposure occurs. For example, if non-compliance of groundwater standards occurs due to contaminants in soil, soil must be addressed even if soil standards are attained. An on-line cumulative risk calculator will be available in April from the referenced Internet address.

Comments:

Impact to Groundwater

Basis: Addressed as groundwater issue
 Citation_Location:
 Contact_Info: Regulations shown are for the voluntary cleanup program. Statewide (i.e., residential) soil standards are addressed above. Site-specific, non-residential soil standards are based on 1 E-04 cancer risk and HI = 1 and less exposure. Cumulative risk requirements (cancer = 1 E-04 and HQ = 1 by target organ) apply regardless of the standard. Soil standards are based on direct exposure to soil by ingestion and dermal contact. Standards do not address cross-media contamination from soil. Instead standards apply only to the medium in which exposure occurs. For example, if non-compliance of groundwater standards occurs due to contaminants in soil, soil must be addressed even if soil standards are attained. An on-line cumulative risk calculator will be available in April from the referenced Internet address.

Comments:

Impact to Surface Water

Basis: Addressed as a surface water issue
 Citation_Location:
 Contact_Info: Regulations shown are for the voluntary cleanup program. Statewide (i.e., residential) soil standards are addressed above. Site-specific, non-residential soil standards are based on 1 E-04 cancer risk and HI = 1 and less exposure. Cumulative risk requirements (cancer = 1 E-04 and HQ = 1 by target organ) apply regardless of the standard. Soil standards are based on direct exposure to soil by ingestion and dermal contact. Standards do not address cross-media contamination from soil. Instead standards apply only to the medium in which exposure occurs. For example, if non-compliance of groundwater standards occurs due to contaminants in soil, soil must be addressed even if soil standards are attained. An on-line cumulative risk calculator will be available in April from the referenced Internet address.

Comments:

Inhalation

Basis: Addressed as an inhalation issue.
 Citation_Location:
 Contact_Info: Regulations shown are for the voluntary cleanup program. Statewide (i.e., residential) soil standards are addressed above. Site-specific, non-residential soil standards are based on 1 E-04 cancer risk and HI = 1 and less exposure. Cumulative risk requirements (cancer = 1 E-04 and HQ = 1 by target organ) apply regardless of the standard. Soil standards are based on direct exposure to soil by ingestion and dermal contact. Standards do not address cross-media contamination from soil. Instead standards apply only to the medium in which exposure occurs. For example, if non-compliance of groundwater standards occurs due to contaminants in soil, soil must be addressed even if soil standards are attained. An on-line cumulative risk calculator will be available in April from the referenced Internet address.

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

IOWA

Name: Bob Drustrup Contact_Title: Environmental Engineer

Organization: Iowa Department of Natural Resources, Land Recycling Program (a VCP)

Address / City: 502 E. 9th Street, Des Moines, 503190034

Email: bob.drustrup@dnr.state.ia.us Contact_Phone: (515) 281-8900

Not Specified

Groundwater

Discharge to Surface Water

Basis: Addressed as surface water issue

Citation_Location:

Contact_Info:

Comments: Regulations shown are for the voluntary cleanup program. Statewide groundwater standards are set for protected and nonprotected groundwater source. (K < 0.44m/day or TDS > 2,500 for nonprotected) Protected groundwater standards are MCLs, HAL, or risk-based if no MCL or HAL exists. Nonprotected standards based on cancer = 1 E-04 and HQ = 1, or the larger of HI = 0.1 or cancer = 1 E-04 for Group C that have a slope factor. Cumulative risk requirements (cancer = 1 E-04 and HQ = 1 by target organ) apply regardless of the standard. Groundwater standards are based on direct exposure to groundwater by ingestion only, comparable to drinking water standards. As with soil, standards apply only to the medium in which exposure occurs. An on-line cumulative risk calculator will be available in April from the referenced Internet address.

RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)

SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Sediment

Other

Basis:

Citation_Location:

Contact_Info:

Comments: No specific sediment standards exist. Contaminants in sediments will be addressed on a site-specific basis in conjunction with the surface water quality program as warranted.

RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)

SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

ILLINOIS

Name: Heather Nifong Contact_Title: Programs Advisor
 Organization: Division of Remediation Management, Bureau of Land
 Address / City: 1021 North Grand Ave East, Springfield, 627949276
 Email: heather.nifong@epa.state.il.us Contact_Phone: (217) 785-4729

Regulatory

Soil

Direct Contact (Dermal)

Basis: addressed in Tier 2 or 3 evaluations only
 Citation_Location: 35 IAC Part 742 (TACO) <http://www.epa.state.il.us/land/taco/>
 Contact_Info: IEPA Toxicity Assessment Unit 217-785-0830
 Comments: Dermal exposure is addressed by the RBCA equations in Tiers 2 and 3, which depend on the use of site-specific paramters. Separate soil impact to groundwater remediation objectives based on pH for identified ionizable organics or inorganics are available. The mixture rule requires that effects of similar-acting chemicals on the same target organ must be taken into account.

Impact to Groundwater

Basis: allows pH specific remediation objectives
 Citation_Location: 35 IAC Part 742 (TACO) <http://www.epa.state.il.us/land/taco/>
 Contact_Info: IEPA Toxicity Assessment Unit 217-785-0830
 Comments: Dermal exposure is addressed by the RBCA equations in Tiers 2 and 3, which depend on the use of site-specific paramters. Separate soil impact to groundwater remediation objectives based on pH for identified ionizable organics or inorganics are available. The mixture rule requires that effects of similar-acting chemicals on the same target organ must be taken into account.

Ingestion

Basis:
 Citation_Location: 35 IAC Part 742 (TACO) <http://www.epa.state.il.us/land/taco/>
 Contact_Info: IEPA Toxicity Assessment Unit 217-785-0830
 Comments: Dermal exposure is addressed by the RBCA equations in Tiers 2 and 3, which depend on the use of site-specific paramters. Separate soil impact to groundwater remediation objectives based on pH for identified ionizable organics or inorganics are available. The mixture rule requires that effects of similar-acting chemicals on the same target organ must be taken into account.

Inhalation

Basis:
 Citation_Location: 35 IAC Part 742 (TACO) <http://www.epa.state.il.us/land/taco/>
 Contact_Info: IEPA Toxicity Assessment Unit 217-785-0830
 Comments: Dermal exposure is addressed by the RBCA equations in Tiers 2 and 3, which depend on the use of site-specific paramters. Separate soil impact to groundwater remediation objectives based on pH for identified ionizable organics or inorganics are available. The mixture rule requires that effects of similar-acting chemicals on the same target organ must be taken into account.

Other

Basis: health effects of similar-acting chemicals
 Citation_Location: 35 IAC Part 742 (TACO) <http://www.epa.state.il.us/land/taco/>
 Contact_Info:
 Comments: Dermal exposure is addressed by the RBCA equations in Tiers 2 and 3, which depend on the use of site-specific paramters. Separate soil impact to groundwater remediation objectives based on pH for identified ionizable organics or inorganics are available. The mixture rule requires that effects of similar-acting chemicals on the same target organ must be taken into account.

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

ILLINOIS

Name: Heather Nifong Contact_Title: Programs Advisor
Organization: Division of Remediation Management, Bureau of Land
Address / City: 1021 North Grand Ave East, Springfield, 627949276
Email: heather.nifong@epa.state.il.us Contact_Phone: (217) 785-4729

Regulatory

Groundwater

Direct Contact (Dermal)

Basis: addressed in Tier 2 or 3 evaluations only
Citation_Location: 35 IAC Part 742 (TACO) <http://www.epa.state.il.us/land/taco>
Contact_Info: IEPA Txocity Assessment Unit, 217-785-0830
Comments:

Drinking (Ingestion)

Basis:
Citation_Location: 35 IAC Part 742 (TACO) <http://www.epa.state.il.us/land/taco>
Contact_Info: IEPA Txocity Assessment Unit, 217-785-0830
Comments:

Other

Basis: health effects of simliar acting chemicals
Citation_Location: 35 IAC Part 742 (TACO) <http://www.epa.state.il.us/land/taco>
Contact_Info:
Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

ILLINOIS

Name: Heather Nifong Contact_Title: Programs Advisor
 Organization: Division of Remediation Management, Bureau of Land
 Address / City: 1021 North Grand Ave East, Springfield, 627949276
 Email: heather.nifong@epa.state.il.us Contact_Phone: (217) 785-4729

Not Specified

Soil

Ecological Risk

Basis:
 Citation_Location: None. Developed on site-specific basis.
 Contact_Info: IEPA Toxicity Assessment Unit, 217-785-0830
 Comments: Dermal exposure is addressed by the RBCA equations in Tiers 2 and 3, which depend on the use of site-specific paramters. Separate soil impact to groundwater remediation objectives based on pH for identified ionizable organics or inorganics are available. The mixture rule requires that effects of similar-acting chemicals on the same target organ must be taken into account.

Impact to Surface Water

Basis:
 Citation_Location: None. Developed on site-specific basis.
 Contact_Info: IEPA Toxicity Assessment Unit, 217-785-0830
 Comments: Dermal exposure is addressed by the RBCA equations in Tiers 2 and 3, which depend on the use of site-specific paramters. Separate soil impact to groundwater remediation objectives based on pH for identified ionizable organics or inorganics are available. The mixture rule requires that effects of similar-acting chemicals on the same target organ must be taken into account.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Discharge to Surface Water

Basis:
 Citation_Location: None. Developed on site-specific basis.
 Contact_Info: IEPA Toxicity Assessment Unit, 217-785-0830
 Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:
 Citation_Location: None. Developed on site-specific basis.
 Contact_Info: IEPA Toxicity Assessment Unit, 217-785-0830
 Comments:

Ecological Risk

Basis:
 Citation_Location: None. Developed on site-specific basis.
 Contact_Info:
 Comments:

Basis:
 Citation_Location: None. Developed on site-specific basis.
 Contact_Info: IEPA Toxicity Assessment Unit, 217-785-0830
 Comments:

ILLINOIS

Name: Heather Nifong

Contact_Title: Programs Advisor

Organization: Division of Remediation Management, Bureau of Land

Address / City: 1021 North Grand Ave East, Springfield, 627949276

Email: heather.nifong@epa.state.il.us

Contact_Phone: (217) 785-4729

Not Specified

Fish Consumption

Basis:

Citation_Location: None. Developed on site-specific basis.

Contact_Info: IEPA Toxicity Assessment Unit, 217-785-0830

Comments:

Other

Basis:

Citation_Location: None. Developed on site-specific basis.

Contact_Info: IEPA Toxicity Assessment Unit, 217-785-0830

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

ILLINOIS

Name: Heather Nifong Contact_Title: Programs Advisor
 Organization: Division of Remediation Management, Bureau of Land
 Address / City: 1021 North Grand Ave East, Springfield, 627949276
 Email: heather.nifong@epa.state.il.us Contact_Phone: (217) 785-4729

Guidelines

Surface Water

Other

Basis: Water quality standards for chemical constituents.

Citation_Location: 35 IAC Part 302.208, 210

Contact_Info: IEPA Toxicity Assessment Unit, 217-785-0830

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Vapor Intrusion

Inhalation

Basis:

Citation_Location: U.S. EPA Draft Guidance for Vapor Intrusion <http://www.epa.gov/correctiveaction/eis/vapor.htm>

Contact_Info: IEPA Toxicity Assessment Unit, 217-785-0830

Comments: Illinois is in the process of developing a vapor intrusion pathway to be added to TACO.

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Sediment

Ecological Risk

Basis:

Citation_Location: None. Developed on site-specific basis.

Contact_Info: IEPA Toxicity Assessment Unit, 217-785-0830

Comments: Cleanup objectives for contaminants other than petroleum are developed on a site-specific basis.

Human Health Risk

Basis:

Citation_Location: Guidance for petroleum product releases to sediments, March 21, 2003

Contact_Info: IEPA Toxicity Assessment Unit, 217-785-0830

Comments: Cleanup objectives for contaminants other than petroleum are developed on a site-specific basis.

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

INDIANA

Name: Megan Hamilton Contact_Title: Environmental Manager
Organization: Applied Science Technologies
Address / City: 100 N Senate Ave, IGCN RM1154N, Indianapolis, 46204
Email: mhamilto@idem.in.gov Contact_Phone: (317) 234-3928

Regulatory

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: 327 IAC 2 Water Quality Standards can be found at: <http://www.in.gov/legislative/iac/title327.html>

Contact_Info: Dennis Clark, (317) 308-3235, dclark@idem.in.gov

Comments:

Drinking (Ingestion)

Basis: U.S. EPA (Federal) MCL's

Citation_Location: 327 IAC 8-2 Drinking Water Standards can be found at: <http://www.in.gov/legislative/iac/title327.html>

Contact_Info: Pat Carroll, (317) 308-3281, pcarroll@idem.in.gov

Comments:

Ecological Risk

Basis:

Citation_Location: 327 IAC 2 Water Quality Standards can be found at: <http://www.in.gov/legislative/iac/title327.html>

Contact_Info: Dennis Clark, (317) 308-3235, dclark@idem.in.gov

Comments:

Fish Consumption

Basis:

Citation_Location: 327 IAC 2 Water Quality Standards can be found at: <http://www.in.gov/legislative/iac/title327.html>

Contact_Info: Dennis Clark, (317) 308-3235, dclark@idem.in.gov

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

INDIANA

Name: Megan Hamilton Contact_Title: Environmental Manager
 Organization: Applied Science Technologies
 Address / City: 100 N Senate Ave, IGCN RM1154N, Indianapolis, 46204
 Email: mhamilto@idem.in.gov Contact_Phone: (317) 234-3928

Guidelines

Soil

Direct Contact (Dermal)

Basis: U.S. EPA. 1996. Soil Screening Guidance: Technical Background Document. Office of Emergency and Remedial Response, Washington, D.C. EPA/540/R-95/128.
 Citation_Location: Soil Cleanup Criteria available at: http://www.in.gov/idem/land/risc/tech_guide/index.html
 Contact_Info: Contact person is Megan Hamilton, (317) 234-3928, mhamilto@idem.in.gov
 Comments:

Ecological Risk

Basis:
 Citation_Location: Ecological Risk Assessment Guidance for Superfund for Designing and Conducting Ecological Risk Assessments <http://www.epa.gov/oerrpage/superfund/programs/risk/ecorisk/ecorisk.htm>
 Contact_Info: Program Specific
 Comments:

Impact to Groundwater

Basis: U.S. EPA Risk Assessment Guidance for Superfund (EPA RAGS), U.S. EPA http://www.epa.gov/oswer/riskassessment/risk_superfund.htm
 Citation_Location: Soil Cleanup Criteria available at: http://www.in.gov/idem/land/risc/tech_guide/index.html
 Contact_Info: Contact person is Megan Hamilton, (317) 234-3928, mhamilto@idem.in.gov
 Comments:

Ingestion

Basis: U.S. EPA. 1996. Soil Screening Guidance: Technical Background Document. Office of Emergency and Remedial Response, Washington, DC. EPA/540/R-96/128. NTIS PB96-963502.
 Citation_Location: Soil Cleanup Criteria available at: http://www.in.gov/idem/land/risc/tech_guide/index.html
 Contact_Info: Contact person is Megan Hamilton, (317) 234-3928, mhamilto@idem.in.gov
 Comments:

Inhalation

Basis: U.S. EPA. 1996. Soil Screening Guidance: Technical Background Document. Office of Emergency and Remedial Response, Washington, D.C. EPA/540/R-95/128.
 Citation_Location: Soil Cleanup Criteria available at: http://www.in.gov/idem/land/risc/tech_guide/index.html
 Contact_Info: Contact person is Megan Hamilton, (317) 234-3928, mhamilto@idem.in.gov
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Direct Contact (Dermal)

Basis: U.S. EPA Risk Assessment Guidance for Superfund (EPA RAGS), U.S. EPA http://www.epa.gov/oswer/riskassessment/risk_superfund.htm
 Citation_Location: Ground water Cleanup Criteria available at: http://www.in.gov/idem/land/risc/tech_guide/index.html
 Contact_Info: Contact person is Megan Hamilton, (317) 234-3928, mhamilto@idem.in.gov
 Comments:

Discharge to Surface Water

INDIANA

Name: Megan Hamilton Contact_Title: Environmental Manager
 Organization: Applied Science Technologies
 Address / City: 100 N Senate Ave, IGCN RM1154N, Indianapolis, 46204
 Email: mhamilto@idem.in.gov Contact_Phone: (317) 234-3928

Guidelines

Basis: U.S. EPA Risk Assessment Guidance for Superfund (EPA RAGS), U.S. EPA
http://www.epa.gov/oswer/riskassessment/risk_superfund.htm
 Citation_Location: Ground water Cleanup Criteria available at: http://www.in.gov/idem/land/risc/tech_guide/index.html
 Contact_Info: Contact person is Megan Hamilton, (317) 234-3928, mhamilto@idem.in.gov
 Comments:

Drinking (Ingestion)

Basis: U.S. EPA Risk Assessment Guidance for Superfund (EPA RAGS), U.S. EPA
http://www.epa.gov/oswer/riskassessment/risk_superfund.htm
 Citation_Location: Ground water Cleanup Criteria available at: http://www.in.gov/idem/land/risc/tech_guide/index.html
 Contact_Info: Contact person is Megan Hamilton, (317) 234-3928, mhamilto@idem.in.gov
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Fish Consumption

Basis:
 Citation_Location: 2005 Indiana Fish Consumption Advisory http://www.in.gov/isdh/dataandstats/fish/fish_adv_index.htm. Please see the FDA/EPA Consumer Advice for more information (<http://www.cfsan.fda.gov/admehg3.html>) and to determine which commercial fish species are safest.
 Contact_Info:
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis: U.S. EPA OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils,
<http://www.epa.gov/correctiveaction/eis/vapor.htm>
 Citation_Location: In the process of developing Vapor Intrusion Pilot Program Guidance
 Contact_Info: John Clark, (317) 234-0999, jclark@idem.in.gov
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis:
 Citation_Location: Ecological Risk Assessment Guidance for Superfund for Designing and Conducting Ecological Risk Assessments
<http://www.epa.gov/oerrpage/superfund/programs/risk/ecorisk/ecorisk.htm>
 Contact_Info:
 Comments:

Human Health Risk

INDIANA

Name: Megan Hamilton

Contact_Title: Environmental Manager

Organization: Applied Science Technologies

Address / City: 100 N Senate Ave, IGCN RM1154N, Indianapolis, 46204

Email: mhamilto@idem.in.gov

Contact_Phone: (317) 234-3928

Guidelines

Basis:

Citation_Location: U.S. EPA Risk Assessment Guidance for Superfund (EPA RAGS), U.S. EPA
http://www.epa.gov/oswer/riskassessment/risk_superfund.htm

Contact_Info:

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

KENTUCKY

Name: Wesley Turner, et.al. Contact_Title: Supervisor Federal Section Superfund
 Organization: Division of Waste Mangement Superfund
 Address / City: 14 Reilly Road, Frankfort, 40601
 Email: wesley.turner@ky.gov Contact_Phone: (502) 564-6716

Regulatory

Soil

Direct Contact (Dermal)

Basis: 401 KAR 100:030, Soil Levels based on Region 9 PRG Table and Users Guide
 Citation_Location: <http://www.lrc.ky.gov/kar/401/100/030.htm>
 Contact_Info: Larry Taylor
 Comments:

Impact to Groundwater

Basis: 401 KAR 100:030, Soil Levels based on Region 9 PRG Table and Users Guide
 Citation_Location: <http://www.lrc.ky.gov/kar/401/100/030.htm>
 Contact_Info: Larry Taylor
 Comments:

Ingestion

Basis: 401 KAR 100:030, Soil Levels based on Region 9 PRG Table and Users Guide
 Citation_Location: <http://www.lrc.ky.gov/kar/401/100/030.htm>
 Contact_Info: Larry Taylor
 Comments:

Inhalation

Basis: 401 KAR 100:030, Soil Levels based on Region 9 PRG Table and Users Guide
 Citation_Location: <http://www.lrc.ky.gov/kar/401/100/030.htm>
 Contact_Info: Larry Taylor
 Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Groundwater

Drinking (Ingestion)

Basis: 401 KAR 100:030, Based on Region 9 PRG Table and Users Guide
 Citation_Location: <http://www.lrc.ky.gov/kar/401/100/030.htm>
 Contact_Info: Larry Taylor
 Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Surface Water

Other

Basis: 401 KAR Chapters 4,5 6, 8
 Citation_Location: <http://www.lrc.ky.gov/kar/TITLE401.HTM>
 Contact_Info: Larry Taylor
 Comments:

KENTUCKY

Name: Wesley Turner, et.al. Contact_Title: Supervisor Federal Section Superfund
Organization: Division of Waste Mangement Superfund
Address / City: 14 Reilly Road, Frankfort, 40601
Email: wesley.turner@ky.gov Contact_Phone: (502) 564-6716

Regulatory

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis: 401 KAR 100:030, Levels calculated from Johnson and Ettinger Vapor Intrusion Model
Citation_Location: <http://www.lrc.ky.gov/kar/TITLE401.HTM>
Contact_Info: Larry Taylor

Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis: 401 KAR 100:030 Ecological Risk Assessment for Superfund, Region 4 Ecological Screening Values
Citation_Location:
Contact_Info: Larry Taylor

Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

KENTUCKY

Name: Wesley Turner, et.al.

Contact_Title: Supervisor Federal Section Superfund

Organization: Division of Waste Mangement Superfund

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Email: wesley.turner@ky.gov

Contact_Phone: (502) 564-6716

Guidelines

Soil

Ecological Risk

Basis: " 401 KAR 100:030 ""Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments (1997)"" , and ""Guidelines for Ecological Risk Assessment (1998)"" . "

Citation_Location: <http://www.lrc.ky.gov/kar/401/100/030.htm>

Contact_Info: Larry Taylor

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Groundwater

Direct Contact (Dermal)

Basis: 401 KAR 100:030 and USEPA Region 9 PRG Table and Users Guide

Citation_Location: <http://www.lrc.ky.gov/kar/401/100/030.htm>

Contact_Info: Larry Taylor

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Surface Water

Ecological Risk

Basis: 401 KAR 100:030 "Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments (1997)", and "Guidelines for Ecological Risk Assessment (1998)".

Citation_Location: <http://www.lrc.ky.gov/kar/401/100/030.htm>

Contact_Info: Larry Taylor

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Sediment

Ecological Risk

Basis: 401 KAR 100:030 401 KAR 100:030 "Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments (1997)", and "Guidelines for Ecological Risk Assessment (1998)"., Region 4 Ecological Screening Values

Citation_Location:

Contact_Info: Larry Taylor

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

LOUISIANA

Name: Patrick J. Lobos

Contact_Title: Toxicologist

Organization: Louisiana Department of Environmental Quality

Address / City: Environmental Technology Division, PO Box 4314, Baton Rouge, 708214314

Email: patrick.lobos@la.gov

Contact_Phone: (225) 219-3425

Regulatory

Soil

Direct Contact (Dermal)

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

Ecological Risk

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

Impact to Groundwater

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

Impact to Surface Water

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

Ingestion

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

Inhalation

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

Other

LOUISIANA

Name: Patrick J. Lobos Contact_Title: Toxicologist
 Organization: Louisiana Department of Environmental Quality
 Address / City: Environmental Technology Division, PO Box 4314, Baton Rouge, 708214314
 Email: patrick.lobos@la.gov Contact_Phone: (225) 219-3425

Regulatory

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments: Soil standards are based upon site-specific considerations for risk. As evaluation proceeded through management options (tiered evaluation) more site-specific parameters are considered.

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Direct Contact (Dermal)

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

Discharge to Surface Water

Basis: Based upon surface water criteria regulation or drinking resource depending on use.

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

Other

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

LOUISIANA

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Contact_Phone: (225) 219-3425

Regulatory

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

Ecological Risk

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

Fish Consumption

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Vapor Intrusion

Inhalation

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

LOUISIANA

Name: Patrick J. Lobos Contact_Title: Toxicologist
Organization: Louisiana Department of Environmental Quality
Address / City: Environmental Technology Division, PO Box 4314, Baton Rouge, 708214314
Email: patrick.lobos@la.gov Contact_Phone: (225) 219-3425

Regulatory

Sediment

Ecological Risk

Basis: Ecological Assessment Plan submitted
Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>
Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425
Comments:

Human Health Risk

Basis:
Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>
Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425
Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

LOUISIANA

Name: Patrick J. Lobos

Contact_Title: Toxicologist

Organization: Louisiana Department of Environmental Quality

Address / City: Environmental Technology Division, PO Box 4314, Baton Rouge, 708214314

Email: patrick.lobos@la.gov

Contact_Phone: (225) 219-3425

Guidelines

Soil

Direct Contact (Dermal)

Basis:

Citation_Location: 2003 RECAP online at: <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov

Comments:

Impact to Groundwater

Basis:

Citation_Location: 2003 RECAP online at: <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov

Comments:

Ingestion

Basis:

Citation_Location: 2003 RECAP online at: <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov

Comments:

Inhalation

Basis:

Citation_Location: 2003 RECAP online at: <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov

Comments:

Other

Basis:

Citation_Location: 2003 RECAP online at: <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Groundwater

Discharge to Surface Water

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

LOUISIANA

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 Organization: Louisiana Department of Environmental Quality
 Address / City: Environmental Technology Division, PO Box 4314, Baton Rouge, 708214314
 Email: patrick.lobos@la.gov Contact_Phone: (225) 219-3425

Guidelines

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

Ecological Risk

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

Fish Consumption

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Vapor Intrusion

Inhalation

Basis:

Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>

Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

LOUISIANA

Name: Patrick J. Lobos Contact_Title: Toxicologist
Organization: Louisiana Department of Environmental Quality
Address / City: Environmental Technology Division, PO Box 4314, Baton Rouge, 708214314
Email: patrick.lobos@la.gov Contact_Phone: (225) 219-3425

Guidelines

Sediment

Ecological Risk

Basis: Ecological Assessment Plan submitted
Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>
Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425
Comments:

Human Health Risk

Basis:
Citation_Location: 2003 Risk Evaluation/Corrective Action Program (RECAP) Mandated in LA R.S. 30:2272. Online version at <http://www.deq.state.la.us/technology/recap>
Contact_Info: Patrick J. Lobos patrick.lobos@la.gov 225-219-3425
Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MASSACHUSETTS

Name: Paul Locke Contact_Title: Division Director - Policy & Program Development
 Organization: MA DEQ, Waste Site Cleanup
 Address / City:
 Email: Paul.Locke@state.ma.us Contact_Phone: (617) 556-1160

Regulatory

Soil

Direct Contact (Dermal)

Basis: Hazard Index=0.2, Cancer Risk= 1E-06. Standards consider cumulative impact of inhalation of contaminated dust, dermal contact and ingestion of contaminated soil.
 Citation_Location: 310 CMR 40 - "The Massachusetts Contingency Plan", specifically standards published in Supart I, 310 CMR 40.0900 et. seq. See <http://mass.gov/dep/cleanup/laws/regulati.htm>
 Contact_Info: Nancy Bettinger, MassDEP Office of Research and Standards, Nancy.Bettinger@state.ma.us, 6176-556-1160
 Comments:

Impact to Groundwater

Basis: Soil standards set based on modeled leaching to meet a specified target groundwater concentration (one of three groundwater categories - see "Groundwater" responses).
 Citation_Location: 310 CMR 40 - "The Massachusetts Contingency Plan", specifically standards published in Supart I, 310 CMR 40.0900 et. seq. See <http://mass.gov/dep/cleanup/laws/regulati.htm>
 Contact_Info: Nancy Bettinger, MassDEP Office of Research and Standards, Nancy.Bettinger@state.ma.us, 6176-556-1160
 Comments:

Ingestion

Basis: Hazard Index=0.2, Cancer Risk= 1E-06. Standards consider cumulative impact of inhalation of contaminated dust, dermal contact and ingestion of contaminated soil.
 Citation_Location: 310 CMR 40 - "The Massachusetts Contingency Plan", specifically standards published in Supart I, 310 CMR 40.0900 et. seq. See <http://mass.gov/dep/cleanup/laws/regulati.htm>
 Contact_Info: Nancy Bettinger, MassDEP Office of Research and Standards, Nancy.Bettinger@state.ma.us, 6176-556-1160
 Comments:

Inhalation

Basis: Hazard Index=0.2, Cancer Risk= 1E-06. Standards consider cumulative impact of inhalation of contaminated dust, dermal contact and ingestion of contaminated soil.
 Citation_Location: 310 CMR 40 - "The Massachusetts Contingency Plan", specifically standards published in Supart I, 310 CMR 40.0900 et. seq. See <http://mass.gov/dep/cleanup/laws/regulati.htm>
 Contact_Info: Nancy Bettinger, MassDEP Office of Research and Standards, Nancy.Bettinger@state.ma.us, 6176-556-1160
 Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Direct Contact (Dermal)

Basis: Hazard Index=0.2, Cancer Risk= 1E-06. Standards consider cumulative impact of inhalation of volatilized contaminant during shower, dermal contact during shower and ingestion of contaminated water. The standards also consider quantitation limits, background levels and "ceiling limits".
 Citation_Location: 310 CMR 40 - "The Massachusetts Contingency Plan", specifically standards published in Supart I, 310 CMR 40.0900 et. seq. See <http://mass.gov/dep/cleanup/laws/regulati.htm>
 Contact_Info: Nancy Bettinger, MassDEP Office of Research and Standards, Nancy.Bettinger@state.ma.us, 6176-556-1160
 Comments:

Discharge to Surface Water

MASSACHUSETTS

Name: Paul Locke Contact_Title: Division Director - Policy & Program Development
 Organization: MA DEQ, Waste Site Cleanup
 Address / City:
 Email: Paul.Locke@state.ma.us Contact_Phone: (617) 556-1160

Regulatory

Basis: 310 CMR 40 - "The Massachusetts Contingency Plan", specifically standards published in Supart I, 310 CMR 40.0900 et. seq. See <http://mass.gov/dep/cleanup/laws/regulati.htm>
 Citation_Location: Ecological Hazard Index = 1, using USEPA National Recommended Water Quality Criteria or similar value as target level and considering fate/transport factors. The standards also consider quantitation limits, background levels and "ceiling limits".
 Contact_Info: Nancy Bettinger, MassDEP Office of Research and Standards, Nancy.Bettinger@state.ma.us, 6176-556-1160
 Comments:

Drinking (Ingestion)

Basis: Hazard Index=0.2, Cancer Risk= 1E-06. Standards consider cumulative impact of inhalation of volatilized contaminant during shower, dermal contact during shower and ingestion of contaminated water. The standards also consider quantitation limits, background levels and "ceiling limits".
 Citation_Location: 310 CMR 40 - "The Massachusetts Contingency Plan", specifically standards published in Supart I, 310 CMR 40.0900 et. seq. See <http://mass.gov/dep/cleanup/laws/regulati.htm>
 Contact_Info: Nancy Bettinger, MassDEP Office of Research and Standards, Nancy.Bettinger@state.ma.us, 6176-556-1160
 Comments:

Other

Basis: Hazard Index=0.2, Cancer Risk= 1E-06. Standards consider cumulative impact of inhalation of volatilized contaminant during shower, dermal contact during shower and ingestion of contaminated water. The standards also consider quantitation limits, background levels and "ceiling limits".
 Citation_Location: 310 CMR 40 - "The Massachusetts Contingency Plan", specifically standards published in Supart I, 310 CMR 40.0900 et. seq. See <http://mass.gov/dep/cleanup/laws/regulati.htm>
 Contact_Info: Nancy Bettinger, MassDEP Office of Research and Standards, Nancy.Bettinger@state.ma.us, 6176-556-1160
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Drinking (Ingestion)

Basis: Hazard Index=0.2, Cancer Risk= 1E-06. Standards consider ingestion of contaminated water. The standards also consider quantitation limits, cost and treatment issues.
 Citation_Location: Massachusetts MCLs. 310 CMR 22 - Mass Drinking Water Regulation, applicable to Class A Surface Water bodies (reservoirs) <http://mass.gov/dep/water/laws/regulati.htm>
 Contact_Info: Dave Terry, David.Terry@state.ma.us, (617) 292-5529
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis: Hazard Index=0.2, Cancer Risk= 1E-06. Standards consider inhalation of indoor air containing contaminants volatilized from groundwater beneath a building. The standards also consider quantitation limits, indoor air background levels and "ceiling limits".
 Citation_Location: GW-2 Standards in 310 CMR 40 - "The Massachusetts Contingency Plan", specifically standards published in Supart I, 310 CMR 40.0900 et. seq. See <http://mass.gov/dep/cleanup/laws/regulati.htm>
 Contact_Info: Nancy Bettinger, MassDEP Office of Research and Standards, Nancy.Bettinger@state.ma.us, 6176-556-1160
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MASSACHUSETTS

Name: Paul Locke

Contact_Title: Division Director - Policy & Program Development

Organization: MA DEQ, Waste Site Cleanup

Address / City:

Email: Paul.Locke@state.ma.us

Contact_Phone: (617) 556-1160

Regulatory

Sediment

Human Health Risk

Basis: See Soil Standards for acceptable values.

Citation_Location:

Contact_Info:

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Guidelines

Surface Water

Ecological Risk

Basis: Ecological Hazard Index = 1, using USEPA National Recommended Water Quality Criteria or similar value as target level and considering fate/transport factors.

Citation_Location: Benchmark levels in surface water identified in background documentation for the MCP groundwater GW-3 standards. See <http://mass.gov/dep/cleanup/laws/regulati.htm>

Contact_Info: Nancy Bettinger, MassDEP Office of Research and Standards, Nancy.Bettinger@state.ma.us, 6176-556-1160

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Sediment

Ecological Risk

Basis: Probable Effects Concentrations (PECs) published by MacDonald, et. al (2000).

Citation_Location: Sediment Screening Values See <http://mass.gov/dep/service/compliance/riskasmt.htm>

Contact_Info: Nancy Bettinger, MassDEP Office of Research and Standards, Nancy.Bettinger@state.ma.us, 6176-556-1160

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

MARYLAND

Name: James Carroll Contact_Title: Program Administrator
 Organization: Maryland Department of the Environment, Waste Management Administration
 Address / City: 1800 Washington Blvd., Ste.625, Baltimore, 21230
 Email: JCarroll@mde.state.md.us Contact_Phone: (410) 537-3437

Regulatory

Soil

Direct Contact (Dermal)

Basis: 10-5 cancer risk, HI=1
 Citation_Location: Sections 7-208 & 7-508 of the Environmental Article, Annotated Code of Maryland
 Contact_Info: ERRP (410) 537-3493
 Comments:

Ecological Risk

Basis:
 Citation_Location: Sections 7-208 & 7-508 of the Environmental Article, Annotated Code of Maryland, COMAR 26.08.02.03-2
 Contact_Info: ERRP (410) 537-3493
 Comments:

Impact to Groundwater

Basis: 10-5 cancer risk, HI=1
 Citation_Location: Sections 7-208 & 7-508 of the Environmental Article, Annotated Code of Maryland
 Contact_Info: ERRP (410) 537-3493
 Comments:

Impact to Surface Water

Basis: 10-5 cancer risk, HI=1
 Citation_Location: Sections 7-208 & 7-508 of the Environmental Article, Annotated Code of Maryland, COMAR 26.08.02.03-2
 Contact_Info: ERRP (410) 537-3493
 Comments:

Ingestion

Basis: 10-5 cancer risk, HI=1
 Citation_Location: Section 7-208 & 7-508 of the Environmental Article, Annotated Code of Maryland
 Contact_Info: ERRP (410) 537-3493
 Comments:

Inhalation

Basis: 10-5 cancer risk, HI=1
 Citation_Location: Sections 7-208 & 7-508 of the Environmental Article, Annotated Code of Maryland <http://www.mlis.state.md.us/>
 Contact_Info: ERRP (410) 537-3493
 Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Groundwater

Direct Contact (Dermal)

Basis: 10-5 cancer risk, HI=1
 Citation_Location: Sections 7-208 & 7-508 of the Environmental Article, Annotated Code of Maryland
 Contact_Info: ERRP (410) 537-3493
 Comments:

MARYLAND

Name: James Carroll Contact_Title: Program Administrator
 Organization: Maryland Department of the Environment, Waste Management Administration
 Address / City: 1800 Washington Blvd., Ste.625, Baltimore, 21230
 Email: JCarroll@mde.state.md.us Contact_Phone: (410) 537-3437

Regulatory

Basis: 10-5 cancer risk, HI=1
 Citation_Location: Sections 7-208 & 7-508 of the Environmental Article, Annotated Code of Maryland, COMAR 26.08.02.03-2
 Contact_Info: ERRP (410) 537-3493
 Comments:

Drinking (Ingestion)

Basis: 10-5 cancer risk, HI=1
 Citation_Location: Sections 7-208 & 7-508 of the Environmental Article, Annotated Code of Maryland, COMAR 26.04.01.06-07
 Contact_Info: ERRP (410) 537-3493
 Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Surface Water

Direct Contact (Dermal)

Basis: 10-5 cancer risk, HI=1
 Citation_Location: Sections 7-208 & 7-508 of the Environmental Article, Annotated Code of Maryland
 Contact_Info: ERRP (410) 537-3493
 Comments:

Drinking (Ingestion)

Basis: 10-5 cancer risk, HI=1
 Citation_Location: Sections 7-208 & 7-508 of the Environmental Article, Annotated Code of Maryland, COMAR 26.04.01.06-07
 Contact_Info: ERRP (410) 537-3493
 Comments:

Ecological Risk

Basis:
 Citation_Location: Sections 7-208 & 7-508 of the Environmental Article, Annotated Code of Maryland, COMAR 26.08.02.03-2
 Contact_Info: ERRP (410) 537-3493
 Comments:

Fish Consumption

Basis:
 Citation_Location: COMAR 26.08.02.03-2
 Contact_Info: TRSA (410) 537-3906
 Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

MARYLAND

Name: James Carroll Contact_Title: Program Administrator
Organization: Maryland Department of the Environment, Waste Management Administration
Address / City: 1800 Washington Blvd., Ste.625, Baltimore, 21230
Email: JCarroll@mde.state.md.us Contact_Phone: (410) 537-3437

Regulatory

Vapor Intrusion

Inhalation

Basis: 10-5 cancer risk, HI=1
Citation_Location: Sections 7-208 & 7-508 of the Environmental Article, Annotated Code of Maryland
Contact_Info: ERRP (410) 537-3493
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis:
Citation_Location: Sections 7-208 & 7-508 of the Environmental Article, Annotated Code of Maryland, COMAR 26.08.02.03-2
Contact_Info: ERRP (410) 537-3493
Comments:

Human Health Risk

Basis: 10-5 cancer risk, HI=1
Citation_Location: Sections 7-208 & 7-508 of the Environmental Article, Annotated Code of Maryland
Contact_Info: ERRP (410) 537-3493
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MARYLAND

Name: James Carroll Contact_Title: Program Administrator
 Organization: Maryland Department of the Environment, Waste Management Administration
 Address / City: 1800 Washington Blvd., Ste.625, Baltimore, 21230
 Email: JCarroll@mde.state.md.us Contact_Phone: (410) 537-3437

Guidelines

Soil

Direct Contact (Dermal)

Basis: U.S. EPA Region III Risk-Based Concentration Table (EPA RBC), <http://www.epa.gov/reg3hwmd/risk/human/index.htm>
 Citation_Location: Risk Assessment Guidance for Superfund (EPA RAGS), U.S. EPA http://www.epa.gov/oswer/riskassessment/risk_superfund.htm
 Contact_Info: State of Maryland Department of the Environment Cleanup Standards for Soil and Groundwater (MDE Cleanup Standards) http://www.mde.state.md.us/Programs/LandPrograms/Hazardous_Waste/cleanup_standards/index.asp
 Comments:

Ecological Risk

Basis:
 Citation_Location: Ecological Risk Assessment Guidance for Superfund, U.S. EPA <http://www.epa.gov/oswer/riskassessment/ecorisk/ecorisk.htm>
 Contact_Info:
 Comments:

Impact to Surface Water

Basis: U.S. EPA Region III Risk-Based Concentration Table (EPA RBC), <http://www.epa.gov/reg3hwmd/risk/human/index.htm>
 Citation_Location: Risk Assessment Guidance for Superfund (EPA RAGS), U.S. EPA http://www.epa.gov/oswer/riskassessment/risk_superfund.htm
 Contact_Info: MDE Cleanup Standards, Ambient Water Quality COMAR 26.08.02.03-2 <http://www.dsd.state.md.us/comar/26/26.08.02.03%2D2.htm>
 Comments:

Ingestion

Basis: U.S. EPA Region III Risk-Based Concentration Table (EPA RBC), <http://www.epa.gov/reg3hwmd/risk/human/index.htm>
 Citation_Location: Risk Assessment Guidance for Superfund (EPA RAGS), U.S. EPA http://www.epa.gov/oswer/riskassessment/risk_superfund.htm
 Contact_Info: State of Maryland Department of the Environment Cleanup Standards for Soil and Groundwater (MDE Cleanup Standards) http://www.mde.state.md.us/Programs/LandPrograms/Hazardous_Waste/cleanup_standards/index.asp
 Comments:

Inhalation

Basis: U.S. EPA Region III Risk-Based Concentration Table (EPA RBC), <http://www.epa.gov/reg3hwmd/risk/human/index.htm>
 Citation_Location: Risk Assessment Guidance for Superfund (EPA RAGS), U.S. EPA http://www.epa.gov/oswer/riskassessment/risk_superfund.htm
 Contact_Info: State of Maryland Department of the Environment Cleanup Standards for Soil and Groundwater (MDE Cleanup Standards) http://www.mde.state.md.us/Programs/LandPrograms/Hazardous_Waste/cleanup_standards/index.asp
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Direct Contact (Dermal)

Basis: EPA RBC,
 Citation_Location: EPA RAGS
 Contact_Info: MDE Cleanup Standards
 Comments:

Discharge to Surface Water

MARYLAND

Name: James Carroll Contact_Title: Program Administrator
 Organization: Maryland Department of the Environment, Waste Management Administration
 Address / City: 1800 Washington Blvd., Ste.625, Baltimore, 21230
 Email: JCarroll@mde.state.md.us Contact_Phone: (410) 537-3437

Guidelines

Basis: EPA RBC
 Citation_Location: EPA RAGS
 Contact_Info: MDE Cleanup Standards, Ambient Water Quality COMAR 26.08.02.03-2
<http://www.dsd.state.md.us/comar/26/26.08.02.03%2D2.htm>

Comments:

Drinking (Ingestion)

Basis: EPA RAGS, EPA RBC
 Citation_Location: Drinking Water Standards and Health Advisories, U.S. EPA <http://www.epa.gov/waterscience/criteria/drinking/>
 Contact_Info: MDE Cleanup Standards, Maximum Contaminant Level COMAR 26.04.01.06-7
<http://www.dsd.state.md.us/comar/26/26.04.01.06.htm> <http://www.dsd.state.md.us/comar/26/26.04.01.07.htm>

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis: EPA RBC
 Citation_Location: EPA RAGS
 Contact_Info: MDE Cleanup Standards

Comments:

Drinking (Ingestion)

Basis: EPA RAGS, EPA RBC
 Citation_Location: Drinking Water Standards and Health Advisories, U.S. EPA <http://www.epa.gov/waterscience/criteria/drinking/>
 Contact_Info: MDE Cleanup Standards, Maximum Contaminant Level COMAR 26.04.01.06-7
<http://www.dsd.state.md.us/comar/26/26.04.01.06.htm> <http://www.dsd.state.md.us/comar/26/26.04.01.07.htm>

Comments:

Ecological Risk

Basis: MDE Cleanup Standards, Ambient Water Quality Criteria (AWQC), COMAR 26.08.02.03-2
<http://www.dsd.state.md.us/comar/26/26.08.02.03%2D2.htm>
 Citation_Location: Ecological Risk Assessment Guidance for Superfund, U.S. EPA <http://www.epa.gov/oswer/riskassessment/ecorisk/ecorisk.htm>
 Contact_Info:

Comments:

Fish Consumption

Basis:
 Citation_Location: Ambient Water Quality COMAR 26.08.02.03-2 <http://www.dsd.state.md.us/comar/26/26.08.02.03%2D2.htm>
 Contact_Info:

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MARYLAND

Name: James Carroll Contact_Title: Program Administrator
Organization: Maryland Department of the Environment, Waste Management Administration
Address / City: 1800 Washington Blvd., Ste.625, Baltimore, 21230
Email: JCarroll@mde.state.md.us Contact_Phone: (410) 537-3437

Guidelines

Vapor Intrusion

Inhalation

Basis:

Citation_Location: OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils, U.S. EPA
<http://www.epa.gov/correctiveaction/eis/vapor.htm>

Contact_Info:

Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis: MDE Cleanup Standards, Ambient Water Quality Criteria (AWQC), COMAR 26.08.02.03-2
<http://www.dsd.state.md.us/comar/26/26.08.02.03%2D2.htm>

Citation_Location: Ecological Risk Assessment Guidance for Superfund, U.S. EPA <http://www.epa.gov/oswer/riskassessment/ecorisk/ecorisk.htm>

Contact_Info:

Comments:

Human Health Risk

Basis: EPA RBC

Citation_Location: EPA RAGS

Contact_Info: MDE Cleanup Standards

Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MICHIGAN

Name: Christine Flaga Contact_Title: Chief, Toxicology Unit, Remediation and Redevelo
 Organization: Part 201 (Environmental Remediation) and Part 213 (Leaking Underground Stora
 Address / City: Michigan Department of Environmental Quality, Remediation and Development Division, Constitution Hall, 525 West Allegan St.,
 Email: flagac@michigan.gov Contact_Phone: (517) 373-0160

Regulatory

Soil

Direct Contact (Dermal)

Basis: Generic cleanup criteria for soil were developed pursuant to Sections 20120a and 21304a of NREPA. The direct contact criteria represents a soil concentration that is protective against adverse health effects due to long-term ingestion of and dermal contact with contaminated soil. Details on the criteria applicability and algorithms can be found in the MDEQ Remediation and Redevelopment Division (RRD) Operational Memoranda.

Citation_Location: Part 201 (Environmental Remediation), Part 213 (LUSTs), and Part 201 Rules. Document available at http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846-58095--,00.html specifically R299.5720

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: 1) Site-specific criteria are developed for exposure pathways and scenarios for which generic methodology has not been developed. Concerns listed below are addressed on a site-specific basis:
 a) Recreational exposures
 b) Contaminated soil runoff to surface water (R299.5728)
 c) Ecological and aesthetic impacts - For screening level ecological risk assessment, the Ecological Screening Level Guidance of the U.S. EPA Reg. 5 RCRA Corrective Action Program (R299.5728 and R299.5732).
 2) Statewide default soil background levels are substituted for the cleanup criterion for a hazardous substance whenever the applicable risk-based criterion is lower than the statewide background level for that particular hazardous substance.
 Note: Drinking water and Safe Drinking Water Act use Rule 57 surface water quality values.

Ecological Risk

Basis: No generic clean-up criteria available. Clean-up levels are determined on a site-specific basis.

Citation_Location: Part 201 (Environmental Remediation), Part 213 (LUSTs), and Part 201 Rules. Document available at http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846-58095--,00.html specifically R299.5728.

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: 1) Site-specific criteria are developed for exposure pathways and scenarios for which generic methodology has not been developed. Concerns listed below are addressed on a site-specific basis:
 a) Recreational exposures
 b) Contaminated soil runoff to surface water (R299.5728)
 c) Ecological and aesthetic impacts - For screening level ecological risk assessment, the Ecological Screening Level Guidance of the U.S. EPA Reg. 5 RCRA Corrective Action Program (R299.5728 and R299.5732).
 2) Statewide default soil background levels are substituted for the cleanup criterion for a hazardous substance whenever the applicable risk-based criterion is lower than the statewide background level for that particular hazardous substance.
 Note: Drinking water and Safe Drinking Water Act use Rule 57 surface water quality values.

Impact to Groundwater

MICHIGAN

Name: Christine Flaga Contact_Title: Chief, Toxicology Unit, Remediation and Redevelo
Organization: Part 201 (Environmental Remediation) and Part 213 (Leaking Underground Storag
Address / City: Michigan Department of Environmental Quality, Remediation and Development Division, Constitution Hall, 525 West Allegan St.,
Email: flagac@michigan.gov Contact_Phone: (517) 373-0160

Regulatory

Basis: "Generic cleanup criteria for soil for all land uses were developed pursuant to Sections 20120a and 21304a of NREPA. The soil criteria protective of drinking water (GWPC) identify concentrations of hazardous substances in soil that are not expected to leach to groundwater at concentrations greater than the applicable generic drinking water criteria. The soil criteria protective for groundwater contact (GCC) identify concentrations of hazardous substances in soil which are not expected to leach to groundwater at concentrations greater than the GCC. The GCC applies for all land uses where contaminated groundwater is, or could be encountered at a depth where subsurface activities (i.e. construction or maintenance of utilities) may result in persons coming into contact with the groundwater. The soil criteria protective of the groundwater surface water interface (GSI) represent concentrations of hazardous substances in soil that are not expected to leach to groundwater at concentrations greater than the corresponding GSI criterion. Details on the criteria applicability and algorithms can be found in the MDEQ Remediation and Redevelopment Division (RRD) Operational Memoranda. "

Citation_Location: Part 201 (Environmental Remediation), Part 213 (LUSTs), and Part 201 Rules. Document available at http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846-58095--,00.html specifically R299.5720, and R299.5722

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: 1) Site-specific criteria are developed for exposure pathways and scenarios for which generic methodology has not been developed. Concerns listed below are addressed on a site-specific basis:
a) Recreational exposures
b) Contaminated soil runoff to surface water (R299.5728)
c) Ecological and aesthetic impacts - For screening level ecological risk assessment, the Ecological Screening Level Guidance of the U.S. EPA Reg. 5 RCRA Corrective Action Program (R299.5728 and R299.5732). 2) Statewide default soil background levels are substituted for the cleanup criterion for a hazardous substance whenever the applicable risk-based criterion is lower than the statewide background level for that particular hazardous substance.
Note: Drinking water and Safe Drinking Water Act use Rule 57 surface water quality values.

Impact to Surface Water

Basis:

Citation_Location: http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846-101581--,00.html

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: 1) Site-specific criteria are developed for exposure pathways and scenarios for which generic methodology has not been developed. Concerns listed below are addressed on a site-specific basis:
a) Recreational exposures
b) Contaminated soil runoff to surface water (R299.5728)
c) Ecological and aesthetic impacts - For screening level ecological risk assessment, the Ecological Screening Level Guidance of the U.S. EPA Reg. 5 RCRA Corrective Action Program (R299.5728 and R299.5732). 2) Statewide default soil background levels are substituted for the cleanup criterion for a hazardous substance whenever the applicable risk-based criterion is lower than the statewide background level for that particular hazardous substance.
Note: Drinking water and Safe Drinking Water Act use Rule 57 surface water quality values.

Inhalation

MICHIGAN

Name: Christine Flaga Contact_Title: Chief, Toxicology Unit, Remediation and Redevelo
 Organization: Part 201 (Environmental Remediation) and Part 213 (Leaking Underground Storag
 Address / City: Michigan Department of Environmental Quality, Remediation and Development Division, Constitution Hall, 525 West Allegan St.,
 Email: flagac@michigan.gov Contact_Phone: (517) 373-0160

Regulatory

Basis: Generic health-based cleanup criteria for soil for all land uses were developed pursuant to Sections 20120a and 21304a of NREPA. The soil volatilization to indoor air criteria (SVIIC) address migration of hazardous substance vapors from soil into indoor air spaces. SVIIC identify concentrations of volatile hazardous substances in soil that are not expected to impact indoor air above levels that may cause adverse human health effects. The particulate soil inhalation criteria (PSIC) address the emission and dispersion of contaminated soil particulates into the ambient air. The PSIC identify concentrations of hazardous substances in soil that, when bound to particulate matter in ambient air, are not expected to impact ambient air at levels that may cause adverse human health effects. The soil volatilization inhalation criteria (VSIC) address the migration of hazardous substance vapors from soil into the ambient air for situations where the vertical extent of contamination is finite (i.e., thickness is 2 meters or less) or infinite. The VSIC identify concentrations of volatile hazardous substances in soil that are not expected to impact ambient air at levels that may cause adverse human health effects. Details on the criteria applicability and algorithms can be found in the MDEQ Remediation and Redevelopment Division (RRD) Operational Memoranda.

Citation_Location: Part 201 (Environmental Remediation), Part 213 (LUSTs), and Part 201 Rules. Document available at http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846-58095--,00.html specifically R299.5724 and R299.5726

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: 1) Site-specific criteria are developed for exposure pathways and scenarios for which generic methodology has not been developed. Concerns listed below are addressed on a site-specific basis:
 a) Recreational exposures
 b) Contaminated soil runoff to surface water (R299.5728)
 c) Ecological and aesthetic impacts - For screening level ecological risk assessment, the Ecological Screening Level Guidance of the U.S. EPA Reg. 5 RCRA Corrective Action Program (R299.5728 and R299.5732).
 2) Statewide default soil background levels are substituted for the cleanup criterion for a hazardous substance whenever the applicable risk-based criterion is lower than the statewide background level for that particular hazardous substance.
 Note: Drinking water and Safe Drinking Water Act use Rule 57 surface water quality values.

Basis: Please refer to the Direct Contact Criteria cited above.

Citation_Location: See information under Direct Contact.

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: 1) Site-specific criteria are developed for exposure pathways and scenarios for which generic methodology has not been developed. Concerns listed below are addressed on a site-specific basis:
 a) Recreational exposures
 b) Contaminated soil runoff to surface water (R299.5728)
 c) Ecological and aesthetic impacts - For screening level ecological risk assessment, the Ecological Screening Level Guidance of the U.S. EPA Reg. 5 RCRA Corrective Action Program (R299.5728 and R299.5732).
 2) Statewide default soil background levels are substituted for the cleanup criterion for a hazardous substance whenever the applicable risk-based criterion is lower than the statewide background level for that particular hazardous substance.
 Note: Drinking water and Safe Drinking Water Act use Rule 57 surface water quality values.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MICHIGAN

Name: Christine Flaga Contact_Title: Chief, Toxicology Unit, Remediation and Redevelo
 Organization: Part 201 (Environmental Remediation) and Part 213 (Leaking Underground Stora
 Address / City: Michigan Department of Environmental Quality, Remediation and Development Division, Constitution Hall, 525 West Allegan St.,
 Email: flagac@michigan.gov Contact_Phone: (517) 373-0160

Regulatory

Groundwater

Direct Contact (Dermal)

Basis: Generic health-based cleanup criteria for groundwater were developed pursuant to Sections 20120a and 21304a of NREPA. The groundwater contact criteria (GCC) represent groundwater concentrations which is protective against adverse health effects resulting from dermal exposures to hazardous substances in groundwater such as could be experienced by workers in subsurface excavations performing short duration, intermittent activity amounting to less than 28 hours per year. Criteria algorithms can be found in the MDEQ Remediation and Redevelopment Division (RRD) Operational Memoranda.

Citation_Location: Part 201 (Environmental Remediation), Part 213 (LUSTs), and Part 201 Rules. Document available at http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846-58095--,00.html specifically R299.5712

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: "1) Where a Safe Drinking Water Standard (SDWS) has been established pursuant to Act No. 399 of the Public Acts of 1976, the SDWS becomes the health-based DWC. 2) Aesthetic DWC have been developed for a limited number of hazardous substances and will be developed for additional hazardous substances, as needed. If the aesthetic DWC is lower than the health-based DWC, then the aesthetic DWC becomes the generic DWC (R299.5706(a)(12). 3) Flammability/explosivity and acute inhalation screening levels (FESLs and AISLs) are available for a number of hazardous substances to address acute inhalation toxicity and flammability or explosivity hazards (R299.5728(1)(d) and (e).
 Notes: ** The RCRA program uses the Part 201 criteria in addition to their _____; *** Surface Water uses Rule 57 water quality values

Discharge to Surface Water

Basis: "Refer to the Soil Standards sheet for the groundwater venting to surface water criteria (GSI)."

Citation_Location: Part 201 (Environmental Remediation), Part 213 (LUSTs), and Part 201 Rules. Document available at http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846-58095--,00.html specifically R299.5722

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: "1) Where a Safe Drinking Water Standard (SDWS) has been established pursuant to Act No. 399 of the Public Acts of 1976, the SDWS becomes the health-based DWC. 2) Aesthetic DWC have been developed for a limited number of hazardous substances and will be developed for additional hazardous substances, as needed. If the aesthetic DWC is lower than the health-based DWC, then the aesthetic DWC becomes the generic DWC (R299.5706(a)(12). 3) Flammability/explosivity and acute inhalation screening levels (FESLs and AISLs) are available for a number of hazardous substances to address acute inhalation toxicity and flammability or explosivity hazards (R299.5728(1)(d) and (e).
 Notes: ** The RCRA program uses the Part 201 criteria in addition to their _____; *** Surface Water uses Rule 57 water quality values

Drinking (Ingestion)

Basis: "Generic health-based cleanup criteria for groundwater were developed pursuant to Sections 20120a and 21304a of NREPA. The drinking water criteria represent groundwater concentrations of hazardous substances in drinking water that are safe for long-term, daily residential consumption and, where information is available, protective against adverse aesthetic impacts. Criteria algorithms can be found in the MDEQ Remediation and Redevelopment Division (RRD) Operational Memoranda. "

Citation_Location: Part 201 (Environmental Remediation), Part 213 (LUSTs), and Part 201 Rules. Document available at http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846-58095--,00.html specifically R299.5710

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: "1) Where a Safe Drinking Water Standard (SDWS) has been established pursuant to Act No. 399 of the Public Acts of 1976, the SDWS becomes the health-based DWC. 2) Aesthetic DWC have been developed for a limited number of hazardous substances and will be developed for additional hazardous substances, as needed. If the aesthetic DWC is lower than the health-based DWC, then the aesthetic DWC becomes the generic DWC (R299.5706(a)(12). 3) Flammability/explosivity and acute inhalation screening levels (FESLs and AISLs) are available for a number of hazardous substances to address acute inhalation toxicity and flammability or explosivity hazards (R299.5728(1)(d) and (e).
 Notes: ** The RCRA program uses the Part 201 criteria in addition to their _____; *** Surface Water uses Rule 57 water quality values

Other

MICHIGAN

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 Organization: Part 201 (Environmental Remediation) and Part 213 (Leaking Underground Stora
 Address / City: Michigan Department of Environmental Quality, Remediation and Development Division, Constitution Hall, 525 West Allegan St.,
 Email: flagac@michigan.gov Contact_Phone: (517) 373-0160

Regulatory

Basis: Vapor Migration to Indoor Air Criteria: The groundwater volatilization to indoor air criteria (GVIIC) address the migration of hazardous substance vapors from groundwater through soil into workplace indoor air spaces. The GVIIC identifies concentrations of a volatile hazardous substance in groundwater that is not expected to impact indoor air above levels that may cause adverse human health effects. Criteria algorithms can be found in the Part 201 Rules (Rule 299.5714)

Citation_Location: Part 201 (Environmental Remediation), Part 213 (LUSTs), and Part 201 Rules. Document available at http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846-58095--,00.html specifically R299.5714

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: "1) Where a Safe Drinking Water Standard (SDWS) has been established pursuant to Act No. 399 of the Public Acts of 1976, the SDWS becomes the health-based DWC. 2) Aesthetic DWC have been developed for a limited number of hazardous substances and will be developed for additional hazardous substances, as needed. If the aesthetic DWC is lower than the health-based DWC, then the aesthetic DWC becomes the generic DWC (R299.5706(a)(12). 3) Flammability/explosivity and acute inhalation screening levels (FESLs and AISLs) are available for a number of hazardous substances to address acute inhalation toxicity and flammability or explosivity hazards (R299.5728(1)(d) and (e).
 Notes: ** The RCRA program uses the Part 201 criteria in addition to their _____; *** Surface Water uses Rule 57 water quality values

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: "Refer to the Soil Standards sheet for the groundwater venting to surface water criteria (GSI). "

Contact_Info:

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: "Refer to the Soil Standards sheet for the groundwater venting to surface water criteria (GSI). "

Contact_Info:

Comments:

Ecological Risk

Basis: No generic clean-up criteria available. Clean-up levels are determined on a site-specific basis.

Citation_Location: Part 201 (Environmental Remediation), Part 213 (LUSTs), and Part 201 Rules. Document available at http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846-58095--,00.html specifically R299.5728.

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments:

Fish Consumption

Basis:

Citation_Location: "Refer to the Soil Standards sheet for the groundwater venting to surface water criteria (GSI). "

Contact_Info:

Comments:

Other

MICHIGAN

Name: Christine Flaga Contact_Title: Chief, Toxicology Unit, Remediation and Redevelo
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 Email: flagac@michigan.gov Contact_Phone: (517) 373-0160

Regulatory

Basis: Hazardous substance-specific values for acute toxicity to aquatic life are listed in the Rule 57 Water Quality Values Spreadsheet (R 323.1057 of Part 4, Toxic Substances, of Part 31, Water Resources Protection, of the NREPA). The Rule 57 Water Quality Values Spreadsheet is available at

Citation_Location: Available at www.michigan.gov/deq select "Water," Water Quality Monitoring, "Assessment of Michigan Waters", Rule 7 Water Quality Values).

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Human Health Risk

Basis:

Citation_Location: Refer to the Soil and Groundwater Standards sheet for the vapor intrusion criteria, SVIIC and GVIIC.

Contact_Info:

Comments: Vapor intrusion of contaminants into a building is addressed by the GVIIC and SVIIC. Soil gas and indoor air screening levels are also available. The user of these criteria and screening levels should refer to guidance documents for application requirements: Technical Standard Document for GVIIC and SVIIC (RRD OP Memo No. 1 Attachment 5, in progress) and Soil Gas Methods (RRD Operational Memorandum No 4 Attachment 4, in progress).

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis: No generic clean-up criteria available. Clean-up levels are determined on a site-specific basis.

Citation_Location: Part 201 (Environmental Remediation), Part 213 (LUSTs), and Part 201 Rules. Document available at http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846-58095--,00.html specifically R299.5730 and R299.5532

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments:

Human Health Risk

Basis: Generic numerical criteria have not been established for contaminated surface water sediments. Sediment contamination is addressed on a site-specific basis.

Citation_Location: Part 201 (Environmental Remediation), Part 213 (LUSTs), and Part 201 Rules. Document available at http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846-58095--,00.html specifically R299.5730 and R299.5532

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MICHIGAN

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 Email: flagac@michigan.gov Contact_Phone: (517) 373-0160

Guidelines

Soil

Direct Contact (Dermal)

Basis: Operational Memoranda 1 - Table 2 and 3. Soil: Residential, Industrial and Commercial I, II, III and IV Part 201 Generic Cleanup Criteria and Screening Levels; Part 213 Tier 1 RBSLs

Citation_Location: Cleanup Criteria available at: http://www.deq.state.mi.us/documents/deq-rrd-OpMemo_1.pdf;
http://www.deq.state.mi.us/documents/deq-rrd-OpMemo_1-Attachment6.pdf

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: 1) Site-specific criteria are developed for exposure pathways and scenarios for which generic methodology has not been developed. Concerns listed below are addressed on a site-specific basis:
 a) Recreational exposures
 b) Contaminated soil runoff to surface water (R299.5728)
 c) Ecological and aesthetic impacts - For screening level ecological risk assessment, the Ecological Screening Level Guidance of the U.S. EPA Reg. 5 RCRA Corrective Action Program (R299.5728 and R299.5732).
 2) Statewide default soil background levels are substituted for the cleanup criterion for a hazardous substance whenever the applicable risk-based criterion is lower than the statewide background level for that particular hazardous substance.
 Note: Drinking water and Safe Drinking Water Act use Rule 57 surface water quality values.

Impact to Groundwater

Basis: Operational Memoranda 1 - Table 2 and 3. Soil: Residential, Industrial and Commercial I, II, III and IV Part 201 Generic Cleanup Criteria and Screening Levels; Part 213 Tier 1 RBSLs; TSD-Attachment TSD-Attachment 9: Generic Groundwater Protection Criteria; TSD: Groundwater Contact Criteria; Operational Memoranda 5 - Groundwater Surface Water Interface Criteria

Citation_Location: Cleanup Criteria available at: http://www.deq.state.mi.us/documents/deq-rrd-OpMemo_1.pdf;
http://www.deq.state.mi.us/documents/deq-rrd-OpMemo_1-Attachment3DrinkingWaterCriteriaTechnicalSupportDocument.pdf
http://www.deq.state.mi.us/documents/deq-rrdOpMemo_1-Attachment9GWPCTechnicalSupportDocument.pdf;
<http://www.deq.state.mi.us/documents/deq-erd-td6.pdf>; <http://www.deq.state.mi.us/documents/deq-erd-td5.pdf>;
http://www.deq.state.mi.us/documents/deq-rrd-OpMemo_5.pdf

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: 1) Site-specific criteria are developed for exposure pathways and scenarios for which generic methodology has not been developed. Concerns listed below are addressed on a site-specific basis:
 a) Recreational exposures
 b) Contaminated soil runoff to surface water (R299.5728)
 c) Ecological and aesthetic impacts - For screening level ecological risk assessment, the Ecological Screening Level Guidance of the U.S. EPA Reg. 5 RCRA Corrective Action Program (R299.5728 and R299.5732).
 2) Statewide default soil background levels are substituted for the cleanup criterion for a hazardous substance whenever the applicable risk-based criterion is lower than the statewide background level for that particular hazardous substance.
 Note: Drinking water and Safe Drinking Water Act use Rule 57 surface water quality values.

Impact to Surface Water

Basis:

Citation_Location: Cleanup Criteria available at: http://www.deq.state.mi.us/documents/deq-rrd-OpMemo_1.pdf

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: 1) Site-specific criteria are developed for exposure pathways and scenarios for which generic methodology has not been developed. Concerns listed below are addressed on a site-specific basis:
 a) Recreational exposures
 b) Contaminated soil runoff to surface water (R299.5728)
 c) Ecological and aesthetic impacts - For screening level ecological risk assessment, the Ecological Screening Level Guidance of the U.S. EPA Reg. 5 RCRA Corrective Action Program (R299.5728 and R299.5732).
 2) Statewide default soil background levels are substituted for the cleanup criterion for a hazardous substance whenever the applicable risk-based criterion is lower than the statewide background level for that particular hazardous substance.
 Note: Drinking water and Safe Drinking Water Act use Rule 57 surface water quality values.

Inhalation

MICHIGAN

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 Email: flagac@michigan.gov Contact_Phone: (517) 373-0160

Guidelines

Basis: Operational Memoranda 1 - Table 2 and 3. Soil: Residential, Industrial and Commercial I, II, III and IV Part 201 Generic Cleanup Criteria and Screening Levels; Part 213 Tier 1 RBLSs; Technical Support Document (TSD): Generic Groundwater and Soil Volatilization to Indoor Air Inhalation Criteria; TSD: Generic Soil Inhalation Criteria for Ambient Air.

Citation_Location: Cleanup Criteria available at: http://www.deq.state.mi.us/documents/deq-rrd-OpMemo_1.pdf;
<http://www.deq.state.mi.us/documents/deq-erd-td5.pdf>; <http://www.deq.state.mi.us/documents/deq-erd-td6.pdf>; <http://www.deq.state.mi.us/documents/deq-erd-td5.pdf>

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: 1) Site-specific criteria are developed for exposure pathways and scenarios for which generic methodology has not been developed. Concerns listed below are addressed on a site-specific basis:
 a) Recreational exposures
 b) Contaminated soil runoff to surface water (R299.5728)
 c) Ecological and aesthetic impacts - For screening level ecological risk assessment, the Ecological Screening Level Guidance of the U.S. EPA Reg. 5 RCRA Corrective Action Program (R299.5728 and R299.5732).
 2) Statewide default soil background levels are substituted for the cleanup criterion for a hazardous substance whenever the applicable risk-based criterion is lower than the statewide background level for that particular hazardous substance.
 Note: Drinking water and Safe Drinking Water Act use Rule 57 surface water quality values.

Basis: Please refer to the Direct Contact Criteria cited above.

Citation_Location: See information under Direct Contact.

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: 1) Site-specific criteria are developed for exposure pathways and scenarios for which generic methodology has not been developed. Concerns listed below are addressed on a site-specific basis:
 a) Recreational exposures
 b) Contaminated soil runoff to surface water (R299.5728)
 c) Ecological and aesthetic impacts - For screening level ecological risk assessment, the Ecological Screening Level Guidance of the U.S. EPA Reg. 5 RCRA Corrective Action Program (R299.5728 and R299.5732).
 2) Statewide default soil background levels are substituted for the cleanup criterion for a hazardous substance whenever the applicable risk-based criterion is lower than the statewide background level for that particular hazardous substance.
 Note: Drinking water and Safe Drinking Water Act use Rule 57 surface water quality values.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Direct Contact (Dermal)

Basis: Operational Memoranda 1 - Table1. Groundwater: Residential, Industrial and Commercial I, II, III and IV Part 201 Generic Cleanup Criteria and Screening Levels; Part 213 Tier 1 RBLSs; TSD: Groundwater Contact Criteria

Citation_Location: Cleanup Criteria available at: http://www.deq.state.mi.us/documents/deq-rrd-OpMemo_1.pdf;
<http://www.deq.state.mi.us/documents/deq-erd-td4.pdf>

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: "1) Where a Safe Drinking Water Standard (SDWS) has been established pursuant to Act No. 399 of the Public Acts of 1976, the SDWS becomes the health-based DWC. 2) Aesthetic DWC have been developed for a limited number of hazardous substances and will be developed for additional hazardous substances, as needed. If the aesthetic DWC is lower than the health-based DWC, then the aesthetic DWC becomes the generic DWC (R299.5706(a)(12). 3) Flammability/explosivity and acute inhalation screening levels (FESLs and AISLs) are available for a number of hazardous substances to address acute inhalation toxicity and flammability or explosivity hazards (R299.5728(1)(d) and (e).
 Notes: ** The RCRA program uses the Part 201 criteria in addition to their _____; *** Surface Water uses Rule 57 water quality values

Discharge to Surface Water

MICHIGAN

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 Email: flagac@michigan.gov Contact_Phone: (517) 373-0160

Guidelines

Basis: Operational Memoranda 1 - Table1. Groundwater: Residential, Industrial and Commercial I, II, III and IV Part 201 Generic Cleanup Criteria and Screening Levels; Part 213 Tier 1 RBSLs; TSD:GSI

Citation_Location: Cleanup Criteria available at: http://www.deq.state.mi.us/documents/deq-rrd-OpMemo_1.pdf;
http://www.deq.state.mi.us/documents/deq-rrd-OpMemo_5.pdf

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: "1) Where a Safe Drinking Water Standard (SDWS) has been established pursuant to Act No. 399 of the Public Acts of 1976, the SDWS becomes the health-based DWC. 2) Aesthetic DWC have been developed for a limited number of hazardous substances and will be developed for additional hazardous substances, as needed. If the aesthetic DWC is lower than the health-based DWC, then the aesthetic DWC becomes the generic DWC (R299.5706(a)(12). 3) Flammability/explosivity and acute inhalation screening levels (FESLs and AISLs) are available for a number of hazardous substances to address acute inhalation toxicity and flammability or explosivity hazards (R299.5728(1)(d) and (e).
 Notes: ** The RCRA program uses the Part 201 criteria in addition to their _____; *** Surface Water uses Rule 57 water quality values

Drinking (Ingestion)

Basis: Operational Memoranda 1 - Table1. Groundwater: Residential, Industrial and Commercial I, II, III and IV Part 201 Generic Cleanup Criteria and Screening Levels; Part 213 Tier 1 RBSLs; TSD - Attachment 3: Drinking Water Criteria (DWC)

Citation_Location: Cleanup Criteria available at: http://www.deq.state.mi.us/documents/deq-rrd-OpMemo_1.pdf;
http://www.deq.state.mi.us/documents/deq-rrd-OpMemo_1-Attachment3DrinkingWaterCriteriaTechnicalSupportDocument.pdf

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: "1) Where a Safe Drinking Water Standard (SDWS) has been established pursuant to Act No. 399 of the Public Acts of 1976, the SDWS becomes the health-based DWC. 2) Aesthetic DWC have been developed for a limited number of hazardous substances and will be developed for additional hazardous substances, as needed. If the aesthetic DWC is lower than the health-based DWC, then the aesthetic DWC becomes the generic DWC (R299.5706(a)(12). 3) Flammability/explosivity and acute inhalation screening levels (FESLs and AISLs) are available for a number of hazardous substances to address acute inhalation toxicity and flammability or explosivity hazards (R299.5728(1)(d) and (e).
 Notes: ** The RCRA program uses the Part 201 criteria in addition to their _____; *** Surface Water uses Rule 57 water quality values

Other

Basis: Operational Memoranda 1 - Table1. Groundwater: Residential, Industrial and Commercial I, II, III and IV Part 201 Generic Cleanup Criteria and Screening Levels; Part 213 Tier 1 RBSLs; TSD: Groundwater and Soil Volatilization to Indoor Air Inhalation Criteria

Citation_Location: Cleanup Criteria available at: http://www.deq.state.mi.us/documents/deq-rrd-OpMemo_1.pdf;
<http://www.deq.state.mi.us/documents/deq-erd-td5.pdf>

Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov

Comments: "1) Where a Safe Drinking Water Standard (SDWS) has been established pursuant to Act No. 399 of the Public Acts of 1976, the SDWS becomes the health-based DWC. 2) Aesthetic DWC have been developed for a limited number of hazardous substances and will be developed for additional hazardous substances, as needed. If the aesthetic DWC is lower than the health-based DWC, then the aesthetic DWC becomes the generic DWC (R299.5706(a)(12). 3) Flammability/explosivity and acute inhalation screening levels (FESLs and AISLs) are available for a number of hazardous substances to address acute inhalation toxicity and flammability or explosivity hazards (R299.5728(1)(d) and (e).
 Notes: ** The RCRA program uses the Part 201 criteria in addition to their _____; *** Surface Water uses Rule 57 water quality values

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: "Refer to the Soil Standards sheet for the groundwater venting to surface water criteria (GSI). "

Contact_Info:

Comments:

MICHIGAN

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Guidelines

Drinking (Ingestion)

Basis:
 Citation_Location: "Refer to the Soil Standards sheet for the groundwater venting to surface water criteria (GSI). "
 Contact_Info:
 Comments:

Fish Consumption

Basis:
 Citation_Location: "Refer to the Soil Standards sheet for the groundwater venting to surface water criteria (GSI). "
 Contact_Info:
 Comments:

Other

Basis: Rule 57 Water Quality Values (R 323.1057 of Part 4, Toxic Substances, of Part 31, Water Resources Protection, of the NREPA).
 Citation_Location: Available at www.michigan.gov/deq select "Water," Water Quality Monitoring, "Assessment of Michigan Waters", Rule 7 Water Quality Values).
 Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Human Health Risk

Basis:
 Citation_Location: Refer to the Soil and Groundwater Standards sheet for the vapor intrusion criteria, SVIIC and GVIIC.
 Contact_Info:
 Comments: Vapor intrusion of contaminants into a building is addressed by the GVIIC and SVIIC. Soil gas and indoor air screening levels are also available. The user of these criteria and screening levels should refer to guidance documents for application requirements: Technical Standard Document for GVIIC and SVIIC (RRD OP Memo No. 1 Attachment 5, in progress) and Soil Gas Methods (RRD Operational Memorandum No 4 Attachment 4, in progress).

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis: No generic clean-up criteria available. Clean-up levels are determined on a site-specific basis.
 Citation_Location: http://www.michigan.gov/deq/0,1607,7-135-3313_3686_3728-11383--,00.html;
 Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov
 Comments:

Human Health Risk

Basis: See Operational Memoranda 4, Attachment 3: Sediments (in progress)
 Citation_Location: Guidelines available at: http://www.michigan.gov/deq/0,1607,7-135-3306_28608---,00.html
 Contact_Info: Christine Flaga, RRD Toxicology Unit (517) 373-0160, flagac@michigan.gov
 Comments:

MICHIGAN

Name: Christine Flaga

Contact_Title: Chief, Toxicology Unit, Remediation and Redevelo

Organization: Part 201 (Environmental Remediation) and Part 213 (Leaking Underground Storang

Address / City: Michigan Department of Environmental Quality, Remediation and Development Division, Constitution Hall, 525 West Allegan St.,

Email: flagac@michigan.gov

Contact_Phone: (517) 373-0160

Guidelines

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MINNESOTA

Name: Doug Beckwith Contact_Title: Remediation Supervisor
Organization: Superfund
Address / City: 525 South Lake Svenue Suite 400, Duluth, 55802
Email: doug.beckwith@pca.state.mn.us Contact_Phone: (218) 529-6267

Regulatory

Groundwater

Discharge to Surface Water

Basis:

Citation_Location: Minnesota Rule Chapter 7050, Which is accessed through: <http://www.leg.state.mn.us/leg/statutes.asp>

Contact_Info: Dan White, 651-296-7237, dan.white@pca.state.mn.us

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: Minnesota's Rules: Parts 4717.7100 to 4717.7800. Which is accessed through: <http://www.leg.state.mn.us/leg/statutes.asp>

Contact_Info: Helen Goeden, 651-201-4904, helen.goeden@health.state.mn.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: Minnesota Rule Chapter 7050, Which is accessed through: <http://www.leg.state.mn.us/leg/statutes.asp>

Contact_Info: Dan White, 651-296-7237, dan.white@pca.state.mn.us

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: Minnesota Rule Chapter 7050, Which is accessed through: <http://www.leg.state.mn.us/leg/statutes.asp>

Contact_Info: Dan White, 651-296-7237, dan.white@pca.state.mn.us

Comments:

Ecological Risk

Basis:

Citation_Location: Minnesota Rule Chapter 7050, Which is accessed through: <http://www.leg.state.mn.us/leg/statutes.asp>

Contact_Info: Dan White, 651-296-7237, dan.white@pca.state.mn.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MINNESOTA

Name: Doug Beckwith Contact_Title: Remediation Supervisor
 Organization: Superfund
 Address / City: 525 South Lake Svenue Suite 400, Duluth, 55802
 Email: doug.beckwith@pca.state.mn.us Contact_Phone: (218) 529-6267

Guidelines

Soil

Direct Contact (Dermal)

Basis: U.S. EPA Risk Assessment Guidance for Superfund (EPA RAGS), U.S. EPA
http://www.epa.gov/oswer/riskassessment/risk_superfund.htm
 Citation_Location: Risk-based guidance for the soil-human health pathway document vol.2 available at:
http://www.pca.state.mn.us/cleanup/pubs/srv3_99.pdf
 Contact_Info: Laura Solem, 218-529-6254, laura.solem@pca.state.mn.us
 Comments:

Ecological Risk

Basis:
 Citation_Location: None, soil reference values concerning ecological issues are calculated on a site specific basis.
 Contact_Info: Steve Hennis, 651-296-7830, steven.hennes@pca.state.mn.us
 Comments:

Impact to Groundwater

Basis: U.S. EPA Risk Assessment Guidance for Superfund (EPA RAGS), U.S. EPA
http://www.epa.gov/oswer/riskassessment/risk_superfund.htm
 Citation_Location: Risk-based guidance for the soil leaching pathway available at: <http://www.pca.state.mn.us/cleanup/pubs/user0598.pdf>
 Contact_Info: Rick Jolley, 651-297-5573, rick.jolley@pca.state.mn.us
 Comments:

Impact to Surface Water

Basis: U.S. EPA Risk Assessment Guidance for Superfund (EPA RAGS), U.S. EPA
http://www.epa.gov/oswer/riskassessment/risk_superfund.htm
 Citation_Location: Risk-based guidance for the soil leaching pathway available at: <http://www.pca.state.mn.us/cleanup/pubs/user0598.pdf>
 Contact_Info: Rick Jolley, 651-297-5573, rick.jolley@pca.state.mn.us
 Comments:

Inhalation

Basis: U.S. EPA Risk Assessment Guidance for Superfund (EPA RAGS), U.S. EPA
http://www.epa.gov/oswer/riskassessment/risk_superfund.htm
 Citation_Location: Risk-based guidance for the soil-human health pathway document vol.2 available at:
http://www.pca.state.mn.us/cleanup/pubs/srv3_99.pdf
 Contact_Info: Laura Solem, 218-529-6254, laura.solem@pca.state.mn.us
 Comments:

Basis: U.S. EPA, Risk Assessment Guidance for Superfund, U.S. EPA http://www.epa.gov/oswer/riskassessment/risk_superfund.htm
 Citation_Location: Risk-based guidance for the soil-human health pathway document vol.2 available at:
http://www.pca.state.mn.us/cleanup/pubs/srv3_99.pdf
 Contact_Info: Laura Solem, 218-529-6254, laura.solem@pca.state.mn.us
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MINNESOTA

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Organization: Superfund
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Email: doug.beckwith@pca.state.mn.us Contact_Phone: (218) 529-6267

Guidelines

Groundwater

Discharge to Surface Water

Basis:

Citation_Location: <http://www.pca.state.mn.us/water/standards/index.html>

Contact_Info: Dan White, 651-296-7237, dan.white@pca.state.mn.us

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: <http://www.health.state.mn.us/divs/eh/groundwater/index.html>

Contact_Info: Helen Goeden, 651-201-4904, helen.goeden@health.state.mn.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: <http://www.pca.state.mn.us/water/standards/index.html>

Contact_Info: Dan White, 651-296-7237, dan.white@pca.state.mn.us

Comments:

Drinking (Ingestion)

Basis: U.S. EPA Drinking Water Standards and Health Advisories, <http://www.epa.gov/waterscience/criteria/drinking/>

Citation_Location: <http://www.pca.state.mn.us/water/standards/index.html>

Contact_Info: Dan White, 651-296-7237, dan.white@pca.state.mn.us

Comments:

Ecological Risk

Basis:

Citation_Location: <http://www.pca.state.mn.us/water/standards/index.html>

Contact_Info: Dan White, 651-296-7237, dan.white@pca.state.mn.us

Comments:

Fish Consumption

Basis:

Citation_Location: No formal guidelines. May refer to: <http://www.pca.state.mn.us/water/standards/index.html>

Contact_Info: Dan White, 651-296-7237, dan.white@pca.state.mn.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MISSOURI

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Organization: Hazardous Waste Program/Superfund Section
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Email: linda.vogt@dnr.mo.gov Contact_Phone: (573) 751-6998

Regulatory

Soil

Impact to Surface Water

Basis: Missouri State Water Quality Standards
Citation_Location: <http://www.sos.mo.gov/adrules/csr/current/10csr/10c20-7a.pdf>
Contact_Info: Division of Environmental Quality,
Water Protection Program
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Discharge to Surface Water

Basis: Missouri State Water Quality Standards
Citation_Location: <http://www.sos.mo.gov/adrules/csr/current/10csr/10c20-7a.pdf>
Contact_Info: Division of Environmental Quality,
Water Protection Program
Comments:

Drinking (Ingestion)

Basis:
Citation_Location: Clean Water Act, Missouri Water Quality Standards
Contact_Info: Public Drinking Water Program
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MISSOURI

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 Email: linda.vogt@dnr.mo.gov Contact_Phone: (573) 751-6998

Guidelines

Soil

Direct Contact (Dermal)

Basis: EPA Region 9 Preliminary Remediation Goals (PRGs), October 2004. <http://www.epa.gov/region09/waste/sfund/prg/>. Cancer risk 1x10⁻⁶, non-cancer risk HQ=1
 Citation_Location: Superfund Chemical Data Matrix (SCDM) <http://www.epa.gov/superfund/sites/npl/hrsres/tools/scdm.htm>. Cancer risk 1x10⁻⁶, non-cancer risk HQ=1
 Contact_Info: Missouri Risk-Based Corrective Action (MRBCA) Technical Guidance (2005 Draft). <http://www.dnr.mo.gov/env/hwp/mrbca/workgroup.htm>. Cancer risk 1x10⁻⁵, noncancer risk HQ=1
 Comments:

Ecological Risk

Basis: Tiered approach to qualitative and/or quantitative eco risk evaluation based on checklists.
 Citation_Location: MRBCA
 Contact_Info: Chris Cady
 Comments:

Impact to Groundwater

Basis: Missouri Risk-Based Corrective Action (MRBCA) Technical Guidance (2005 Draft). <http://www.dnr.mo.gov/env/hwp/mrbca/workgroup.htm>. Cancer risk 1x10⁻⁵, noncancer risk HQ=1. Soil levels protective of leaching to groundwater calculated from risk-based groundwater stds.
 Citation_Location: EPA Region 9 Preliminary Remediation Goals (PRGs), October 2004. <http://www.epa.gov/region09/waste/sfund/prg/>. Cancer risk 1x10⁻⁶, non-cancer risk HQ=1
 Contact_Info:
 Comments:

Impact to Surface Water

Basis: Soil or sediment contam. levels protective of surface water would be determined based on surface water quality std. Regulations
 Citation_Location: MRBCA
 Contact_Info: Chris Cady
 Comments:

Ingestion

Basis: Missouri Risk-Based Corrective Action (MRBCA) Technical Guidance (2005 Draft). <http://www.dnr.mo.gov/env/hwp/mrbca/workgroup.htm>. Cancer risk 1x10⁻⁵, noncancer risk HQ=1
 Citation_Location: EPA Region 9 Preliminary Remediation Goals (PRGs), October 2004. <http://www.epa.gov/region09/waste/sfund/prg/>. Cancer risk 1x10⁻⁶, non-cancer risk HQ=1
 Contact_Info:
 Comments:

Inhalation

Basis: Missouri Risk-Based Corrective Action (MRBCA) Technical Guidance (2005 Draft). <http://www.dnr.mo.gov/env/hwp/mrbca/workgroup.htm>. Cancer risk 1x10⁻⁵, noncancer risk HQ=1
 Citation_Location: EPA Region 9 Preliminary Remediation Goals (PRGs), October 2004. <http://www.epa.gov/region09/waste/sfund/prg/>. Cancer risk 1x10⁻⁶, non-cancer risk HQ=1
 Contact_Info:
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MISSOURI

Name: Linda Vogt Contact_Title: Environmental Specialist
 Organization: Hazardous Waste Program/Superfund Section
 Address / City: P.O. Box 176, Jefferson City, 65102
 Email: linda.vogt@dnr.mo.gov Contact_Phone: (573) 751-6998

Guidelines

Groundwater

Direct Contact (Dermal)

Basis: Missouri Risk-Based Corrective Action (MRBCA) Technical Guidance (2005 Draft).
<http://www.dnr.mo.gov/env/hwp/mrbca/workgroup.htm>. Cancer risk 1x10-5, noncancer risk HQ=1
 Citation_Location: EPA Region 9 Preliminary Remediation Goals (PRGs), October 2004. <http://www.epa.gov/region09/waste/sfund/prg/>. Cancer risk 1x10-6, non-cancer risk HQ=1
 Contact_Info:
 Comments:

Discharge to Surface Water

Basis: Guidance requires adherence to regs for any site being cleaned up under MRBCA
 Citation_Location: MRBCA
 Contact_Info:
 Comments:

Drinking (Ingestion)

Basis: EPA Region 9 Preliminary Remediation Goals (PRGs), October 2004. <http://www.epa.gov/region09/waste/sfund/prg/>. Cancer risk 1x10-6, non-cancer risk HQ=1
 Citation_Location: Superfund Chemical Data Matrix (SCDM) <http://www.epa.gov/superfund/sites/npl/hrsres/tools/scdm.htm>. Cancer risk 1x10-6, non-cancer risk HQ=1
 Contact_Info: Missouri Risk-Based Corrective Action (MRBCA) Technical Guidance (2005 Draft).
<http://www.dnr.mo.gov/env/hwp/mrbca/workgroup.htm>. Cancer risk 1x10-5, noncancer risk HQ=1
 Comments:

Other

Basis: Missouri Risk-Based Corrective Action (MRBCA) Technical Guidance (2005 Draft).
<http://www.dnr.mo.gov/env/hwp/mrbca/workgroup.htm>. Cancer risk 1x10-5, noncancer risk HQ=1
 Citation_Location: EPA Region 9 Preliminary Remediation Goals (PRGs), October 2004. <http://www.epa.gov/region09/waste/sfund/prg/>. Cancer risk 1x10-6, non-cancer risk HQ=1
 Contact_Info:
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Drinking (Ingestion)

Basis: Missouri Risk-Based Corrective Action (MRBCA) Technical Guidance (2005 Draft).
<http://www.dnr.mo.gov/env/hwp/mrbca/workgroup.htm>. Cancer risk 1x10-5, noncancer risk HQ=1
 Citation_Location: EPA Region 9 Preliminary Remediation Goals (PRGs), October 2004. <http://www.epa.gov/region09/waste/sfund/prg/>. Cancer risk 1x10-6, non-cancer risk HQ=1
 Contact_Info:
 Comments:

Ecological Risk

MISSOURI

Name: Linda Vogt Contact_Title: Environmental Specialist
 Organization: Hazardous Waste Program/Superfund Section
 Address / City: P.O. Box 176, Jefferson City, 65102
 Email: linda.vogt@dnr.mo.gov Contact_Phone: (573) 751-6998

Guidelines

Basis:

Citation_Location: Superfund Chemical Data Matrix (SCDM) <http://www.epa.gov/superfund/sites/npl/hrsres/tools/scdm.htm>. Cancer risk 1x10-6, non-cancer risk HQ=1

Contact_Info:

Comments:

Fish Consumption

Basis:

Citation_Location: Superfund Chemical Data Matrix (SCDM) <http://www.epa.gov/superfund/sites/npl/hrsres/tools/scdm.htm>. Cancer risk 1x10-6, non-cancer risk HQ=1

Contact_Info:

Comments:

Other

Basis: Missouri Risk-Based Corrective Action (MRBCA) Technical Guidance (2005 Draft). <http://www.dnr.mo.gov/env/hwp/mrbca/workgroup.htm>. Cancer risk 1x10-5, noncancer risk HQ=1

Citation_Location: EPA Region 9 Preliminary Remediation Goals (PRGs), October 2004. <http://www.epa.gov/region09/waste/sfund/prg/>. Cancer risk 1x10-6, non-cancer risk HQ=1

Contact_Info:

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis: Missouri Risk-Based Corrective Action (MRBCA) Technical Guidance (2005 Draft). <http://www.dnr.mo.gov/env/hwp/mrbca/workgroup.htm>. Cancer risk 1x10-5, noncancer risk HQ=1

Citation_Location: U.S. EPA Users Guide for Evaluating Subsurface Vapor Intrusion into Buildings, http://www.epa.gov/oswer/riskassessment/airmodel/pdf/2004_0222_3phase_users_guide.pdf. Feb 2004. Based on Johnson Ettinger Model; risk levels chosen site specifically.

Contact_Info: EPA Region 9 Preliminary Remediation Goals (PRGs), October 2004. <http://www.epa.gov/region09/waste/sfund/prg/>. Cancer risk 1x10-6, non-cancer risk HQ=1

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis: EPA Consensus-based freshwater sediment quality guidelines. June 2000. EPA 905/R-00/007

Citation_Location: U.S. EPA Ecotox Thresholds, EPA 540/F-95/038, January 1996. <http://www.dnr.mo.gov/env/hwp/mrbca/workgroup.htm>.

Contact_Info:

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MISSISSIPPI

Name: Jere "Trey" Hess Contact_Title: Brownfields Program Coordinator
Organization: Groundwater Assessment and Remediation Division
Address / City:
Email: Trey_Hess@deq.state.ms.us Contact_Phone: (601) 961-5654

Regulatory

Soil

Inhalation

Basis: Subpart II - Brownfield Risk Evaluation Procedures
Citation_Location:
Contact_Info: [http://www.deq.state.ms.us/MDEQ.nsf/pdf/GARD_brownfieldrisk/\\$File/Proced.pdf?OpenElement](http://www.deq.state.ms.us/MDEQ.nsf/pdf/GARD_brownfieldrisk/$File/Proced.pdf?OpenElement)
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Discharge to Surface Water

Basis: Subpart II - Brownfield Risk Evaluation Procedures
Citation_Location:
Contact_Info: [http://www.deq.state.ms.us/MDEQ.nsf/pdf/GARD_brownfieldrisk/\\$File/Proced.pdf?OpenElement](http://www.deq.state.ms.us/MDEQ.nsf/pdf/GARD_brownfieldrisk/$File/Proced.pdf?OpenElement)
Comments:

Drinking (Ingestion)

Basis: Subpart II - Brownfield Risk Evaluation Procedures
Citation_Location:
Contact_Info: [http://www.deq.state.ms.us/MDEQ.nsf/pdf/GARD_brownfieldrisk/\\$File/Proced.pdf?OpenElement](http://www.deq.state.ms.us/MDEQ.nsf/pdf/GARD_brownfieldrisk/$File/Proced.pdf?OpenElement)
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Other

Basis: State Water Quality Standards
Citation_Location:
Contact_Info: Surface Water Division - Randy Reed 601-961-5171
Comments: Our Surface Water Division has Water Quality Regulations and Standards
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MISSISSIPPI

Name: Jere "Trey" Hess Contact_Title: Brownfields Program Coordinator
Organization: Groundwater Assessment and Remediation Division
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Email: Trey_Hess@deq.state.ms.us Contact_Phone: (601) 961-5654

Guidelines

Soil

Ingestion

Basis: Subpart II - Brownfield Risk Evaluation Procedures
Citation_Location:
Contact_Info: [http://www.deq.state.ms.us/MDEQ.nsf/pdf/GARD_brownfieldrisk/\\$File/Proced.pdf?OpenElement](http://www.deq.state.ms.us/MDEQ.nsf/pdf/GARD_brownfieldrisk/$File/Proced.pdf?OpenElement)
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Human Health Risk

Basis: U.S. EPA Users Guide for Evaluating Subsurface Vapor Intrusion into Buildings, http://www.epa.gov/oswer/riskassessment/airmodel/pdf/2004_0222_3phase_users_guide.pdf. February 2004. Based on Johnson Ettinger Model; risk levels are chosen site specifically.
Citation_Location:
Contact_Info:
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis: U.S. EPA, Ecological Risk Assessment Guidance for Superfund, <http://www.epa.gov/oswer/riskassessment/ecorisk/ecorisk.htm>
Citation_Location:
Contact_Info:
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

MONTANA

Name: Aimee Reynolds Contact_Title: Voluntary Cleanup Coordinator
Organization: Hazardous Waste Site Cleanup Bureau
Address / City:
Email: areynolds@mt.gov Contact_Phone: (406) 841-5065

Regulatory

Soil

Inhalation

Basis:
Citation_Location: Clean Air Act ambient air standards
Contact_Info:
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other Groundwater Remediation

Groundwater

Discharge to Surface Water

Basis: 1 x 10⁻⁵ except Arsenic 1 x 10⁻³ & HQ of 1
Citation_Location: Montana Numeric Water Quality Standards - Jan. 2004
Contact_Info: Chris Levine
Comments:

Drinking (Ingestion)

Basis: 1 x 10⁻⁵ except Arsenic 1 x 10⁻³ & HQ of 1
Citation_Location: Montana Numeric Water Quality Standards - Jan. 2004
Contact_Info: Chris Levine
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other Groundwater Remediation

Surface Water

Drinking (Ingestion)

Basis: 1 x 10⁻⁵ except Arsenic 1 x 10⁻³ & HQ of 1
Citation_Location: Montana Numeric Water Quality Standards - Jan. 2004
Contact_Info: Chris Levine
Comments:

Ecological Risk

Basis: 1 x 10⁻⁵ except Arsenic 1 x 10⁻³ & HQ of 1
Citation_Location: Montana Numeric Water Quality Standards - Jan. 2004
Contact_Info: Chris Levine
Comments:

Fish Consumption

Basis: 1 x 10⁻⁵ except Arsenic 1 x 10⁻³ & HQ of 1
Citation_Location: Montana Numeric Water Quality Standards - Jan. 2004
Contact_Info: Chris Levine
Comments:

MONTANA

Name: Aimee Reynolds

Contact_Title: Voluntary Cleanup Coordinator

Organization: Hazardous Waste Site Cleanup Bureau

Address / City:

Email: areynolds@mt.gov

Contact_Phone: (406) 841-5065

Regulatory

- | | | | | | |
|--|--|---|---|---|---|
| <input checked="" type="checkbox"/> RCRA_CA | <input checked="" type="checkbox"/> Brownfields | <input type="checkbox"/> DrinkingWater | <input type="checkbox"/> SurfaceWater | <input type="checkbox"/> AirQuality (Clean Air Act) | |
| <input checked="" type="checkbox"/> SolidWsteLndfill | <input checked="" type="checkbox"/> VoluntaryClnUp | <input type="checkbox"/> SafeDrinkingWaterAct | <input checked="" type="checkbox"/> UST | <input type="checkbox"/> WetlandsProgram | <input checked="" type="checkbox"/> Other Groundwater Remediation |

MONTANA

Name: Aimee Reynolds Contact_Title: Voluntary Cleanup Coordinator
 Organization: Hazardous Waste Site Cleanup Bureau
 Address / City:
 Email: areynolds@mt.gov Contact_Phone: (406) 841-5065

Guidelines

Soil

Direct Contact (Dermal)

Basis: 1 x10-6 & HQ of 1/10
 Citation_Location: Region 9 Preliminary Remediation Goals
 Contact_Info: Aimee Reynolds
 Comments:

Basis: 1 x 10-6 & HQ of 1/8
 Citation_Location: Montana Risk-Based Corrective Action for Petroleum Releases - October 2003
 Contact_Info: Aimee Reynolds
 Comments:

Impact to Groundwater

Basis: DAF of 10
 Citation_Location: EPA Soil Screening Levels for migration to groundwater
 Contact_Info: Aimee Reynolds
 Comments:

Basis: 1 x 10-6 & HQ of 1/8
 Citation_Location: Montana Risk-Based Corrective Action for Petroleum Releases - October 2003
 Contact_Info: Aimee Reynolds
 Comments:

Ingestion

Basis: 1 x 10-6 & HQ of 1/10
 Citation_Location: Region 9 Preliminary Remediation Goals
 Contact_Info: Aimee Reynolds
 Comments:

Basis: 1 x 10-6 & HQ of 1/8
 Citation_Location: Montana Risk-Based Corrective Action for Petroleum Releases - October 2003
 Contact_Info: Aimee Reynolds
 Comments:

Inhalation

Basis: 1 x 10-6 & HQ of 1/8
 Citation_Location: Montana Risk-Based Corrective Action for Petroleum Releases - October 2003
 Contact_Info: Aimee Reynolds
 Comments:

Basis: 1 x10-6 & HQ of 1/10
 Citation_Location: Region 9 Preliminary Remediation Goals
 Contact_Info: Aimee Reynolds
 Comments:

MONTANA

Name: Aimee Reynolds Contact_Title: Voluntary Cleanup Coordinator
Organization: Hazardous Waste Site Cleanup Bureau
Address / City:
Email: areynolds@mt.gov Contact_Phone: (406) 841-5065

Guidelines

Basis: 1 x10-6 & HQ of 1
Citation_Location: EPA Vapor Intrusion to Indoor Air Guidance
Contact_Info: Aimee Reynolds
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other Groundwater Remediation

Groundwater

Drinking (Ingestion)

Basis: 1 x 10-6 & HQ of 1/8
Citation_Location: Montana Risk-Based Corrective Action for Petroleum Releases - October 2003
Contact_Info: Aimee Reynolds
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other Groundwater Remediation

Vapor Intrusion

Inhalation

Basis: 1 x 10-6 & HQ of 1
Citation_Location: EPA Vapor Intrusion to Indoor Air Guidance
Contact_Info: Aimee Reynolds
Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other Groundwater Remediation

NORTH DAKOTA

Name: Curt Erickson Contact_Title: Program Manager
 Organization: Hazardous Waste Program
 Address / City: 918 East Divide Ave, Bismarck, 585011947
 Email: cerickso@state.nd.us Contact_Phone: (701) 328-5166

Regulatory

Soil

Ingestion

Basis: 400 ppm residential; 1200 ppm non-residential.
 Citation_Location: Chapter 33-15-24 NDAC Standards for Lead-Based Paint Activities. Available at www.legis.nd.gov/information/acdata/pdf/33-15-24.pdf
 Contact_Info: Sandra Washek, (701) 328-5190, swashek@state.nd.us
 Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other Groundwater Program

Groundwater

Drinking (Ingestion)

Basis:
 Citation_Location: The drinking water maximum contaminant levels are found in Chapter 33-17-01 NDAC Public Water Supply Systems in North Dakota and are available at: www.legis.nd.gov/information/acdata/pdf/33-17-01.pdf
 Contact_Info:
 Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Ecological Risk

Basis:
 Citation_Location: Maximum limits for substances or characteristics of class I streams as well as water quality criteria priority pollutants levels are found in Chapter 33-16-02.1 NDAC Standards of Quality for Water of the State and are available at: <http://www.legis.nd.gov/information/acdata/pdf/33-16-02.1.pdf>
 Contact_Info:
 Comments:

Ingestion

Basis:
 Citation_Location: The drinking water maximum contaminant levels are found in Chapter 33-17-01 NDAC Public Water Supply Systems in North Dakota and are available at: www.legis.nd.gov/information/acdata/pdf/33-17-01.pdf
 Contact_Info:
 Comments:
 RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

NORTH DAKOTA

Name: Curt Erickson Contact_Title: Program Manager
Organization: Hazardous Waste Program
Address / City: 918 East Divide Ave, Bismarck, 585011947
Email: cerickso@state.nd.us Contact_Phone: (701) 328-5166

Not Specified

Soil

Ecological Risk

Basis:

Citation_Location: None. Where applicable, ecological risk-based soil remediation standards will be developed on a site-specific basis using US EPA Guidance for Developing Ecological Soil Screening Levels revised Feb 2005. Available at: www.epa.gov/oswer/riskassessment/ecorisk/ecossl.htm

Contact_Info:

Comments:

Impact to Surface Water

Basis:

Citation_Location: No "generic" numeric standards. Where applicable, soil impact to surface waters are developed on a site-specific basis.

Contact_Info: Gary Bracht, (701) 328-5227, gbracht@state.nd.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other Groundwater Program

Vapor Intrusion

Human Health Risk

Basis:

Citation_Location: "None. Where applicable, vapor intrusion to indoor air pathways will be assessed using: US EPA Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance) November 2002, EPA530-D-02-004. Available at: www.epa.gov/correctiveaction/eis/vapor/complete.pdf"

Contact_Info:

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

NORTH DAKOTA

Name: Curt Erickson Contact_Title: Program Manager
 Organization: Hazardous Waste Program
 Address / City: 918 East Divide Ave, Bismarck, 585011947
 Email: cerickso@state.nd.us Contact_Phone: (701) 328-5166

Guidelines

Soil

Direct Contact (Dermal)

Basis:

Citation_Location: None. Where applicable, standards will be developed on a site-specific basis using US EPA Soil Screening Guidance July 1996. Available at: www.epa.gov/superfund/resources/soil/#user

Contact_Info:

Comments:

Impact to Groundwater

Basis: Action levels have been set for petroleum compounds and drinking water maximum contaminant levels may also be used as action levels. Final standards for cleanup are determined on a case-by-case basis, depending on the contaminant involved and potential for risk to human health and the environment.

Citation_Location: Guidelines For Cleanup Action Levels For Gasoline and Other Petroleum Hydrocarbons available at: www.ndhealth.gov/wm

Contact_Info: Gary Berreth, (701) 328-5167, gberreth@state.nd.us

Comments:

Inhalation

Basis:

Citation_Location: None. Where applicable, standards will be developed on a site-specific basis using US EPA Soil Screening Guidance July 1996. Available at: www.epa.gov/superfund/resources/soil/#user

Contact_Info:

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other Groundwater Program

Groundwater

Discharge to Surface Water

Basis:

Citation_Location: Action levels have been set for petroleum compounds, drinking water maximum contaminant levels and maximum limits for substances or characteristics of class I streams as well as water quality criteria priority pollutants levels may also be used as action levels. Final standards for cleanup are determined on a case-by-case basis, depending on the contaminant involved and potential for risk to human health and the environment.

Contact_Info: Kris Roberts, (701) 328-5236, kroberts@state.nd.us

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: Drinking water maximum contaminant levels may be used as action levels. Final standards for cleanup are determined on a case-by-case basis, depending on the contaminant involved and potential for risk to human health and the environment.

Contact_Info: Kris Roberts, (701) 328-5236, kroberts@state.nd.us

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

NORTH DAKOTA

Name: Curt Erickson Contact_Title: Program Manager
Organization: Hazardous Waste Program
Address / City: 918 East Divide Ave, Bismarck, 585011947
Email: cerickso@state.nd.us Contact_Phone: (701) 328-5166

Guidelines

Surface Water

Ecological Risk

Basis:

Citation_Location: Maximum limits for substances or characteristics of class I streams as well as water quality criteria priority pollutants levels may also be used as action levels. Final standards for cleanup are determined on a case-by-case basis, depending on the contaminant involved and potential for risk to human health and the environment.

Contact_Info:

Comments:

Fish Consumption

Basis:

Citation_Location: A Guide to Safe Eating of Fish Caught in North Dakota (July 2003). Available at: www.health.state.nd.us/wq/sw/Z7_Publications/B_2003FishAdvisory.pdf

Contact_Info: Mike Ell, (701) 328-5214, mell@state.nd.us

Comments:

Ingestion

Basis:

Citation_Location: Drinking water maximum contaminant levels may be used as action levels. Final standards for cleanup are determined on a case-by-case basis, depending on the contaminant involved and potential for risk to human health and the environment.

Contact_Info: Kris Roberts, (701) 328-5236, kroberts@state.nd.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

NEBRASKA

Name: Jim Borovich Contact_Title: Geologist
 Organization: Nebraska Department of Environmental Quality, Remediation Section/Voluntary CI
 Address / City: P.O. Box 98922, Lincoln, 685098922
 Email: jim.borovich@ndeq.state.ne.us Contact_Phone: (402) 471-2223

Regulatory

Soil

Impact to Groundwater

Basis: Title 118 specifies standards for groundwater based on the Maximum Contaminant Level (MCL) (or a mechanism to determine appropriate groundwater cleanup levels in the absence of an MCL). It does not specify cleanup standards for soil, but includes overlying soils in defining a remedial action class (RAC). Any remediation goal (RG) determined for soils impacting groundwater would ultimately be derived from the groundwater MCL (see also "Guidelines" for this pathway).

Citation_Location: Nebraska Title 118 - Ground Water Quality Standards and Use Classification, available at <http://www.deq.state.ne.us>

Contact_Info: Marty Link, 402/471-4270, marty.link@ndeq.state.ne.us

Comments: NDEQ's Petroleum Remediation Section uses a Risk-Based Corrective Action (RBCA) process specific for petroleum releases that provides screening levels and site-specific target levels for several exposure pathways under different land use and groundwater use scenarios. These levels may differ significantly from the Remediation Goals (RGs) discussed above for individual chemicals of concern common to both programs.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Discharge to Surface Water

Basis:

Citation_Location: Nebraska Title 117 - Nebraska Surface Water Quality Standards, available at: <http://www.deq.state.ne.us>

Contact_Info: John Bender, 402/471-4201, john.bender@ndeq.state.ne.us

Comments: "Other*" exposure pathway provided for groundwater is inhalation of vapors from contaminated groundwater via a showering-type scenario. In terms of overall exposure pathways involving groundwater, in the absence of an MCL, a final RG for a particular chemical will be based on the most conservative RG calculated for the ingestion, inhalation and dermal individual exposure pathways.

Drinking (Ingestion)

Basis: Title 118 specifies standards for groundwater based on the Maximum Contaminant Level (MCL) or a mechanism to determine appropriate groundwater cleanup levels in the absence of an MCL.

Citation_Location: Nebraska Title 118 - Ground Water Quality Standards and Use Classification, available at <http://www.deq.state.ne.us>

Contact_Info: Marty Link, 402/471-4270, marty.link@ndeq.state.ne.us

Comments: "Other*" exposure pathway provided for groundwater is inhalation of vapors from contaminated groundwater via a showering-type scenario. In terms of overall exposure pathways involving groundwater, in the absence of an MCL, a final RG for a particular chemical will be based on the most conservative RG calculated for the ingestion, inhalation and dermal individual exposure pathways.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Drinking (Ingestion)

Basis: Surface water standards for drinking water would follow Safe Drinking Water Act MCLs.

Citation_Location: Nebraska Title 117 - Nebraska Surface Water Quality Standards, available at: <http://www.deq.state.ne.us>

Contact_Info: John Bender, 402/471-4201, john.bender@ndeq.state.ne.us

Comments:

Ecological Risk

NEBRASKA

Name: Jim Borovich

Contact_Title: Geologist

Organization: Nebraska Department of Environmental Quality, Remediation Section/Voluntary CI

Address / City: P.O. Box 98922, Lincoln, 685098922

Email: jim.borovich@ndeq.state.ne.us

Contact_Phone: (402) 471-2223

Regulatory

Basis: Standards for acute criteria provided in Chapter 4 of Title 117 generally represent threats to aquatic life, as opposed to human consumption of aquatic life.

Citation_Location: Nebraska Title 117 - Nebraska Surface Water Quality Standards, available at: <http://www.deq.state.ne.us>

Contact_Info: John Bender, 402/471-4201, john.bender@ndeq.state.ne.us

Comments:

Fish Consumption

Basis: Standards for chronic criteria provided in Chapter 4 of Title 117 generally represent threats to human consumption of aquatic life.

Citation_Location: Nebraska Title 117 - Nebraska Surface Water Quality Standards, available at: <http://www.deq.state.ne.us>

Contact_Info: John Bender, 402/471-4201, john.bender@ndeq.state.ne.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

NEBRASKA

Name: Jim Borovich Contact_Title: Geologist
 Organization: Nebraska Department of Environmental Quality, Remediation Section/Voluntary CI
 Address / City: P.O. Box 98922, Lincoln, 685098922
 Email: jim.borovich@ndeq.state.ne.us Contact_Phone: (402) 471-2223

Guidelines

Soil

Direct Contact (Dermal)

Basis: Remediation goals (RGs) are developed for residential and industrial land uses. For residential land use, the cancer risk basis is 1E-06 for individual chemical carcinogenic risks and 1E-05 for cumulative carcinogenic effects for multiple chemical risks; for noncarcinogenic hazards, a HQ=0.25 is used for individual chemical noncarcinogenic effects and a HI=1.0 for target organ-specific for multiple chemical noncarcinogenic hazards. For industrial land use scenarios, the cancer risk basis is 1E-05 for individual carcinogens and 1E-04 for cumulative carcinogenic hazards; for noncarcinogenic hazards, a HQ=1.0 is used for individual chemicals and a HI=1.0 is used for target organ-specific multiple chemical hazards.

Citation_Location: Nebraska Voluntary Cleanup Program Guidance & Protocol for VCP Remediation Goals Lookup Tables, available at: <http://www.deq.state.ne.us>

Contact_Info: Jim Borovich, 402/471-2223, jim.borovich@ndeq.state.ne.us

Comments: NDEQ's Petroleum Remediation Section uses a Risk-Based Corrective Action (RBCA) process specific for petroleum releases that provides screening levels and site-specific target levels for several exposure pathways under different land use and groundwater use scenarios. These levels may differ significantly from the Remediation Goals (RGs) discussed above for individual chemicals of concern common to both programs.

Ecological Risk

Basis: NDEQ's VCP guidance cited in #1 calls for the user to answer a series of questions to screen for ecological risk concerns. Should this screening indicate a potential ecological risk, the user would need to conduct an ecological risk assessment in accordance with EPA guidance.

Citation_Location: NDEQ's Protocol for VCP Remediation Goals Lookup Tables, available at: <http://www.deq.state.ne.us>; also EPA's Ecological Risk Assessment Guidance for Superfund (EPA 1997).

Contact_Info: Jim Borovich, 402/471-2223, jim.borovich@ndeq.state.ne.us

Comments: NDEQ's Petroleum Remediation Section uses a Risk-Based Corrective Action (RBCA) process specific for petroleum releases that provides screening levels and site-specific target levels for several exposure pathways under different land use and groundwater use scenarios. These levels may differ significantly from the Remediation Goals (RGs) discussed above for individual chemicals of concern common to both programs.

Impact to Groundwater

Basis: RGs for soils related to this pathway would be derived from the groundwater MCL (or some other groundwater standard in the absence of an MCL), multiplied by an assumed dilution attenuation factor of 20x and converted to a representative soil concentration.

Citation_Location: Nebraska Voluntary Cleanup Program Guidance & Protocol for VCP Remediation Goals Lookup Tables, available at: <http://www.deq.state.ne.us>

Contact_Info: Jim Borovich, 402/471-2223, jim.borovich@ndeq.state.ne.us

Comments: NDEQ's Petroleum Remediation Section uses a Risk-Based Corrective Action (RBCA) process specific for petroleum releases that provides screening levels and site-specific target levels for several exposure pathways under different land use and groundwater use scenarios. These levels may differ significantly from the Remediation Goals (RGs) discussed above for individual chemicals of concern common to both programs.

Ingestion

Basis: Remediation goals (RGs) are developed for residential and industrial land uses. For residential land use, the cancer risk basis is 1E-06 for individual chemical carcinogenic risks and 1E-05 for cumulative carcinogenic effects for multiple chemical risks; for noncarcinogenic hazards, a HQ=0.25 is used for individual chemical noncarcinogenic effects and a HI=1.0 for target organ-specific for multiple chemical noncarcinogenic hazards. For industrial land use scenarios, the cancer risk basis is 1E-05 for individual carcinogens and 1E-04 for cumulative carcinogenic hazards; for noncarcinogenic hazards, a HQ=1.0 is used for individual chemicals and a HI=1.0 is used for target organ-specific multiple chemical hazards.

Citation_Location: Nebraska Voluntary Cleanup Program Guidance & Protocol for VCP Remediation Goals Lookup Tables, available at: <http://www.deq.state.ne.us>

Contact_Info: Jim Borovich, 402/471-2223, jim.borovich@ndeq.state.ne.us

Comments: NDEQ's Petroleum Remediation Section uses a Risk-Based Corrective Action (RBCA) process specific for petroleum releases that provides screening levels and site-specific target levels for several exposure pathways under different land use and groundwater use scenarios. These levels may differ significantly from the Remediation Goals (RGs) discussed above for individual chemicals of concern common to both programs.

NEBRASKA

Name: Jim Borovich Contact_Title: Geologist
 Organization: Nebraska Department of Environmental Quality, Remediation Section/Voluntary CI
 Address / City: P.O. Box 98922, Lincoln, 685098922
 Email: jim.borovich@ndeq.state.ne.us Contact_Phone: (402) 471-2223

Guidelines

Inhalation

Basis: Remediation goals (RGs) are developed for residential and industrial land uses. For residential land use, the cancer risk basis is 1E-06 for individual chemical carcinogenic risks and 1E-05 for cumulative carcinogenic effects for multiple chemical risks; for noncarcinogenic hazards, a HQ=0.25 is used for individual chemical noncarcinogenic effects and a HI=1.0 for target organ-specific for multiple chemical noncarcinogenic hazards. For industrial land use scenarios, the cancer risk basis is 1E-05 for individual carcinogens and 1E-04 for cumulative carcinogenic hazards; for noncarcinogenic hazards, a HQ=1.0 is used for individual chemicals and a HI=1.0 is used for target organ-specific multiple chemical hazards.

Citation_Location: Nebraska Voluntary Cleanup Program Guidance & Protocol for VCP Remediation Goals Lookup Tables, available at: <http://www.deq.state.ne.us>

Contact_Info: Jim Borovich, 402/471-2223, jim.borovich@ndeq.state.ne.us

Comments: NDEQ's Petroleum Remediation Section uses a Risk-Based Corrective Action (RBCA) process specific for petroleum releases that provides screening levels and site-specific target levels for several exposure pathways under different land use and groundwater use scenarios. These levels may differ significantly from the Remediation Goals (RGs) discussed above for individual chemicals of concern common to both programs.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Direct Contact (Dermal)

Basis: RGs for dermal exposure to groundwater have been calculated for contaminants identified in EPA's Risk Assessment for Superfund (RAGS), Part E Supplemental Guidance for Dermal Risk Assessment having a dermal dose contributing >10% of the dose from the groundwater ingestion pathway (Exhibits B-3 & B-4 of Part E).

Citation_Location: Nebraska Voluntary Cleanup Program Guidance & Protocol for VCP Remediation Goals Lookup Tables, available at: <http://www.deq.state.ne.us>

Contact_Info: Jim Borovich, 402/471-2223, jim.borovich@ndeq.state.ne.us

Comments: "Other*" exposure pathway provided for groundwater is inhalation of vapors from contaminated groundwater via a showering-type scenario. In terms of overall exposure pathways involving groundwater, in the absence of an MCL, a final RG for a particular chemical will be based on the most conservative RG calculated for the ingestion, inhalation and dermal individual exposure pathways.

Discharge to Surface Water

Basis: NDEQ's VCP guidance simply states that the VCP RGs should be consistent with Nebraska Title 117.

Citation_Location: Nebraska Voluntary Cleanup Program Guidance & Protocol for VCP Remediation Goals Lookup Tables, available at: <http://www.deq.state.ne.us>

Contact_Info: Jim Borovich, 402/471-2223, jim.borovich@ndeq.state.ne.us

Comments: "Other*" exposure pathway provided for groundwater is inhalation of vapors from contaminated groundwater via a showering-type scenario. In terms of overall exposure pathways involving groundwater, in the absence of an MCL, a final RG for a particular chemical will be based on the most conservative RG calculated for the ingestion, inhalation and dermal individual exposure pathways.

Drinking (Ingestion)

Basis: RGs specified or derived from regulatory authority provided in Nebraska Title 118 -Ground Water Quality Standards and Use Classification.

Citation_Location: Nebraska Voluntary Cleanup Program Guidance & Protocol for VCP Remediation Goals Lookup Tables, available at: <http://www.deq.state.ne.us>

Contact_Info: Jim Borovich, 402/471-2223, jim.borovich@ndeq.state.ne.us

Comments: "Other*" exposure pathway provided for groundwater is inhalation of vapors from contaminated groundwater via a showering-type scenario. In terms of overall exposure pathways involving groundwater, in the absence of an MCL, a final RG for a particular chemical will be based on the most conservative RG calculated for the ingestion, inhalation and dermal individual exposure pathways.

Other

NEBRASKA

Name: Jim Borovich Contact_Title: Geologist
 Organization: Nebraska Department of Environmental Quality, Remediation Section/Voluntary CI
 Address / City: P.O. Box 98922, Lincoln, 685098922
 Email: jim.borovich@ndeq.state.ne.us Contact_Phone: (402) 471-2223

Guidelines

Basis: RGs for inhalation of vapors from contaminated groundwater (i.e., a "showering scenario") have been calculated for volatile chemicals as defined in the above referenced guidance (Section 4.5 of Protocol).

Citation_Location: Nebraska Voluntary Cleanup Program Guidance & Protocol for VCP Remediation Goals Lookup Tables, available at: <http://www.deq.state.ne.us>

Contact_Info: Jim Borovich, 402/471-2223, jim.borovich@ndeq.state.ne.us

Comments: "Other*" exposure pathway provided for groundwater is inhalation of vapors from contaminated groundwater via a showering-type scenario. In terms of overall exposure pathways involving groundwater, in the absence of an MCL, a final RG for a particular chemical will be based on the most conservative RG calculated for the ingestion, inhalation and dermal individual exposure pathways.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Drinking (Ingestion)

Basis: Surface water standards for drinking water would follow Safe Drinking Water Act MCLs.

Citation_Location: Nebraska Voluntary Cleanup Program Guidance & Protocol for VCP Remediation Goals Lookup Tables, available at: <http://www.deq.state.ne.us>

Contact_Info: Jim Borovich, 402/471-2223, jim.borovich@ndeq.state.ne.us

Comments:

Ecological Risk

Basis: NDEQ's VCP guidance simply states that the VCP RGs should be consistent with Nebraska Title 117.

Citation_Location: Nebraska Voluntary Cleanup Program Guidance & Protocol for VCP Remediation Goals Lookup Tables, available at: <http://www.deq.state.ne.us>

Contact_Info: Jim Borovich, 402/471-2223, jim.borovich@ndeq.state.ne.us

Comments:

Human Health Risk

Basis: NDEQ's VCP guidance simply states that the VCP RGs should be consistent with Nebraska Title 117.

Citation_Location: Nebraska Voluntary Cleanup Program Guidance & Protocol for VCP Remediation Goals Lookup Tables, available at: <http://www.deq.state.ne.us>

Contact_Info: Jim Borovich, 402/471-2223, jim.borovich@ndeq.state.ne.us

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Human Health Risk

Basis: NDEQ's VCP guidance specifies that vapor intrusion concerns be screened using the following criteria: 1) volatile chemicals are located 100 feet below ground level or less and 2) volatile chemicals are located in proximity to existing or future buildings (within 100 feet horizontally). If these criteria are met, the user is to use a cancer risk basis of 1E-06 for residential land use and 1E-05 for industrial land use and an HI=1 for both residential and industrial land use.

Citation_Location: Nebraska Voluntary Cleanup Program Guidance & Protocol for VCP Remediation Goals Lookup Tables, available at: <http://www.deq.state.ne.us>

Contact_Info: Jim Borovich, 402/471-2223, jim.borovich@ndeq.state.ne.us

Comments: NDEQ's Petroleum Remediation Section uses a Risk-Based Corrective Action (RBCA) process specific for petroleum releases that provides screening levels and site-specific target levels for several exposure pathways under different land use and groundwater use scenarios. These levels may differ significantly from the Remediation Goals (RGs) discussed above for individual chemicals of concern common to both programs.

NEBRASKA

Name: Jim Borovich

Contact_Title: Geologist

Organization: Nebraska Department of Environmental Quality, Remediation Section/Voluntary CI

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Contact_Phone: (402) 471-2223

Guidelines

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

NEW HAMPSHIRE

Name: Robin Mongeon Contact_Title: Engineer
 Organization: Waste Management Division, Site Remediation Programs
 Address / City: 29 Hazen Drive, PO Box 95, Concord, 033020095
 Email: rmongeon@des.state.nh.us Contact_Phone: (603) 271-7378

Regulatory

Soil

Direct Contact (Dermal)

Basis: Dermal contact and ingestion are combined to develop a risk based soil cleanup value
 Citation_Location: For Petroleum sites see Env-Wm 1600 "Standards for Reporting and Remediation Of Oil Discharges"
http://www.des.state.nh.us/orcb/doclist/pdf/Env-Wm_1600.pdf
 Contact_Info: David Larson dl Larson@des.state.nh.us
 Comments: The combined dermal/injection risk based value is compared to the leaching to groundwater based value and the lower more protective value is chosen as the soil cleanup value.

Ingestion

Basis: For petroleum sites Leaching based soil values are based on SESOIL and AT123D modeling
 Citation_Location: For Petroleum sites see Env-Wm 1600 "Standards for Reporting and Remediation Of Oil Discharges"
http://www.des.state.nh.us/orcb/doclist/pdf/Env-Wm_1600.pdf See also "Risk Characterization and Management Policy"
<http://www.des.state.nh.us/orcb/doclist/pdf/rcmp.pdf>
 Contact_Info: Lori Siegel lsiegel@des.state.nh.us
 Comments: The combined dermal/injection risk based value is compared to the leaching to groundwater based value and the lower more protective value is chosen as the soil cleanup value.

Basis: Dermal contact and ingestion are combined to develop a risk based soil cleanup value
 Citation_Location: For Petroleum sites see Env-Wm 1600 "Standards for Reporting and Remediation Of Oil Discharges"
http://www.des.state.nh.us/orcb/doclist/pdf/Env-Wm_1600.pdf
 Contact_Info: David Larson dl Larson@des.state.nh.us
 Comments: The combined dermal/injection risk based value is compared to the leaching to groundwater based value and the lower more protective value is chosen as the soil cleanup value.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Discharge to Surface Water

Basis: No numerical values - see comment (1) below
 Citation_Location: Env-Wm 1403 "Groundwater Management and Groundwater Release Detection Permits"
<http://www.des.state.nh.us/orcb/doclist/wm1403.pdf>
 Contact_Info: Robin Mongeon rmongeon@des.state.nh.us
 Comments: (1) Groundwater shall not contain any contaminant such that the natural discharge of the groundwater will cause a violation of a surface water quality standard

Drinking (Ingestion)

Basis: Ambient Groundwater Quality Standards are risk based.
 Citation_Location: Env-Wm 1403 "Groundwater Management and Groundwater Release Detection Permits"
<http://www.des.state.nh.us/orcb/doclist/wm1403.pdf>
 Contact_Info: Dave Gordon dgordon@des.state.nh.us
 Comments: (1) Groundwater shall not contain any contaminant such that the natural discharge of the groundwater will cause a violation of a surface water quality standard

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

NEW HAMPSHIRE

Name: Robin Mongeon Contact_Title: Engineer
 Organization: Waste Management Division, Site Remediation Programs
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 Email: rmongeon@des.state.nh.us Contact_Phone: (603) 271-7378

Guidelines

Soil

Direct Contact (Dermal)

Basis: Dermal contact and ingestion are combined to develop a risk based soil cleanup value
 Citation_Location: For Non-Petroleum sites soil cleanup guidelines are listed in the "Risk Characterization and Management Policy" <http://www.des.state.nh.us/orcb/doclist/pdf/rcmp.pdf>
 Contact_Info: David Larson dl Larson@des.state.nh.us
 Comments: The combined dermal/injection risk based value is compared to the leaching to groundwater based value and the lower more protective value is chosen as the soil cleanup value.

Impact to Groundwater

Basis: For non petroleum sites leaching based soil guidelines are based on SESOIL and AT123D modeling
 Citation_Location: For Non-Petroleum sites soil cleanup guidelines are listed in the "Risk Characterization and Management Policy" <http://www.des.state.nh.us/orcb/doclist/pdf/rcmp.pdf>
 Contact_Info: Lori Siegel lsiegel@des.state.nh.us
 Comments: The combined dermal/injection risk based value is compared to the leaching to groundwater based value and the lower more protective value is chosen as the soil cleanup value.

Ingestion

Basis: Dermal contact and ingestion are combined to develop a risk based soil cleanup value
 Citation_Location: For Non-Petroleum sites soil cleanup guidelines are listed in the "Risk Characterization and Management Policy" <http://www.des.state.nh.us/orcb/doclist/pdf/rcmp.pdf>
 Contact_Info: David Larson dl Larson@des.state.nh.us
 Comments: The combined dermal/injection risk based value is compared to the leaching to groundwater based value and the lower more protective value is chosen as the soil cleanup value.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis: See explanation below
 Citation_Location: Guidelines for evaluating vapor intrusion see the "Risk Characterization and Management Policy" <http://www.des.state.nh.us/orcb/doclist/pdf/rcmp.pdf> and the Draft Vapor Intrusion Guidance http://www.des.state.nh.us/orcb/doclist/pdf/vapor_intrusion.pdf
 Contact_Info: Robin Mongeon rmongeon@des.state.nh.us
 Comments: Indoor air values are derived taking into account risk, background and method reporting limit, then groundwater and soil gas screening values are derived based on applying specific attenuation factors.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis: See comment below
 Citation_Location: See "Evaluation of Sediment Quality Guidance Document" http://des.nh.gov/PDF/WD-04-9_Evaluation_of_Sediment.pdf
 Contact_Info: Lori Siegel lsiegel@des.state.nh.us
 Comments: Site specific sediment quality is assessed using a triad approach by evaluating chemical analysis values, toxicity bioassays (laboratory) and community assessments(field) as outlined in the guidance.

NEW HAMPSHIRE

Name: Robin Mongeon

Contact_Title: Engineer

Organization: Waste Management Division, Site Remediation Programs

Address / City: 29 Hazen Drive, PO Box 95, Concord, 033020095

Email: rmongeon@des.state.nh.us

Contact_Phone: (603) 271-7378

Guidelines

- | | | | | | |
|--|--|--|--|---|--------------------------------|
| <input checked="" type="checkbox"/> RCRA_CA | <input checked="" type="checkbox"/> Brownfields | <input checked="" type="checkbox"/> DrinkingWater | <input checked="" type="checkbox"/> SurfaceWater | <input type="checkbox"/> AirQuality (Clean Air Act) | |
| <input checked="" type="checkbox"/> SolidWsteLndfill | <input checked="" type="checkbox"/> VoluntaryClnUp | <input checked="" type="checkbox"/> SafeDrinkingWaterAct | <input checked="" type="checkbox"/> UST | <input checked="" type="checkbox"/> WetlandsProgram | <input type="checkbox"/> Other |

NEW JERSEY

Name: Barry Frasco Contact_Title: Assistant Director - Division of Remediation Manag
 Organization: New Jersey DEP
 Address / City: 401 East State Street PO Box 413, Trenton, 08625
 Email: Barry.Frasco@dep.state.nj.us Contact_Phone: (609) 633-6801

Regulatory

Soil

Direct Contact (Dermal)

Basis: Health-based: 1x10-6 for carcinogens; HQ = 1 for non-carcinogens
 Citation_Location: N.J.A.C. 7:26D (Pending Proposal)
 Contact_Info: Interested Party Review Document available at <http://www.nj.gov/dep/srp/regs/srs/proposed/> - Estimated formal proposal in the New Jersey Register in 12/05. Contact person is Barry Frasco
 Comments:

Impact to Groundwater

Basis: Soil standards developed such that soil contamination does not result in an exceedance of ground water remediation standards. The ground water remediation standards are health-based: 1x10-6 for carcinogens; HQ = 1 for non-carcinogens
 Citation_Location: N.J.A.C. 7:26D (Pending Proposal)
 Contact_Info: Interested Party Review Document available at <http://www.nj.gov/dep/srp/regs/srs/proposed/> - Estimated formal proposal in the New Jersey Register in 12/05. Contact person is Barry Frasco
 Comments:

Ingestion

Basis: Health-based: 1x10-6 for carcinogens; HQ = 1 for non-carcinogens
 Citation_Location: N.J.A.C. 7:26D (Pending Proposal)
 Contact_Info: Interested Party Review Document available at <http://www.nj.gov/dep/srp/regs/srs/proposed/> - Estimated formal proposal in the New Jersey Register in 12/05. Contact person is Barry Frasco
 Comments:

Inhalation

Basis: Health-based: 1x10-6 for carcinogens; HQ = 1 for non-carcinogens
 Citation_Location: N.J.A.C. 7:26D (Pending Proposal)
 Contact_Info: Interested Party Review Document available at <http://www.nj.gov/dep/srp/regs/srs/proposed/> - Estimated formal proposal in the New Jersey Register in 12/05. Contact person is Barry Frasco
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
- SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Discharge to Surface Water

Basis:
 Citation_Location: There are no specific ground water discharge to surface water standards. NJPDES discharge limits are established on a permit specific basis.
 Contact_Info: Contact person is Tracey Grabiak.
 Comments:

Drinking (Ingestion)

NEW JERSEY

Name: Barry Frasco Contact_Title: Assistant Director - Division of Remediation Manag
 Organization: New Jersey DEP
 Address / City: 401 East State Street PO Box 413, Trenton, 08625
 Email: Barry.Frasco@dep.state.nj.us Contact_Phone: (609) 633-6801

Regulatory

Basis: For Class I groundwater, the standards are based on natural background. For Class II ground water, the standards are health-based: 1x10⁻⁶ for carcinogens; HQ = 1 for non-carcinogens assuming the water is used for potable purposes. For Class III ground water, the standards are derived on a site specific basis.

Citation_Location: Ground water remediation standards - N.J.A.C. 7:26E -1.13. These standards are identical to the Ground Water Quality Standards N.J.A.C. 7:9C but are different than the New Jersey Drinking Water Standards NJAC 7:10.

Contact_Info: Technical Requirements for Site Remediation are available at <http://www.nj.gov/dep/srp/regs/techrule/> Contact person is Barry Frasco.

Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Drinking (Ingestion)

Basis: See comments section below.

Citation_Location: Surface Water Remediation Standards (N.J.A.C. 7:26E-1.13. These standards are identical to the Surface Water Quality Standards N.J.A.C. 7:9B. See comments section below.

Contact_Info: The contact person is Barry Frasco.

Comments: The Surface Water Quality Standards (N.J.A.C. 7:9B) classify the surface water of New Jersey into 7 categories. Class FW1 (fresh water) and PL (pinelands) surface waters have surface water quality standards that are based on natural background. Class FW2 (fresh water) surface water have surface water quality standards that are based primarily on potability with secondary consideration of ecological risk and bioaccumulation. Class SE1, SE2, SE3 and SC surface waters have surface water quality standards based on ecological risk and bioaccumulation.

Ecological Risk

Basis: See comments section below.

Citation_Location: Surface Water Remediation Standards (N.J.A.C. 7:26E-1.13. These standards are identical to the Surface Water Quality Standards N.J.A.C. 7:9B. See comments section below.

Contact_Info: The contact person is Barry Frasco.

Comments: The Surface Water Quality Standards (N.J.A.C. 7:9B) classify the surface water of New Jersey into 7 categories. Class FW1 (fresh water) and PL (pinelands) surface waters have surface water quality standards that are based on natural background. Class FW2 (fresh water) surface water have surface water quality standards that are based primarily on potability with secondary consideration of ecological risk and bioaccumulation. Class SE1, SE2, SE3 and SC surface waters have surface water quality standards based on ecological risk and bioaccumulation.

Fish Consumption

Basis: See comments section below.

Citation_Location: Surface Water Remediation Standards (N.J.A.C. 7:26E-1.13. These standards are identical to the Surface Water Quality Standards N.J.A.C. 7:9B. See comments section below.

Contact_Info: The contact person is Barry Frasco.

Comments: The Surface Water Quality Standards (N.J.A.C. 7:9B) classify the surface water of New Jersey into 7 categories. Class FW1 (fresh water) and PL (pinelands) surface waters have surface water quality standards that are based on natural background. Class FW2 (fresh water) surface water have surface water quality standards that are based primarily on potability with secondary consideration of ecological risk and bioaccumulation. Class SE1, SE2, SE3 and SC surface waters have surface water quality standards based on ecological risk and bioaccumulation.

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

NEW JERSEY

Name: Barry Frasco Contact_Title: Assistant Director - Division of Remediation Manag
 Organization: New Jersey DEP
 Address / City: 401 East State Street PO Box 413, Trenton, 08625
 Email: Barry.Frasco@dep.state.nj.us Contact_Phone: (609) 633-6801

Not Specified

Soil

Ecological Risk

Basis: The following references are used as screening levels as well as a starting point in the development of site-specific remediation standards: 1) U.S. Department of Energy. August 1997. Efroymsen, R.A., Suter, G.W. II., Sample, B.E., and Jones, D.S. Preliminary remediation goals for ecological endpoints. Oak ridge National Laboratory. ES/ER/TM-162/R2. and 2) U.S. Environmental Protection Agency. 2003. Ecological soil screening level guidance. Draft. Office of Emergency and Remedial Response. Available at: www.epa.gov/superfund/programs/risk/tooleco.htm

Citation_Location: None. Where applicable, ecological risk-based soil remediation standards will be developed on a site-specific basis.

Contact_Info:

Comments:

Basis: The following references are used as screening levels as well as a starting point in the development of site-specific remediation standards: 1) U.S. Department of Energy. August 1997. Efroymsen, R.A., Suter, G.W. II., Sample, B.E., and Jones, D.S. Preliminary remediation goals for ecological endpoints. Oak ridge National Laboratory. ES/ER/TM-162/R2. and 2) U.S. Environmental Protection Agency. 2003. Ecological soil screening level guidance. Draft. Office of Emergency and Remedial Response. Available at: www.epa.gov/superfund/programs/risk/tooleco.htm

Citation_Location: None. Where applicable, ecological risk-based soil remediation standards will be developed on a site-specific basis.

Contact_Info:

Comments:

Impact to Surface Water

Basis: Soil standards developed on a site-specific basis such that soil contamination does not result in an exceedance of surface water remediation standards. The surface water remediation standards are health-based: 1x10⁻⁶ for carcinogens; HQ = 1 for non-carcinogens

Citation_Location: None. Where applicable, soil impact to surface water will be developed on a site-specific basis.

Contact_Info: Interested Party Review Document available at <http://www.nj.gov/dep/srp/regs/srs/proposed/> - Estimated formal proposal in the New Jersey Register in 12/05. Contact person is Barry Frasco

Comments:

Basis: Soil standards developed on a site-specific basis such that soil contamination does not result in an exceedance of surface water remediation standards. The surface water remediation standards are health-based: 1x10⁻⁶ for carcinogens; HQ = 1 for non-carcinogens

Citation_Location: No "generic" numeric standards. Where applicable, soil impact to surface water are developed on a site-specific basis.

Contact_Info: Contact person is Barry Frasco.

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

NEW JERSEY

Name: Barry Frasco Contact_Title: Assistant Director - Division of Remediation Manag
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 Email: Barry.Frasco@dep.state.nj.us Contact_Phone: (609) 633-6801

Guidelines

Soil

Direct Contact (Dermal)

Basis: Standard based on prevention of allergic contact dermatitis. Discussion of the derivation of the standard can be found at: http://www.nj.gov/dep/srp/siteinfo/chrome/b_b_sum.htm
 Citation_Location: Soil Cleanup Criteria (for Hexavalent chromium only)
 Contact_Info: Soil Cleanup Criteria available at: <http://www.nj.gov/dep/srp/regs/scc/> - Contact person is Barry Frasco
 Comments:

Impact to Groundwater

Basis: Soil Cleanup Criteria developed to minimize soil contamination impact on ground water quality (ground water quality standards).
 Citation_Location: Soil Cleanup Criteria
 Contact_Info: Soil Cleanup Criteria available at: <http://www.nj.gov/dep/srp/regs/scc/> - Contact person is Barry Frasco
 Comments:

Ingestion

Basis: Health-based: 1x10⁻⁶ for carcinogens; HQ = 1 for non-carcinogens
 Citation_Location: Soil Cleanup Criteria
 Contact_Info: Soil Cleanup Criteria available at: <http://www.nj.gov/dep/srp/regs/scc/> - Contact person is Barry Frasco
 Comments:

Inhalation

Basis: Health-based: 1x10⁻⁶ for carcinogens; HQ = 1 for non-carcinogens
 Citation_Location: Soil Cleanup Criteria
 Contact_Info: Soil Cleanup Criteria available at: <http://www.nj.gov/dep/srp/regs/scc/> - Contact person is Barry Frasco
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis: Health-based: 1x10⁻⁶ for carcinogens; HQ = 1 for non-carcinogens
 Citation_Location: Vapor Intrusion Guidance Document (Draft) - Document is expected to be finalized in October 2005.
 Contact_Info: Draft of the Vapor Intrusion Guidance Document is available at: http://www.nj.gov/dep/srp/guidance/vaporintrusion/vig_draft.htm
 Contact person is Diane Groth.
 Comments: For those contaminants whose health-based screening level is below analytical capability, the screening level is set at the analytical Practical Quantitation Level. In addition, for those contaminants whose health-based screening level is less than the ground water quality standard, the screening level is set at the ground water quality standard. Also, no remediation is conducted if indoor air levels are below ambient air background levels.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

NEW JERSEY

Name: Barry Frasco Contact_Title: Assistant Director - Division of Remediation Manag
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Address / City: 401 East State Street PO Box 413, Trenton, 08625
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Guidelines

Sediment

Ecological Risk

Basis: "The following references are used as screening levels as well as a starting point in the development of site-specific sediment remediation standards: 1) Marine/Estuarine sediment: Long, E.R., MacDonald, D.D., Smith, S.L., and Calder, F.D. 1995. Incidence of adverse biological effects within ranges of chemical concentrations in marine and estuarine sediments. Environmental Management Vol.19, No.1. pp. 81-97. and 2) Freshwater sediment: Persaud, D., Jaagumagi, R., and Hayton, A. 1993. Guidelines for the protection and management of aquatic sediment quality in Ontario. ISBN 0-7729-9248-7. Ontario Ministry of the Environment, Ottawa, Ontario. 23p. "

Citation_Location: Guidance For Sediment Quality Evaluations.

Contact_Info: A copy of the Guidance For Sediment Quality Evaluations is available at: <http://www.nj.gov/dep/srp/regs/sediment/>
The contact person is Nancy Hamill.

Comments: Sediment remediation is based solely on ecological risk. If sediment is moved to an upland location, it is treated as soil, and as such, soil remediation standards would apply.

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

OHIO

Name: Timothy Christman Contact_Title: Environmental Scientist 3

Organization: Ohio Environmental Protection Agency

Address / City: 122 South Front Street, Lazarus Government Center, Columbus, 43215

Email: timothy.christman@epa.state.oh.us Contact_Phone: 614-644-2297

Regulatory

Groundwater

Drinking (Ingestion)

Basis: Federal MCL's

Citation_Location: OAC 3745-81-11,12

Contact_Info: Tim Christman, OEPA/Emergency and Remedial Response 614-644-2297

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis: ILCR 1E-5, HI = 1

Citation_Location: OAC 3745-1-31 through 34

Contact_Info: Bob Heitzman, Division of Surface Water, 614-644-3075

Comments:

Drinking (Ingestion)

Basis: ILCR 1E-5, HI = 1

Citation_Location: OAC 3745-1-31 through 34

Contact_Info: Bob Heitzman, Division of Surface Water, 614-644-3075

Comments:

Ecological Risk

Basis: ILCR 1E-5, HI = 1

Citation_Location: OAC 3745-1-31 through 34, 36, 39

Contact_Info: Bob Heitzman, Division of Surface Water, 614-644-3075

Comments:

Fish Consumption

Basis: ILCR 1E-5, HI = 1

Citation_Location: OAC 3745-1-38

Contact_Info: Bob Heitzman, Division of Surface Water, 614-644-3075

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

OHIO

Name: Timothy Christman Contact_Title: Environmental Scientist 3
 Organization: Ohio Environmental Protection Agency
 Address / City: 122 South Front Street, Lazarus Government Center, Columbus, 43215
 Email: timothy.christman@epa.state.oh.us Contact_Phone: 614-644-2297

Guidelines

Soil

Direct Contact (Dermal)

Basis: ILCR = 1E-06, HI =1
 Citation_Location: Use of USEPA Region 9 PRG's as Screening Values in Human Health Risk Assessment, Technical Decision Compendium
 Contact_Info: Brian Tucker, Emergency and Remedial Response 614-644-3120
 Comments:

Ecological Risk

Basis: Threshold effects
 Citation_Location: Ecological Risk Assessment Guidance Document, RR-031
 Contact_Info: Brian Tucker, Emergency and Remedial Response 614-644-3120
 Comments:

Impact to Groundwater

Basis: HI=1
 Citation_Location: Soil Leaching to Ground Water, TPH, DERR Technical Decision Document RR-036
 Contact_Info: Tim Christman, Emergency and Remedial Response 614-644-2297
 Comments:

Ingestion

Basis: ILCR = 1E-06, HI =1
 Citation_Location: Use of USEPA Region 9 PRG's as Screening Values in Human Health Risk Assessment, Technical Decision Compendium
 Contact_Info: Brian Tucker, Emergency and Remedial Response 614-644-3120
 Comments:

Inhalation

Basis: ILCR = 1E-06, HI =1
 Citation_Location: Use of USEPA Region 9 PRG's as Screening Values in Human Health Risk Assessment, Technical Decision Compendium
 Contact_Info: Brian Tucker, Emergency and Remedial Response 614-644-3120
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis: ILCR = 1E-06 to 1E-04, HI =1
 Citation_Location: Methodology for Vapor Intrusion Assessment, Technical Decision Compendium
 Contact_Info: Brian Tucker, Emergency and Remedial Response 614-644-3120
 Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

OHIO

Name: Timothy Christman

Contact_Title: Environmental Scientist 3

Organization: Ohio Environmental Protection Agency

Address / City: 122 South Front Street, Lazarus Government Center, Columbus, 43215

Email: timothy.christman@epa.state.oh.us

Contact_Phone: 614-644-2297

Guidelines

Sediment

Ecological Risk

Basis: Threshold effects

Citation_Location: Ecological Risk Assessment Guidance Document, RR-031

Contact_Info: Brian Tucker, Emergency and Remedial Response 614-644-3120

Comments:

Human Health Risk

Basis: ILCR = 1E-06, HI =1

Citation_Location: Use of USEPA Region 9 PRG's as Screening Values in Human Health Risk Assessment, Technical Decision Compendium, use soil values for sediment

Contact_Info: Brian Tucker, Emergency and Remedial Response 614-644-3120

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

OKLAHOMA

Name: Catherine Sharp

Contact_Title: Assistant Director

Organization: Brownfields and Voluntary Cleanup

Address / City:

Email: catherine.sharp@deq.state.ok.us

Contact_Phone: (405) 702-5151

Regulatory

Surface Water

Drinking (Ingestion)

Basis:

Citation_Location: Oklahoma Water Resources Board (separate agency that sets water standards and regulates water usage) has regulations that are used to support decisions. <http://www.owrb.state.ok.us/util/rules/rules.php#ch45>

Contact_Info:

Comments:

Fish Consumption

Basis:

Citation_Location: Oklahoma Water Resources Board has regulations that are used to support decisions

Contact_Info:

Comments:

- | | | | | | |
|--|--|---|---------------------------------------|---|--------------------------------|
| <input checked="" type="checkbox"/> RCRA_CA | <input checked="" type="checkbox"/> Brownfields | <input type="checkbox"/> DrinkingWater | <input type="checkbox"/> SurfaceWater | <input type="checkbox"/> AirQuality (Clean Air Act) | |
| <input checked="" type="checkbox"/> SolidWsteLndfill | <input checked="" type="checkbox"/> VoluntaryClnUp | <input type="checkbox"/> SafeDrinkingWaterAct | <input type="checkbox"/> UST | <input type="checkbox"/> WetlandsProgram | <input type="checkbox"/> Other |

OKLAHOMA

Name: Catherine Sharp

Contact_Title: Assistant Director

Organization: Brownfields and Voluntary Cleanup

Address / City:

Email: catherine.sharp@deq.state.ok.us

Contact_Phone: (405) 702-5151

Guidelines

Soil

Direct Contact (Dermal)

Basis:

Citation_Location: Cleanups are reviewed on a site specific basis. Federal Guidance documents are used, specifically the EPA Soil Screening Levels, the EPA Region VI Medium Specific Screening Levels, and occasionally others.

Contact_Info: Further information is available in our Risk Based Cleanup Fact Sheet located at <http://www.deq.state.ok.us/lpdnew/FactSheets/RiskbasedDecisionGuidanceFinal.pdf>

Comments:

Ecological Risk

Basis:

Citation_Location: In addition to other appropriate guidance documents, we use the EPA Ecological Soils Screening document, November 2003, <http://www.epa.gov/ecotox/ecoss>.

Contact_Info:

Comments:

Impact to Groundwater

Basis:

Citation_Location: Cleanups are reviewed on a site specific basis. Federal Guidance documents are used, specifically the EPA Soil Screening Levels, the EPA Region VI Medium Specific Screening Levels, and occasionally others.

Contact_Info: Further information is available in our Risk Based Cleanup Fact Sheet located at <http://www.deq.state.ok.us/lpdnew/FactSheets/RiskbasedDecisionGuidanceFinal.pdf>

Comments:

Impact to Surface Water

Basis:

Citation_Location: Cleanups are reviewed on a site specific basis. Federal Guidance documents are used, specifically the EPA Soil Screening Levels, the EPA Region VI Medium Specific Screening Levels, and occasionally others.

Contact_Info: Further information is available in our Risk Based Cleanup Fact Sheet located at <http://www.deq.state.ok.us/lpdnew/FactSheets/RiskbasedDecisionGuidanceFinal.pdf>

Comments:

Ingestion

Basis:

Citation_Location: Cleanups are reviewed on a site specific basis. Federal Guidance documents are used, specifically the EPA Soil Screening Levels, the EPA Region VI Medium Specific Screening Levels, and occasionally others.

Contact_Info: Further information is available in our Risk Based Cleanup Fact Sheet located at <http://www.deq.state.ok.us/lpdnew/FactSheets/RiskbasedDecisionGuidanceFinal.pdf>

Comments:

Inhalation

Basis:

Citation_Location: Cleanups are reviewed on a site specific basis. Federal Guidance documents are used, specifically the EPA Soil Screening Levels, the EPA Region VI Medium Specific Screening Levels, and occasionally others.

Contact_Info: Further information is available in our Risk Based Cleanup Fact Sheet located at <http://www.deq.state.ok.us/lpdnew/FactSheets/RiskbasedDecisionGuidanceFinal.pdf>

Comments:

Other

OKLAHOMA

Name: Catherine Sharp

Contact_Title: Assistant Director

Organization: Brownfields and Voluntary Cleanup

Address / City:

Email: catherine.sharp@deq.state.ok.us

Contact_Phone: (405) 702-5151

Guidelines

Basis:

Citation_Location: Cleanups are reviewed on a site specific basis. Federal Guidance documents are used, specifically the EPA Soil Screening Levels, the EPA Region VI Medium Specific Screening Levels, and occasionally others.

Contact_Info:

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Groundwater

Direct Contact (Dermal)

Basis:

Citation_Location: Cleanups are reviewed on a site specific basis. Federal Guidance documents are used, specifically the EPA Soil Screening Levels, the EPA Region VI Medium Specific Screening Levels, and occasionally others.

Contact_Info: Further information is available in our Risk Based Cleanup Fact Sheet located at <http://www.deq.state.ok.us/lpdnew/FactSheets/RiskbasedDecisionGuidanceFinal.pdf>

Comments: Guidance is used, and other than the Safe Drinking Water Act there are no laws or rules that are directly used. ODEQ allows a 10-6 or 10-5 risk level but nothing lower than that.

Discharge to Surface Water

Basis:

Citation_Location: Cleanups are reviewed on a site specific basis. Federal Guidance documents are used, specifically the EPA Soil Screening Levels, the EPA Region VI Medium Specific Screening Levels, and occasionally others.

Contact_Info: Further information is available in our Risk Based Cleanup Fact Sheet located at <http://www.deq.state.ok.us/lpdnew/FactSheets/RiskbasedDecisionGuidanceFinal.pdf>

Comments: Guidance is used, and other than the Safe Drinking Water Act there are no laws or rules that are directly used. ODEQ allows a 10-6 or 10-5 risk level but nothing lower than that.

Drinking (Ingestion)

Basis:

Citation_Location: Cleanups are reviewed on a site specific basis. Federal Guidance documents are used, specifically the EPA Soil Screening Levels, the EPA Region VI Medium Specific Screening Levels, and occasionally others.

Contact_Info: Further information is available in our Risk Based Cleanup Fact Sheet located at <http://www.deq.state.ok.us/lpdnew/FactSheets/RiskbasedDecisionGuidanceFinal.pdf>

Comments: Guidance is used, and other than the Safe Drinking Water Act there are no laws or rules that are directly used. ODEQ allows a 10-6 or 10-5 risk level but nothing lower than that.

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: Cleanups are reviewed on a site specific basis. Federal Guidance documents are used, specifically the EPA Soil Screening Levels, the EPA Region VI Medium Specific Screening Levels, and occasionally others.

Contact_Info:

Comments:

Drinking (Ingestion)

OKLAHOMA

Name: Catherine Sharp

Contact_Title: Assistant Director

Organization: Brownfields and Voluntary Cleanup

Address / City:

Email: catherine.sharp@deq.state.ok.us

Contact_Phone: (405) 702-5151

Guidelines

Basis:

Citation_Location: In addition to guidance documents cited above, OWRB standards are used for reference, along with the Water Quality Standards Implementation Plan (WQSIP)

Contact_Info:

Comments:

Fish Consumption

Basis:

Citation_Location: In addition to guidance documents cited above, OWRB standards are used for reference, along with the Water Quality Standards Implementation Plan (WQSIP)

Contact_Info:

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Vapor Intrusion

Inhalation

Basis: Additionally we rely on the USEPA Vapor Intrusion Guidance Document.

Citation_Location: Cleanups are reviewed on a site specific basis. Federal Guidance documents are used, specifically the EPA Soil Screening Levels, the EPA Region VI Medium Specific Screening Levels, and occasionally others.

Contact_Info:

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Sediment

Ecological Risk

Basis:

Citation_Location: Cleanups are reviewed on a site specific basis. Federal Guidance documents are used, specifically the EPA Soil Screening Levels, the EPA Region VI Medium Specific Screening Levels, and occasionally others.

Contact_Info: Further information is available in our Risk Based Cleanup Fact Sheet located at <http://www.deq.state.ok.us/lpdnew/FactSheets/RiskbasedDecisionGuidanceFinal.pdf>

Comments:

Human Health Risk

Basis:

Citation_Location: Cleanups are reviewed on a site specific basis. Federal Guidance documents are used, specifically the EPA Soil Screening Levels, the EPA Region VI Medium Specific Screening Levels, and occasionally others.

Contact_Info: Further information is available in our Risk Based Cleanup Fact Sheet located at <http://www.deq.state.ok.us/lpdnew/FactSheets/RiskbasedDecisionGuidanceFinal.pdf>

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

OREGON

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 Address / City: 2020 SW 4th St., Portland, 97201
 Email: poulsen.mike@deq.state.or.us Contact_Phone: (503) 229-6773

Regulatory

Soil

Direct Contact (Dermal)

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: OAR 340-122-0115 http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_122.html
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
 Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

Ecological Risk

Basis: T&E species: hazard index of 1 for individuals. Non-T&E species: a 10% chance or less that more than 20% of the total local population will be exposed to a concentration greater than the ecological benchmark value for each chemical of concern, and no other observed significant adverse effects on the health or viability of the local population.
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Impact to Groundwater

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: OAR 340-122-0115 http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_122.html
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Impact to Surface Water

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: OAR 340-122-0115 http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_122.html
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
 Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

Ingestion

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: OAR 340-122-0115 http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_122.html
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
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Inhalation

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: OAR 340-122-0115 http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_122.html
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Regulatory

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Direct Contact (Dermal)

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: OAR 340-122-0115 http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_122.html
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
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Discharge to Surface Water

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: OAR 340-122-0115 http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_122.html
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
 Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

Drinking (Ingestion)

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: OAR 340-122-0115 http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_122.html
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
 Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

Other

Basis: Beneficial uses are protected.
 Citation_Location: OAR 340-122-0115 http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_122.html
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
 Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: OAR 340-122-0115 http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_122.html
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
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Drinking (Ingestion)

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Ecological Risk

Basis: T&E species: hazard index of 1 for individuals. Non-T&E species: a 10% chance or less that more than 20% of the total local population will be exposed to a concentration greater than the ecological benchmark value for each chemical of concern, and no other observed significant adverse effects on the health or viability of the local population.
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Fish Consumption

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: OAR 340-122-0115 http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_122.html
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Other

Basis: Beneficial uses are protected.
 Citation_Location: OAR 340-122-0115 http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_122.html
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- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: OAR 340-122-0115 http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_122.html
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- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

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Regulatory

Sediment

Ecological Risk

Basis: T&E species: hazard index of 1 for individuals. Non-T&E species: a 10% chance or less that more than 20% of the total local population will be exposed to a concentration greater than the ecological benchmark value for each chemical of concern, and no other observed significant adverse effects on the health or viability of the local population.

Citation_Location: OAR 340-122-0115 http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_122.html

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Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

Human Health Risk

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.

Citation_Location: OAR 340-122-0115 http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_122.html

Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us

Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

OREGON

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 Email: poulsen.mike@deq.state.or.us Contact_Phone: (503) 229-6773

Guidelines

Soil

Direct Contact (Dermal)

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: Human health risk assessment guidance available at: <http://www.deq.state.or.us/wmc/cleanup/hh-intro.htm> and <http://www.deq.state.or.us/wmc/tank/rbdm.htm>
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
 Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

Ecological Risk

Basis: T&E species: hazard index of 1 for individuals. Non-T&E species: a 10% chance or less that more than 20% of the total local population will be exposed to a concentration greater than the ecological benchmark value for each chemical of concern, and no other observed significant adverse effects on the health or viability of the local population.
 Citation_Location: Ecological risk assessment guidance available at: <http://www.deq.state.or.us/wmc/cleanup/ecocover.htm>
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
 Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

Impact to Groundwater

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: Human health risk assessment guidance available at: <http://www.deq.state.or.us/wmc/cleanup/hh-intro.htm> and <http://www.deq.state.or.us/wmc/tank/rbdm.htm>
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
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Impact to Surface Water

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: Human health risk assessment guidance available at: <http://www.deq.state.or.us/wmc/cleanup/hh-intro.htm> and <http://www.deq.state.or.us/wmc/tank/rbdm.htm>
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
 Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

Ingestion

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: Human health risk assessment guidance available at: <http://www.deq.state.or.us/wmc/cleanup/hh-intro.htm> and <http://www.deq.state.or.us/wmc/tank/rbdm.htm>
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
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Inhalation

OREGON

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Guidelines

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: Human health risk assessment guidance available at: <http://www.deq.state.or.us/wmc/cleanup/hh-intro.htm> and <http://www.deq.state.or.us/wmc/tank/rbdrm.htm>
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
 Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Direct Contact (Dermal)

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: Human health risk assessment guidance available at: <http://www.deq.state.or.us/wmc/cleanup/hh-intro.htm> and <http://www.deq.state.or.us/wmc/tank/rbdrm.htm>
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
 Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

Discharge to Surface Water

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: Human health risk assessment guidance available at: <http://www.deq.state.or.us/wmc/cleanup/hh-intro.htm> and <http://www.deq.state.or.us/wmc/tank/rbdrm.htm>
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
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Drinking (Ingestion)

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: Human health risk assessment guidance available at: <http://www.deq.state.or.us/wmc/cleanup/hh-intro.htm> and <http://www.deq.state.or.us/wmc/tank/rbdrm.htm>
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
 Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

Other

Basis: Beneficial uses are protected.
 Citation_Location: Guidance for identification of hot spots: <http://www.deq.state.or.us/wmc/documents/hotspot2.pdf>
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
 Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

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Guidelines

Surface Water

Direct Contact (Dermal)

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: Human health risk assessment guidance available at: <http://www.deq.state.or.us/wmc/cleanup/hh-intro.htm> and <http://www.deq.state.or.us/wmc/tank/rbdm.htm>
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
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Drinking (Ingestion)

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: Human health risk assessment guidance available at: <http://www.deq.state.or.us/wmc/cleanup/hh-intro.htm> and <http://www.deq.state.or.us/wmc/tank/rbdm.htm>
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
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Ecological Risk

Basis: T&E species: hazard index of 1 for individuals. Non-T&E species: a 10% chance or less that more than 20% of the total local population will be exposed to a concentration greater than the ecological benchmark value for each chemical of concern, and no other observed significant adverse effects on the health or viability of the local population.
 Citation_Location: Ecological risk assessment guidance available at: <http://www.deq.state.or.us/wmc/cleanup/ecocover.htm>
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
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Fish Consumption

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: Human health risk assessment guidance available at: <http://www.deq.state.or.us/wmc/cleanup/hh-intro.htm> and <http://www.deq.state.or.us/wmc/tank/rbdm.htm>
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Other

Basis: Beneficial uses are protected.
 Citation_Location: Guidance for identification of hot spots: <http://www.deq.state.or.us/wmc/documents/hotspot2.pdf>
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
 Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

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Guidelines

Vapor Intrusion

Inhalation

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: Human health risk assessment guidance available at: <http://www.deq.state.or.us/wmc/tank/rbdrm.htm>
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Sediment

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Basis: T&E species: hazard index of 1 for individuals. Non-T&E species: a 10% chance or less that more than 20% of the total local population will be exposed to a concentration greater than the ecological benchmark value for each chemical of concern, and no other observed significant adverse effects on the health or viability of the local population.
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Human Health Risk

Basis: 1.E-06 for individual carcinogens, 1.E0-5 for multiple carcinogens.
 Citation_Location: Human health risk assessment guidance available at: <http://www.deq.state.or.us/wmc/cleanup/hh-intro.htm>
 Contact_Info: Mike Poulsen 503 229-6773 poulsen.mike@deq.state.or.us
 Comments: RCRA corrective action is done by the state environmental cleanup program in Oregon. SW land fill contamination that extends off-site is cleaned up under cleanup program authority. UST, Brownfield, and VCP all operate under the same statute, and therefoer the same definition of acceptable risk.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

RHODE ISLAND

Name: Michael D. Andrews Contact_Title: Sanitary Engineer
 Organization: Office of Waste Management, Site Remediation
 Address / City: 235 Promenade Street, Providence, 02871
 Email: michael.andrews@dem.ri.gov Contact_Phone: (401) 862-5250

Regulatory

Basis:

Citation_Location: Remediation standards specific to drinking groundwater have not been established by RIDEM. Refer to the GA and GB Groundwater Objectives as specified in the Rules and Regulation for the Investigation and Remediation of Hazardous Material Releases (as amended February 2004). For a detailed explanation see the "Other" section of this spreadsheet.

Contact_Info: Contact person is Michael Andrews, (401) 222-2797 ext. 7140, michael.andrews@dem.ri.gov

Comments: A complete list of RIDEM Regulations is available at : <http://www.dem.ri.gov/pubs/regs/index.htm#WM>

Other

Basis:

Citation_Location: The RIDEM Office of Waste Management applies the GA and GB Groundwater Objectives (remediation standards) as specified in the Rules and Regulation for the Investigation and Remediation of Hazardous Material Releases (as amended February 2004) to all sites. The GA Groundwater Objectives are based on the maximum contaminant levels (MCL) found in the US EPA 2004 Edition of the Drinking Water Standards and Health Advisories. This document may be found at: <http://www.epa.gov/ost/drinking/standards/dwstandards.pdf>.

Contact_Info:

Comments: A complete list of RIDEM Regulations is available at : <http://www.dem.ri.gov/pubs/regs/index.htm#WM>

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: See Comments

Contact_Info: Contact person is Michael Andrews, (401) 222-2797 ext. 7140, michael.andrews@dem.ri.gov

Comments: The RIDEM Office of Waste Management has not established remediation standards for surface waters. All standards applied are established on a site specific basis. For more information specific to Surface Waters use the Water Quality Regulations as administered by the RIDEM Office of Water Resources. These regulations can be found at: <http://www.dem.ri.gov/pubs/regs/regs/water/h20qlty.pdf>

Drinking (Ingestion)

Basis:

Citation_Location: See Comments

Contact_Info: Contact person is Michael Andrews, (401) 222-2797 ext. 7140, michael.andrews@dem.ri.gov

Comments: The RIDEM Office of Waste Management has not established remediation standards for surface waters. All standards applied are established on a site specific basis. For more information specific to Surface Waters use the Water Quality Regulations as administered by the RIDEM Office of Water Resources. These regulations can be found at: <http://www.dem.ri.gov/pubs/regs/regs/water/h20qlty.pdf>

Ecological Risk

Basis:

Citation_Location: See Comments

Contact_Info: Contact person is Michael Andrews, (401) 222-2797 ext. 7140, michael.andrews@dem.ri.gov

Comments: The RIDEM Office of Waste Management has not established remediation standards for surface waters. All standards applied are established on a site specific basis. For more information specific to Surface Waters use the Water Quality Regulations as administered by the RIDEM Office of Water Resources. These regulations can be found at: <http://www.dem.ri.gov/pubs/regs/regs/water/h20qlty.pdf>

Fish Consumption

RHODE ISLAND

Name: Michael D. Andrews Contact_Title: Sanitary Engineer
 Organization: Office of Waste Management, Site Remediation
 Address / City: 235 Promenade Street, Providence, 02871
 Email: michael.andrews@dem.ri.gov Contact_Phone: (401) 862-5250

Regulatory

Basis:

Citation_Location: See Comments

Contact_Info: Contact person is Michael Andrews, (401) 222-2797 ext. 7140, michael.andrews@dem.ri.gov

Comments: The RIDEM Office of Waste Management has not established remediation standards for surface waters. All standards applied are established on a site specific basis. For more information specific to Surface Waters use the Water Quality Regulations as administered by the RIDEM Office of Water Resources. These regulations can be found at: <http://www.dem.ri.gov/pubs/regs/regs/water/h20qlty.pdf>

Basis:

Citation_Location: See Comments

Contact_Info: Contact person is Michael Andrews, (401) 222-2797 ext. 7140, michael.andrews@dem.ri.gov

Comments: The RIDEM Office of Waste Management has not established remediation standards for surface waters. All standards applied are established on a site specific basis. For more information specific to Surface Waters use the Water Quality Regulations as administered by the RIDEM Office of Water Resources. These regulations can be found at: <http://www.dem.ri.gov/pubs/regs/regs/water/h20qlty.pdf>

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Sediment

Ecological Risk

Basis:

Citation_Location: An Ecological Risk Assessment may be conducted in accordance with EPA/630/R-92/001, February 1992, Framework For Ecological Risk Assessment, or functional equivalent. Site Specific remedial objectives may be demonstrated through an Ecological Risk Assessment.

Contact_Info: Contact person is Richard Enander, (401) 222-6822 ext. 4411, richard.enander@dem.ri.gov

Comments: Remediation standards for sediment have not been established by RIDEM. All remediation standards with respect to sediment are developed on a site specific basis.

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

RHODE ISLAND

Name: Michael D. Andrews Contact_Title: Sanitary Engineer
 Organization: Office of Waste Management, Site Remediation
 Address / City: 235 Promenade Street, Providence, 02871
 Email: michael.andrews@dem.ri.gov Contact_Phone: (401) 862-5250

Not Specified

Soil

Ecological Risk

Basis: An Ecological Risk Assessment may be conducted in accordance with EPA/630/R-92/001, February 1992, Framework For Ecological Risk Assessment, or functional equivalent. Site Specific remedial objectives may be demonstrated through an Ecological Risk Assessment and are considered Method 3 Soil Objectives. For additional guidance see Section 8.0, Risk Management of the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases. These regulations are available at: <http://www.dem.ri.gov/pubs/regs/regs/waste/remreg04.pdf>

Citation_Location: None. Where applicable ecological risk based soil remediation standards will be developed on a site specific basis.

Contact_Info: Contact person is Richard Enander, (401) 222-6822 ext. 4411, richard.enander@dem.ri.gov

Comments: A complete list of RIDEM Regulations is available at : <http://www.dem.ri.gov/pubs/regs/index.htm#WM>

Impact to Surface Water

Basis:

Citation_Location: None. Where applicable, soil remediation standards for impacts to surface water will be developed on a site specific basis.

Contact_Info: Contact person is Michael Andrews, (401) 222-2797 ext. 7140, michael.andrews@dem.ri.gov

Comments: A complete list of RIDEM Regulations is available at : <http://www.dem.ri.gov/pubs/regs/index.htm#WM>

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Human Health Risk

Basis:

Citation_Location: None. Where applicable, sediment remediation standards with regard to human health risk will be developed on a site specific basis.

Contact_Info: Contact person is Michael Andrews, (401) 222-2797 ext. 7140, michael.andrews@dem.ri.gov

Comments: Remediation standards for sediment have not been established by RIDEM. All remediation standards with respect to sediment are developed on a site specific basis.

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

RHODE ISLAND

Name: Michael D. Andrews Contact_Title: Sanitary Engineer
 Organization: Office of Waste Management, Site Remediation
 Address / City: 235 Promenade Street, Providence, 02871
 Email: michael.andrews@dem.ri.gov Contact_Phone: (401) 862-5250

Guidelines

Soil

Direct Contact (Dermal)

Basis:

Citation_Location: Method 1 Soil Direct Exposure Criteria available in Table 1 at: <http://www.dem.ri.gov/pubs/regs/regs/waste/remreg04.pdf>

Contact_Info: Contact person is Michael Andrews, (401) 222-2797 ext. 7140, michael.andrews@dem.ri.gov

Comments: A complete list of RIDEM Regulations is available at : <http://www.dem.ri.gov/pubs/regs/index.htm#WM>

Impact to Groundwater

Basis:

Citation_Location: Soil Leachability Criteria for GA and GB Groundwater Classification Areas available in Table 2 at: <http://www.dem.ri.gov/pubs/regs/regs/waste/remreg04.pdf>

Contact_Info: Contact person is Michael Andrews, (401) 222-2797 ext. 7140, michael.andrews@dem.ri.gov

Comments: A complete list of RIDEM Regulations is available at : <http://www.dem.ri.gov/pubs/regs/index.htm#WM>

Ingestion

Basis: Additional resources regarding the ingestion components of the Direct Exposure Criteria are available in Appendix D of the above-referenced regulations.

Citation_Location: Method 1 Soil Direct Exposure Criteria available in Table 1 at: <http://www.dem.ri.gov/pubs/regs/regs/waste/remreg04.pdf>

Contact_Info: Contact person is Michael Andrews, (401) 222-2797 ext. 7140, michael.andrews@dem.ri.gov

Comments: A complete list of RIDEM Regulations is available at : <http://www.dem.ri.gov/pubs/regs/index.htm#WM>

Inhalation

Basis: Additional resources regarding the inhalation components of the Direct Exposure Criteria are available in Appendix D of the above-referenced regulations.

Citation_Location: Method 1 Soil Direct Exposure Criteria available in Table 1 at: <http://www.dem.ri.gov/pubs/regs/regs/waste/remreg04.pdf>

Contact_Info: Contact person is Michael Andrews, (401) 222-2797 ext. 7140, michael.andrews@dem.ri.gov

Comments: A complete list of RIDEM Regulations is available at : <http://www.dem.ri.gov/pubs/regs/index.htm#WM>

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Direct Contact (Dermal)

Basis:

Citation_Location: The RIDEM Office of Waste Management applies to the GA and GB Groundwater Objectives as defined in the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (as amended February 2004) as remediation standards at all sites. GA and GB Groundwater Objectives are available in Tables 3 and 4 at: <http://www.dem.ri.gov/pubs/regs/regs/waste/remreg04.pdf>

Contact_Info:

Comments: A complete list of RIDEM Regulations is available at : <http://www.dem.ri.gov/pubs/regs/index.htm#WM>

Discharge to Surface Water

RHODE ISLAND

Name: Michael D. Andrews Contact_Title: Sanitary Engineer
 Organization: Office of Waste Management, Site Remediation
 Address / City: 235 Promenade Street, Providence, 02871
 Email: michael.andrews@dem.ri.gov Contact_Phone: (401) 862-5250

Guidelines

Basis: For more information on RIDEM Groundwater Regulations, refer to the Rules and Regulations for Groundwater Quality. These regulations are available at <http://www.dem.ri.gov/pubs/regs/regs/water/gwqual05.pdf>

Citation_Location: The RIDEM Office of Waste Management applies to GA and GB Groundwater Objectives as defined in the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (as amended February 2004) as remediation standards at all sites. GA and GB Groundwater Objectives are available in Tables 3 and 4 at: <http://www.dem.ri.gov/pubs/regs/regs/waste/remreg04.pdf>

Contact_Info: Contact person is Ernie Panciera, (401) 222-4700 ext. 7603, ernie.panciera@dem.ri.gov

Comments: A complete list of RIDEM Regulations is available at : <http://www.dem.ri.gov/pubs/regs/index.htm#WM>

Drinking (Ingestion)

Basis: The Rhode Island Department of Health regulates public and private drinking water sources. For more information, refer to the Rules and Regulations Pertaining to Public Drinking Water at http://www.rules.state.ri.us/rules/released/pdf/DOH/DOH_3355.pdf

Citation_Location: The RIDEM Office of Waste Management applies the GA and GB Groundwater Objectives as defined in the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (as amended February 2004) as remediation standards at all sites. GA and GB Groundwater Objectives are available in Tables 3 and 4 at: <http://www.dem.ri.gov/pubs/regs/regs/waste/remreg04.pdf>

Contact_Info: Contact person for RIDOH Regulations is June Swallow, P.E., (401) 222-6867, junes@doh.state.ri.us

Comments: A complete list of RIDEM Regulations is available at : <http://www.dem.ri.gov/pubs/regs/index.htm#WM>

Other

Basis:

Citation_Location: The RIDEM GB Groundwater Objectives are based on a scientifically acceptable volatilization model as referenced in Appendix F of the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (as amended February 2004). This model incorporates site-specific information on the hazardous substances, hydrogeological conditions at the contaminated site, current and reasonably foreseeable building conditions, and demonstrates that contamination will not infiltrate to indoor air and result in significant risk of harm to human health or the environment.

Contact_Info:

Comments: A complete list of RIDEM Regulations is available at : <http://www.dem.ri.gov/pubs/regs/index.htm#WM>

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: The RIDEM Office of Waste Management has not established remediation standards for surface waters. All standards applied are established on a site specific basis. For more information specific to Surface Waters use the Water Quality Regulations as administered by the RIDEM Office of Water Resources. These regulations can be found at: <http://www.dem.ri.gov/pubs/regs/regs/water/h20qlty.pdf>

Contact_Info: Contact person is Michael Andrews, (401) 222-2797 ext. 7140, michael.andrews@dem.ri.gov

Comments: The RIDEM Office of Waste Management has not established remediation standards for surface waters. All standards applied are established on a site specific basis. For more information specific to Surface Waters use the Water Quality Regulations as administered by the RIDEM Office of Water Resources. These regulations can be found at: <http://www.dem.ri.gov/pubs/regs/regs/water/h20qlty.pdf>

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

RHODE ISLAND

Name: Michael D. Andrews Contact_Title: Sanitary Engineer
Organization: Office of Waste Management, Site Remediation
Address / City: 235 Promenade Street, Providence, 02871
Email: michael.andrews@dem.ri.gov Contact_Phone: (401) 862-5250

Guidelines

Vapor Intrusion

Other

Basis:

Citation_Location: The RIDEM Method 1 GB Groundwater Objectives are based on a scientifically acceptable volatilization model as referenced in Appendix F of the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (as amended February 2004). This model incorporates site-specific information on the hazardous substances, hydrogeological conditions at the contaminated site, current and reasonably foreseeable building conditions, and demonstrates that contamination will not infiltrate to indoor air and result in significant risk of harm to human health or the environment. GB Groundwater Objectives are available at: <http://www.dem.ri.gov/pubs/regs/regs/waste/remreg04.pdf>

Contact_Info: Contact person is Michael Andrews, (401) 222-2797 ext. 7140, michael.andrews@dem.ri.gov

Comments: A complete list of RIDEM Regulations is available at : <http://www.dem.ri.gov/pubs/regs/index.htm#WM>

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis:

Citation_Location: Ecological Risk Assessments may be conducted in accordance with EPA/630/R-92/001, February 1992, Framework For Ecological Risk Assessment.

Contact_Info: Contact person is Richard Enander, (401) 222-6822 ext. 4411, richard.enander@dem.ri.gov

Comments: Remediation standards for sediment have not been established by RIDEM. All remediation standards with respect to sediment are developed on a site specific basis.

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

SOUTH DAKOTA

Name: Mark Lawrensen Contact_Title: Superfund Program Manager
Organization: Ground Water Quality Program
Address / City: 523 East Capitol Avenue, Pierre, 57501
Email: mark.lawrensen@state.sd.us Contact_Phone: (605) 773-3296

Regulatory

Soil

Impact to Groundwater

Basis:

Citation_Location: <http://legis.state.sd.us/rules/DisplayRule.aspx?Rule=74:56>

Contact_Info: Joane Lineburg, SDDENR 773-3296

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Direct Contact (Dermal)

Basis:

Citation_Location: <http://legis.state.sd.us/statutes/DisplayStatute.aspx?Type=Statute&Statute=34A-12>

Contact_Info: Joane Lineburg, SDDENR 773-3296

Comments:

Discharge to Surface Water

Basis:

Citation_Location: <http://legis.state.sd.us/statutes/DisplayStatute.aspx?Type=Statute&Statute=34A-12>

Contact_Info: Joane Lineburg, SDDENR 773-3296

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: <http://legis.state.sd.us/statutes/DisplayStatute.aspx?Type=Statute&Statute=34A-12>

Contact_Info: Joane Lineburg, SDDENR 773-3296

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: <http://legis.state.sd.us/statutes/DisplayStatute.aspx?Type=Statute&Statute=34A-12>

Contact_Info: Patrick Snyder, SDDENR 773-3351

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: <http://legis.state.sd.us/statutes/DisplayStatute.aspx?Type=Statute&Statute=34A-12>

Contact_Info: Patrick Snyder, SDDENR 773-3351

Comments:

Ecological Risk

SOUTH DAKOTA

Name: Mark Lawrensen

Contact_Title: Superfund Program Manager

Organization: Ground Water Quality Program

Address / City: 523 East Capitol Avenue, Pierre, 57501

Email: mark.lawrensen@state.sd.us

Contact_Phone: (605) 773-3296

Regulatory

Basis:

Citation_Location: <http://legis.state.sd.us/statutes/DisplayStatute.aspx?Type=Statute&Statute=34A-12>

Contact_Info: Patrick Snyder, SDDENR 773-3351

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

SOUTH DAKOTA

Name: Mark Lawrensen

Contact_Title: Superfund Program Manager

Organization: Ground Water Quality Program

Address / City: 523 East Capitol Avenue, Pierre, 57501

Email: mark.lawrensen@state.sd.us

Contact_Phone: (605) 773-3296

Not Specified

Vapor Intrusion

Inhalation

Basis:

Citation_Location: No specific regulations, site-specific cleanup criteria will be developed as necessary.

Contact_Info:

Comments:

Other

Basis:

Citation_Location: No specific regulations, site-specific cleanup criteria will be developed as necessary.

Contact_Info:

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis:

Citation_Location: No specific regulations, site-specific cleanup criteria will be developed as necessary.

Contact_Info:

Comments:

Human Health Risk

Basis:

Citation_Location: No specific regulations, site-specific cleanup criteria will be developed as necessary.

Contact_Info:

Comments:

Other

Basis:

Citation_Location: No specific regulations, site-specific cleanup criteria will be developed as necessary.

Contact_Info:

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

SOUTH DAKOTA

Name: Mark Lawrensen Contact_Title: Superfund Program Manager
Organization: Ground Water Quality Program
Address / City: 523 East Capitol Avenue, Pierre, 57501
Email: mark.lawrensen@state.sd.us Contact_Phone: (605) 773-3296

Guidelines

Soil

Impact to Groundwater

Basis:

Citation_Location: <http://www.state.sd.us/denr/DES/Ground/Spills/Handbook.htm>

Contact_Info: Joane Lineburg, SDDENR 773-3296

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Direct Contact (Dermal)

Basis:

Citation_Location: <http://legis.state.sd.us/rules/DisplayRule.aspx?Rule=74:54>

Contact_Info:

Comments:

Discharge to Surface Water

Basis:

Citation_Location: <http://legis.state.sd.us/rules/DisplayRule.aspx?Rule=74:54>

Contact_Info:

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: <http://legis.state.sd.us/rules/DisplayRule.aspx?Rule=74:54>

Contact_Info:

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: <http://legis.state.sd.us/rules/DisplayRule.aspx?Rule=74:51>

Contact_Info: Patrick Snyder, SDDENR 773-3351

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: <http://legis.state.sd.us/rules/DisplayRule.aspx?Rule=74:51>

Contact_Info: Patrick Snyder, SDDENR 773-3351

Comments:

Ecological Risk

SOUTH DAKOTA

Name: Mark Lawrensen

Contact_Title: Superfund Program Manager

Organization: Ground Water Quality Program

Address / City: 523 East Capitol Avenue, Pierre, 57501

Email: mark.lawrensen@state.sd.us

Contact_Phone: (605) 773-3296

Guidelines

Basis:

Citation_Location: <http://legis.state.sd.us/rules/DisplayRule.aspx?Rule=74:51>

Contact_Info: Patrick Snyder, SDDENR 773-3351

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

TEXAS

Name: Chet Clarke Contact_Title: Manager, Technical Support Section
Organization: Remediation Division (Superfund, RCRA, LUST, Voluntary Cleanup)
Address / City: TCEQ MC-225, P.O. Box 13087, Austin, 787113087
Email: cclarke@tceq.state.tx.us Contact_Phone: (512) 239-2268

Regulatory

Soil

Direct Contact (Dermal)

Basis:

Citation_Location: Title 30 Texas Administrative Code Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>
350.72, 350.74(c), 350.75(i)(6)

Contact_Info: Chet Clarke, Paul Lewis, or Kip Haney

Comments:

Ecological Risk

Basis:

Citation_Location: Title 30 Texas Administrative Code Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>

Contact_Info: Larry Champagne or Vickie Reat

Comments:

Impact to Groundwater

Basis:

Citation_Location: Title 30 Texas Administrative Code Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>
350.72, 350.74(f), 350.75(i)(7)

Contact_Info: Chet Clarke, Paul Lewis, or Kip Haney

Comments:

Impact to Surface Water

Basis:

Citation_Location: Title 30 Texas Administrative Code Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>
350.72 and 350.74(h)

Contact_Info: Vickie Reat

Comments:

Ingestion

Basis:

Citation_Location: Title 30 Texas Administrative Code Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>
350.72, 350.74(c), 350.75(i)(6)

Contact_Info: Chet Clarke, Paul Lewis, or Kip Haney

Comments:

Inhalation

Basis:

Citation_Location: Title 30 Texas Administrative Code Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>
350.72, 350.74(b), 350.75(i)(6) and (8)

Contact_Info: Chet Clarke, Paul Lewis, or Kip Haney

Comments:

Other

TEXAS

Name: Chet Clarke Contact_Title: Manager, Technical Support Section
 Organization: Remediation Division (Superfund, RCRA, LUST, Voluntary Cleanup)
 Address / City: TCEQ MC-225, P.O. Box 13087, Austin, 787113087
 Email: cclarke@tceq.state.tx.us Contact_Phone: (512) 239-2268

Regulatory

Basis:

Citation_Location: Title 30 Texas Administrative Code Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>
 350.74(e)

Contact_Info: Kip Haney

Comments: "Other" denotes the vegetable consumption pathway. Cumulative risk for multiple chemicals acting through a single pathway is 1E-4. The hazard quotient is 1. Soil ingestion, dermal contact, inhalation of volatiles and particulates, and consumption of aboveground and below ground vegetables are combined for surface soil (residential: soils 0-15 feet, Com/Ind: soils 0-5 feet. For groundwater ingestion, risk-based values are derived for only chemicals that lack a federal MCL.

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Discharge to Surface Water

Basis:

Citation_Location: Title 30 Texas Administrative Code Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>

Contact_Info: Vickie Reat

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: Title 30 Texas Administrative Code Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>
 350.72, 350.74(f), 350.75(i)(7)

Contact_Info: Chet Clarke, Paul Lewis, or Kip Haney

Comments:

Other

Basis:

Citation_Location: Title 30 Texas Administrative Code Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>
 350.72, 350.74(b), 350.75(i)(7)

Contact_Info: Chet Clarke, Paul Lewis, or Kip Haney

Comments: "Other" denotes the groundwater chemicals volatilizing to outdoor air and then human inhalation. Cumulative risk for multiple chemicals acting through a single pathway is 1E-4. The hazard quotient is 1. For groundwater ingestion, risk-based values are derived for only chemicals that lack a federal MCL.

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:

Citation_Location: Title 30 Texas Administrative Code Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>

Contact_Info: Larry Champagne or Vickie Reat

Comments:

TEXAS

Name: Chet Clarke Contact_Title: Manager, Technical Support Section
 Organization: Remediation Division (Superfund, RCRA, LUST, Voluntary Cleanup)
 Address / City: TCEQ MC-225, P.O. Box 13087, Austin, 787113087
 Email: cclarke@tceq.state.tx.us Contact_Phone: (512) 239-2268

Regulatory

Basis:

Citation_Location: Title 30 Texas Administrative Code Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>
 350.72, 350.74(h)

Contact_Info: Vickie Reat

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: Title 30 Texas Administrative Code (TAC) Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>, 30 TAC 307
 350.72, 350.74(f), 350.74(h)

Contact_Info: Vickie Reat

Comments:

Fish Consumption

Basis:

Citation_Location: Title 30 Texas Administrative Code (TAC) Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>, 30 TAC 307

Contact_Info: Vickie Reat

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis:

Citation_Location: Title 30 Texas Administrative Code Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>

Contact_Info: Larry Champagne or Vickie Reat

Comments: Cumulative risk for multiple chemicals acting through a single pathway is 1E-4. The hazard quotient is 1.

Human Health Risk

Basis:

Citation_Location: Title 30 Texas Administrative Code Chapter 350, <http://www.tceq.state.tx.us/remediation/trrp/trrprule.html>
 350.72, 350.74(h)

Contact_Info: Vickie Reat

Comments: Cumulative risk for multiple chemicals acting through a single pathway is 1E-4. The hazard quotient is 1.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

TEXAS

Name: Chet Clarke

Contact_Title: Manager, Technical Support Section

Organization: Remediation Division (Superfund, RCRA, LUST, Voluntary Cleanup)

Address / City: TCEQ MC-225, P.O. Box 13087, Austin, 787113087

Email: cclarke@tceq.state.tx.us

Contact_Phone: (512) 239-2268

Guidelines

Soil

Direct Contact (Dermal)

Basis:

Citation_Location: TRRP-18, TRRP-22, <http://www.tceq.state.tx.us/remediation/trrp/guidance.html>

Contact_Info: Chet Clarke, Paul Lewis, or Kip Haney

Comments:

Ecological Risk

Basis:

Citation_Location: RG-263 and associated guidance, <http://www.tceq.state.tx.us/remediation/eco/eco.html>

Contact_Info: Larry Champagne or Vickie Reat

Comments:

Impact to Groundwater

Basis:

Citation_Location: TRRP-18, TRRP-22, <http://www.tceq.state.tx.us/remediation/trrp/guidance.html>

Contact_Info: Chet Clarke, Paul Lewis, or Kip Haney

Comments:

Impact to Surface Water

Basis:

Citation_Location: TRRP-18, TRRP-24, <http://www.tceq.state.tx.us/remediation/trrp/guidance.html>

Contact_Info: Vickie Reat

Comments:

Ingestion

Basis:

Citation_Location: TRRP-18, TRRP-22, <http://www.tceq.state.tx.us/remediation/trrp/guidance.html>

Contact_Info: Chet Clarke, Paul Lewis, or Kip Haney

Comments:

Inhalation

Basis:

Citation_Location: TRRP-18, TRRP-22, <http://www.tceq.state.tx.us/remediation/trrp/guidance.html>

Contact_Info: Chet Clarke, Paul Lewis, or Kip Haney

Comments:

Other

Basis:

Citation_Location: TRRP-18, TRRP-22, <http://www.tceq.state.tx.us/remediation/trrp/guidance.html>

Contact_Info: Chet Clarke, Paul Lewis, or Kip Haney

Comments: "Other" denotes the vegetable consumption pathway. Cumulative risk for multiple chemicals acting through a single pathway is 1E-4. The hazard quotient is 1. Soil ingestion, dermal contact, inhalation of volatiles and particulates, and consumption of aboveground and below ground vegetables are combined for surface soil (residential: soils 0-15 feet, Com/Ind: soils 0-5 feet. For groundwater ingestion, risk-based values are derived for only chemicals that lack a federal MCL.

TEXAS

Name: Chet Clarke Contact_Title: Manager, Technical Support Section
 Organization: Remediation Division (Superfund, RCRA, LUST, Voluntary Cleanup)
 Address / City: TCEQ MC-225, P.O. Box 13087, Austin, 787113087
 Email: cclarke@tceq.state.tx.us Contact_Phone: (512) 239-2268

Guidelines

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Discharge to Surface Water

Basis:
 Citation_Location: TRRP-18, TRRP-24, <http://www.tceq.state.tx.us/remediation/trrp/guidance.html>
 Contact_Info: Vickie Reat
 Comments:

Drinking (Ingestion)

Basis:
 Citation_Location: TRRP-18, TRRP-22, <http://www.tceq.state.tx.us/remediation/trrp/guidance.html>
 Contact_Info: Chet Clarke, Paul Lewis, or Kip Haney
 Comments:

Other

Basis:
 Citation_Location: TRRP-18, TRRP-22, <http://www.tceq.state.tx.us/remediation/trrp/guidance.html>
 Contact_Info: Chet Clarke, Paul Lewis, or Kip Haney
 Comments: "Other" denotes the groundwater chemicals volatilizing to outdoor air and then human inhalation. Cumulative risk for multiple chemicals acting through a single pathway is 1E-4. The hazard quotient is 1. For groundwater ingestion, risk-based values are derived for only chemicals that lack a federal MCL.

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Direct Contact (Dermal)

Basis:
 Citation_Location: TRRP-18, TRRP-24, <http://www.tceq.state.tx.us/remediation/trrp/guidance.html>
 Contact_Info: Vickie Reat
 Comments:

Basis:
 Citation_Location: RG-263 and associated guidance, <http://www.tceq.state.tx.us/remediation/eco/eco.html>
 Contact_Info: Larry Champagne or Vickie Reat
 Comments:

Drinking (Ingestion)

Basis:
 Citation_Location: TRRP-18, TRRP-24, <http://www.tceq.state.tx.us/remediation/trrp/guidance.html>, Procedures to Implement the Texas Surface Water Quality Standards, http://www.tceq.state.tx.us/comm_exec/forms_pubs/pubs/rg-rg-194.html
 Contact_Info: Vickie Reat
 Comments:

Fish Consumption

TEXAS

Name: Chet Clarke Contact_Title: Manager, Technical Support Section
Organization: Remediation Division (Superfund, RCRA, LUST, Voluntary Cleanup)
Address / City: TCEQ MC-225, P.O. Box 13087, Austin, 787113087
Email: cclarke@tceq.state.tx.us Contact_Phone: (512) 239-2268

Guidelines

Basis:

Citation_Location: TRRP-18, TRRP-24, <http://www.tceq.state.tx.us/remediation/trrp/guidance.html>, Procedures to Implement the Texas Surface Water Quality Standards, http://www.tceq.state.tx.us/comm_exec/forms_pubs/pubs/rg/rg-194.html

Contact_Info: Vickie Reat

Comments:

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis:

Citation_Location: RG-263 and associated guidance, <http://www.tceq.state.tx.us/remediation/eco/eco.html>

Contact_Info: Larry Champagne or Vickie Reat

Comments: Cumulative risk for multiple chemicals acting through a single pathway is 1E-4. The hazard quotient is 1.

Human Health Risk

Basis:

Citation_Location: TRRP-18, TRRP-24, <http://www.tceq.state.tx.us/remediation/trrp/guidance.html>

Contact_Info: Vickie Reat

Comments: Cumulative risk for multiple chemicals acting through a single pathway is 1E-4. The hazard quotient is 1.

RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

UTAH

Name: Scott Everett

Contact_Title: Toxicologist

Organization: Voluntary Cleanup Program

Address / City:

Email: Severett@utah.gov

Contact_Phone: (801) 536-4117

Regulatory

Groundwater

Direct Contact (Dermal)

Basis:

Citation_Location: Regulations currently being drafted

Contact_Info: Contact person is Scott Everett, (801) 536-4117, Severett@utah.gov

Comments:

Drinking (Ingestion)

Basis:

Citation_Location: Regulations currently being drafted for Brownfields/VCP. For UST Program, R311-211 Utah Admin. Code (Pending Approval) Interested party may review document at http://www.undergroundtanks.utah.gov/prop_rules.htm. Rule is estimated to be final in the summer of 2006.

Contact_Info: Contact person is Scott Everett, (801) 536-4117, Severett@utah.gov

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Surface Water

Drinking (Ingestion)

Basis:

Citation_Location: Regulations currently being drafted

Contact_Info: Contact person is Scott Everett, (801) 536-4117, Severett@utah.gov

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Not Specified

Soil

Impact to Groundwater

Basis:

Citation_Location: Regulations currently being drafted for Brownfields/VCP. For UST program, R311-211 Utah Admin. Code (Pending Approval) Interested party may review document at http://www.undergroundtanks.utah.gov/prop_rules.htm. Rule is estimated to be final in the summer of 2006.

Contact_Info: Contact person is Scott Everett, (801) 536-4117, Severett@utah.gov

Comments:

Ingestion

Basis:

Citation_Location: Regulations currently being drafted

Contact_Info: Contact person is Scott Everett, (801) 536-4117, Severett@utah.gov

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

UTAH

Name: Scott Everett

Contact_Title: Toxicologist

Organization: Voluntary Cleanup Program

Address / City:

Email: Severett@utah.gov

Contact_Phone: (801) 536-4117

Guidelines

Soil

Ecological Risk

Basis:

Citation_Location: Guidelines currently under review

Contact_Info: Contact person is Scott Everett, (801) 536-4117, Severett@utah.gov

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Ecological Risk

Basis:

Citation_Location: Guidelines currently under review

Contact_Info: Contact person is Scott Everett, (801) 536-4117, Severett@utah.gov

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis:

Citation_Location: Guidelines currently under review

Contact_Info: Contact person is Scott Everett, (801) 536-4117, Severett@utah.gov

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Ecological Risk

Basis:

Citation_Location: Guidelines currently under review

Contact_Info: Contact person is Scott Everett, (801) 536-4117, Severett@utah.gov

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

VIRGINIA

Name: Pat McMurray Contact_Title: Toxicologist
 Organization: Department of Environmental Quality
 Address / City:
 Email: pamcmurray@deq.virginia.gov Contact_Phone: (804) 698-4186

Regulatory

Soil

Direct Contact (Dermal)

Basis: * see note below
 Citation_Location: N/A
 Contact_Info:
 Comments: The above applies to the Voluntary Remediation Program only. In Virginia, there are no statewide numerical standards established by regulation or by guidance for the above media. Specific criteria or performance standards are implemented on a program specific basis. For UST see the DEQ Storage Tank Program Technical Manual at <http://www.deq.state.va.us/tanks/dwnllib.html#techmanfiles>. Contact jsbarnett@deq.virginia.gov. For RCRA Subtitle C, the federal regulations are adopted by reference. For Solid Waste DEQ uses Subtitle D federal criteria and guidance. Contact skthirunagari@deq.virginia.gov program specific basis.

Ecological Risk

Basis: * see note below
 Citation_Location: 9VAC20-160-90
 Contact_Info: klgreene@deq.virginia.gov
 Comments: The above applies to the Voluntary Remediation Program only. In Virginia, there are no statewide numerical standards established by regulation or by guidance for the above media. Specific criteria or performance standards are implemented on a program specific basis. For UST see the DEQ Storage Tank Program Technical Manual at <http://www.deq.state.va.us/tanks/dwnllib.html#techmanfiles>. Contact jsbarnett@deq.virginia.gov. For RCRA Subtitle C, the federal regulations are adopted by reference. For Solid Waste DEQ uses Subtitle D federal criteria and guidance. Contact skthirunagari@deq.virginia.gov program specific basis.

Impact to Groundwater

Basis: MCL supercedes risk-based
 Citation_Location: 9VAC20-160-90
 Contact_Info: klgreene@deq.virginia.gov
 Comments: In Virginia, there are no statewide numerical standards established by regulation or by guidance for the above media. Specific criteria or performance standards are implemented on a program specific basis.

Impact to Surface Water

Basis: Water Quality Standards. 9 VAC 25-260-140.
 Citation_Location: 9VAC20-160-90
 Contact_Info: klgreene@deq.virginia.gov
 Comments: In Virginia, there are no statewide numerical standards established by regulation or by guidance for the above media. Specific criteria or performance standards are implemented on a program specific basis.

Ingestion

Basis: * See Note Below.
 Citation_Location: 9VAC20-160-90
 Contact_Info: klgreene@deq.virginia.gov
 Comments: The above applies to the Voluntary Remediation Program only. In Virginia, there are no statewide numerical standards established by regulation or by guidance for the above media. Specific criteria or performance standards are implemented on a program specific basis. For UST see the DEQ Storage Tank Program Technical Manual at <http://www.deq.state.va.us/tanks/dwnllib.html#techmanfiles>. Contact jsbarnett@deq.virginia.gov. For RCRA Subtitle C, the federal regulations are adopted by reference. For Solid Waste DEQ uses Subtitle D federal criteria and guidance. Contact skthirunagari@deq.virginia.gov program specific basis.

Inhalation

VIRGINIA

Name: Pat McMurray Contact_Title: Toxicologist
 Organization: Department of Environmental Quality
 Address / City:
 Email: pamcmurray@deq.virginia.gov Contact_Phone: (804) 698-4186

Regulatory

Basis: The above applies to the Voluntary Remediation Program only. In Virginia, there are no statewide numerical standards established by regulation or by guidance for the above media. Specific criteria or performance standards are implemented on a program specific basis. For UST see the DEQ Storage Tank Program Technical Manual at <http://www.deq.state.va.us/tanks/dwnllib.html#techmanfiles>. Contact jsbarnett@deq.virginia.gov. For RCRA Subtitle C, the federal regulations are adopted by reference. For Solid Waste DEQ uses Subtitle D federal criteria and guidance. Contact skthirunagari@deq.virginia.gov program specific basis.

Citation_Location: 9VAC20-160-90

Contact_Info: klgreene@deq.virginia.gov

Comments: In Virginia, there are no statewide numerical standards established by regulation or by guidance for the above media. Specific criteria or performance standards are implemented on a program specific basis.

Other

Basis: * see note below

Citation_Location: N/A

Contact_Info:

Comments: The above applies to the Voluntary Remediation Program only. In Virginia, there are no statewide numerical standards established by regulation or by guidance for the above media. Specific criteria or performance standards are implemented on a program specific basis. For UST see the DEQ Storage Tank Program Technical Manual at <http://www.deq.state.va.us/tanks/dwnllib.html#techmanfiles>. Contact jsbarnett@deq.virginia.gov. For RCRA Subtitle C, the federal regulations are adopted by reference. For Solid Waste DEQ uses Subtitle D federal criteria and guidance. Contact skthirunagari@deq.virginia.gov program specific basis.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Direct Contact (Dermal)

Basis: * see note below

Citation_Location: N/A

Contact_Info:

Comments: The above applies to the Voluntary Remediation Program only. In Virginia, there are no statewide numerical standards established by regulation or by guidance for the above media. Specific criteria or performance standards are implemented on a program specific basis. For UST see the DEQ Storage Tank Program Technical Manual at <http://www.deq.state.va.us/tanks/dwnllib.html#techmanfiles>. Contact jsbarnett@deq.virginia.gov. For RCRA Subtitle C, the federal regulations are adopted by reference. For Solid Waste DEQ uses Subtitle D federal criteria and guidance. Contact skthirunagari@deq.virginia.gov

Discharge to Surface Water

Basis: Water Quality Standards. 9 VAC 25-260-140.

Citation_Location: 9VAC20-160-90

Contact_Info: klgreene@deq.virginia.gov

Comments:

Drinking (Ingestion)

Basis: MCL supercedes risk-based

Citation_Location: 9VAC20-160-90

Contact_Info:

Comments:

Other

VIRGINIA

Name: Pat McMurray Contact_Title: Toxicologist
 Organization: Department of Environmental Quality
 Address / City:
 Email: pamcmurray@deq.virginia.gov Contact_Phone: (804) 698-4186

Regulatory

Basis: * see note below
 Citation_Location: N/A
 Contact_Info: The above applies to the Voluntary Remediation Program only. In Virginia, there are no statewide numerical standards established by regulation or by guidance for the above media. Specific criteria or performance standards are implemented on a program specific basis. For UST see the DEQ Storage Tank Program Technical Manual at <http://www.deq.state.va.us/tanks/dwnlib.html#techmanfiles>. Contact jsbarnett@deq.virginia.gov. For RCRA Subtitle C, the federal regulations are adopted by reference. For Solid Waste DEQ uses Subtitle D federal criteria and guidance. Contact skthirunagari@deq.virginia.gov

Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Surface Water

Drinking (Ingestion)

Basis: MCL supercedes risk-based
 Citation_Location: 9VAC20-160-90
 Contact_Info:
 Comments:

Ecological Risk

Basis: Water Quality Standards. 9 VAC 25-260-140.
 Citation_Location: 9VAC20-160-90
 Contact_Info: klgreene@deq.virginia.gov
 Comments:

Fish Consumption

Basis: Water Quality Standards. 9 VAC 25-260-140.
 Citation_Location: 9VAC20-160-90
 Contact_Info: klgreene@deq.virginia.gov
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Not Specified

Sediment

Human Health Risk

Basis:
 Citation_Location: www.deq.virginia.gov/vrprisk/tables.html
 Contact_Info: pamcmurray@deq.virginia.gov
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

VIRGINIA

Name: Pat McMurray Contact_Title: Toxicologist
 Organization: Department of Environmental Quality
 Address / City:
 Email: pamcmurray@deq.virginia.gov Contact_Phone: (804) 698-4186

Guidelines

Soil

Impact to Groundwater

Basis: MCL supercedes risk-based
 Citation_Location: www.deq.virginia.gov/vrprisk/tables.html
 Contact_Info: pamcmurray@deq.virginia.gov
 Comments:

Ingestion

Basis: (HQ for screening =0.1)
 Citation_Location: www.deq.virginia.gov/vrprisk/tables.html
 Contact_Info: pamcmurray@deq.virginia.gov
 Comments:

Inhalation

Basis: (HQ for screening =0.1)
 Citation_Location: www.deq.virginia.gov/vrprisk/tables.html
 Contact_Info: pamcmurray@deq.virginia.gov
 Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Groundwater

Direct Contact (Dermal)

Basis: HQ=0.1 for screening; MCL supercedes risk-based
 Citation_Location: www.deq.virginia.gov/vrprisk/tables.html
 Contact_Info: pamcmurray@deq.virginia.gov
 Comments:

Discharge to Surface Water

Basis:
 Citation_Location: N/A
 Contact_Info:
 Comments: The above applies to the Voluntary Remediation Program only. In Virginia, there are no statewide numerical standards established by regulation or by guidance for the above media. Specific criteria or performance standards are implemented on a program specific basis. For UST see the DEQ Storage Tank Program Technical Manual at <http://www.deq.state.va.us/tanks/dwnllib.html#techmanfiles>. Contact jsbarnett@deq.virginia.gov. For RCRA Subtitle C, the federal regulations are adopted by reference. For Solid Waste DEQ uses Subtitle D federal criteria and guidance. Contact skthirunagari@deq.virginia.gov

Drinking (Ingestion)

Basis: HQ=0.1 for screening; MCL supercedes risk-based
 Citation_Location: www.deq.virginia.gov/vrprisk/tables.html
 Contact_Info: pamcmurray@deq.virginia.gov
 Comments: In Virginia, there are no statewide numerical standards established by regulation or by guidance for the above media. Specific criteria or performance standards are implemented on a program specific basis.

Other

VIRGINIA

Name: Pat McMurray Contact_Title: Toxicologist
 Organization: Department of Environmental Quality
 Address / City:
 Email: pamcmurray@deq.virginia.gov Contact_Phone: (804) 698-4186

Guidelines

Basis: see VRP risk assessment guidance for screening levels for construction worker exposure and vapor intrusion

Citation_Location: www.deq.virginia.gov/vrprisk/tables.html

Contact_Info: pamcmurray@deq.virginia.gov

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Surface Water

Drinking (Ingestion)

Basis: WQS used for screening; federal criteria used when Virginia WQS not available

Citation_Location: www.deq.virginia.gov/vrprisk/tables.html

Contact_Info: pamcmurray@deq.virginia.gov

Comments:

Ecological Risk

Basis: WQS used for screening; federal criteria used when Virginia WQS not available

Citation_Location: www.deq.virginia.gov/vrprisk/tables.html

Contact_Info: pamcmurray@deq.virginia.gov

Comments:

Fish Consumption

Basis: WQS used for screening; federal criteria used when Virginia WQS not available

Citation_Location: www.deq.virginia.gov/vrprisk/tables.html

Contact_Info: pamcmurray@deq.virginia.gov

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Vapor Intrusion

Inhalation

Basis: HQ=0.1for screening; screening levels are for soil vapor and groundwater; VRP uses EPA Region III RBC for indoor air screening level.

Citation_Location: www.deq.virginia.gov/vrprisk/tables.html

Contact_Info: pamcmurray@deq.virginia.gov

Comments: In Virginia, there are no statewide numerical standards established by regulation or by guidance for the above media. Specific criteria or performance standards are implemented on a program specific basis.

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

WISCONSIN

Name: Aristeo M. Pelayo Contact_Title: Hydrogeologist
 Organization: Remediation and Redevelopment
 Address / City: WDNR, RR/3, PO Box 7921, Madison, 53707
 Email: Aristeo.Pelayo@dnr.state.wi.us Contact_Phone: (608) 267-3539

Regulatory**Soil***Ecological Risk*

Basis: Site-specific
 Citation_Location: NR 720.19(6), wis. Adm. Code
 Contact_Info:
 Comments: The administrative code on soil cleanup in WI is available at: <http://www.legis.state.wi.us/rsb/code/nr/nr720.pdf>. WI sites are classified either as: non-industrial or industrial. In determining generic non-industrial direct-contact soil cleanup levels that require almost no review on the part of the WDNR, default values of 1.e-07 TCR and 0.2 THQ are used. The generic direct-contact soil cleanup level that applies at a site will be the least of the levels determined from the different d-c pathways. However, site-specific (i.e., requiring WDNR review) cleanup levels can use up to 1.e-06 TCR, and the hazard index (sum of THQs) must not exceed 1. These latter direct-contact constraints of 1.e-06 TCR and 1.0 HI apply to soil cleanup at industrial sites as well. To determine groundwater-protective soil levels, the basis is the regulatory PAL concentrations in groundwater, and this basis is the same for non-industrial and industrial sites.

Impact to Groundwater

Basis: Regulatory basis is Preventive Action Limits (PALs) in groundwater tabulated in NR 140, Wis. Adm. Code. PALs are based on 1.e-07 TCR or 0.2 THQ.
 Citation_Location: NR 720.19(4), Wis. Adm. Code
 Contact_Info: Aristeo.Pelayo@dnr.state.wi.us
 Comments: The administrative code on soil cleanup in WI is available at: <http://www.legis.state.wi.us/rsb/code/nr/nr720.pdf>. WI sites are classified either as: non-industrial or industrial. In determining generic non-industrial direct-contact soil cleanup levels that require almost no review on the part of the WDNR, default values of 1.e-07 TCR and 0.2 THQ are used. The generic direct-contact soil cleanup level that applies at a site will be the least of the levels determined from the different d-c pathways. However, site-specific (i.e., requiring WDNR review) cleanup levels can use up to 1.e-06 TCR, and the hazard index (sum of THQs) must not exceed 1. These latter direct-contact constraints of 1.e-06 TCR and 1.0 HI apply to soil cleanup at industrial sites as well. To determine groundwater-protective soil levels, the basis is the regulatory PAL concentrations in groundwater, and this basis is the same for non-industrial and industrial sites.

Impact to Surface Water

Basis: Site-specific
 Citation_Location: NR 720.19(6), wis. Adm. Code
 Contact_Info:
 Comments: The administrative code on soil cleanup in WI is available at: <http://www.legis.state.wi.us/rsb/code/nr/nr720.pdf>. WI sites are classified either as: non-industrial or industrial. In determining generic non-industrial direct-contact soil cleanup levels that require almost no review on the part of the WDNR, default values of 1.e-07 TCR and 0.2 THQ are used. The generic direct-contact soil cleanup level that applies at a site will be the least of the levels determined from the different d-c pathways. However, site-specific (i.e., requiring WDNR review) cleanup levels can use up to 1.e-06 TCR, and the hazard index (sum of THQs) must not exceed 1. These latter direct-contact constraints of 1.e-06 TCR and 1.0 HI apply to soil cleanup at industrial sites as well. To determine groundwater-protective soil levels, the basis is the regulatory PAL concentrations in groundwater, and this basis is the same for non-industrial and industrial sites.

Ingestion

Basis: HI (= sum of target hazard quotients) must not exceed 1.
 Citation_Location: NR 720.19(5), Wis. Adm. Code
 Contact_Info: Aristeo.Pelayo@dnr.state.wi.us
 Comments: The administrative code on soil cleanup in WI is available at: <http://www.legis.state.wi.us/rsb/code/nr/nr720.pdf>. WI sites are classified either as: non-industrial or industrial. In determining generic non-industrial direct-contact soil cleanup levels that require almost no review on the part of the WDNR, default values of 1.e-07 TCR and 0.2 THQ are used. The generic direct-contact soil cleanup level that applies at a site will be the least of the levels determined from the different d-c pathways. However, site-specific (i.e., requiring WDNR review) cleanup levels can use up to 1.e-06 TCR, and the hazard index (sum of THQs) must not exceed 1. These latter direct-contact constraints of 1.e-06 TCR and 1.0 HI apply to soil cleanup at industrial sites as well. To determine groundwater-protective soil levels, the basis is the regulatory PAL concentrations in groundwater, and this basis is the same for non-industrial and industrial sites.

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Regulatory

Inhalation

Basis: HI (= sum of target hazard quotients) must not exceed 1.
 Citation_Location: NR 720.19(5), Wis. Adm. Code
 Contact_Info: Aristeo.Pelayo@dnr.state.wi.us
 Comments: The administrative code on soil cleanup in WI is available at: <http://www.legis.state.wi.us/rsb/code/nr/nr720.pdf>. WI sites are classified either as: non-industrial or industrial. In determining generic non-industrial direct-contact soil cleanup levels that require almost no review on the part of the WDNR, default values of 1.e-07 TCR and 0.2 THQ are used. The generic direct-contact soil cleanup level that applies at a site will be the least of the levels determined from the different d-c pathways. However, site-specific (i.e., requiring WDNR review) cleanup levels can use up to 1.e-06 TCR, and the hazard index (sum of THQs) must not exceed 1. These latter direct-contact constraints of 1.e-06 TCR and 1.0 HI apply to soil cleanup at industrial sites as well. To determine groundwater-protective soil levels, the basis is the regulatory PAL concentrations in groundwater, and this basis is the same for non-industrial and industrial sites.

Other

Basis: Particulate Inhalation
 Citation_Location: NR 720.19(5), Wis. Adm. Code
 Contact_Info: Aristeo.Pelayo@dnr.state.wi.us
 Comments: The administrative code on soil cleanup in WI is available at: <http://www.legis.state.wi.us/rsb/code/nr/nr720.pdf>. WI sites are classified either as: non-industrial or industrial. In determining generic non-industrial direct-contact soil cleanup levels that require almost no review on the part of the WDNR, default values of 1.e-07 TCR and 0.2 THQ are used. The generic direct-contact soil cleanup level that applies at a site will be the least of the levels determined from the different d-c pathways. However, site-specific (i.e., requiring WDNR review) cleanup levels can use up to 1.e-06 TCR, and the hazard index (sum of THQs) must not exceed 1. These latter direct-contact constraints of 1.e-06 TCR and 1.0 HI apply to soil cleanup at industrial sites as well. To determine groundwater-protective soil levels, the basis is the regulatory PAL concentrations in groundwater, and this basis is the same for non-industrial and industrial sites.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
- SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Discharge to Surface Water

Basis:
 Citation_Location: Per s. NR 140.02 (4), Wis. Adm. Code, WI state surface water quality standards apply to groundwater discharge to surface water
 Contact_Info:
 Comments: The administrative code containing established WI state groundwater quality standards, NR 140, Wis. Adm. Code, is available at: <http://www.legis.state.wi.us/rsb/code/nr/nr140.pdf>. State groundwater quality standards for substances of public health concern are listed in Table 1 of NR 140.

Drinking (Ingestion)

Basis:
 Citation_Location: Enforcement Standards in Table 1 of NR 140, Wis. Adm. Code
 Contact_Info: William.Phelps@dnr.state.wi.us
 Comments: The administrative code containing established WI state groundwater quality standards, NR 140, Wis. Adm. Code, is available at: <http://www.legis.state.wi.us/rsb/code/nr/nr140.pdf>. State groundwater quality standards for substances of public health concern are listed in Table 1 of NR 140.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
- SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

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Contact_Phone: (608) 267-3539

Regulatory

Surface Water

Drinking (Ingestion)

Basis:

Citation_Location: Ambient Water Quality Criteria NR 105.09 (4)a, use NR809 MCL if lower and water is classified as a drinking water source.

Contact_Info:

Comments:

Fish Consumption

Basis:

Citation_Location: NR 105.08 for non-carcinogens and NR 105.09 for carcinogens

Contact_Info:

Comments:

Other

Basis: Based on ingestion during Swimming and other Recreational uses

Citation_Location: NR 105.08 for non-carcinogens and NR 105.09 for carcinogens

Contact_Info:

Comments:

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

Vapor Intrusion

Inhalation

Basis:

Citation_Location: Vapor migration is a contaminant migration pathway that needs to be evaluated like other pathways, and is required by s. NR 716.11(5)(a) and (b).

Contact_Info: Theresa.Evanson@dnr.state.wi.us

Comments: Investigation and cleanup of vapor intrusion impacts of indoor air target a one in one million increased cancer risk or hazard index of 1.0. Initial default exposure assumptions and the resulting target concentrations are consistent with the EPA Region III Risk Based Concentration Table entry for Ambient Air Quality. Background concentrations (e.g. benzene) and site specific exposure assumptions may be considered when appropriate.

- RCRA_CA
 Brownfields
 DrinkingWater
 SurfaceWater
 AirQuality (Clean Air Act)
 SolidWsteLndfill
 VoluntaryClnUp
 SafeDrinkingWaterAct
 UST
 WetlandsProgram
 Other

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Guidelines

Soil

Direct Contact (Dermal)

Basis: Direct dermal contact levels should not exceed the ingestion-pathway levels.
Citation_Location: <http://www.dnr.wi.gov/org/aw/rr/archives/pubs/RR682.pdf>
Contact_Info: Aristeo.Pelayo@dnr.state.wi.us
Comments: The administrative code on soil cleanup in WI is available at: <http://www.legis.state.wi.us/rsb/code/nr/nr720.pdf>. WI sites are classified either as: non-industrial or industrial. In determining generic non-industrial direct-contact soil cleanup levels that require almost no review on the part of the WDNR, default values of 1.e-07 TCR and 0.2 THQ are used. The generic direct-contact soil cleanup level that applies at a site will be the least of the levels determined from the different d-c pathways. However, site-specific (i.e., requiring WDNR review) cleanup levels can use up to 1.e-06 TCR, and the hazard index (sum of THQs) must not exceed 1. These latter direct-contact constraints of 1.e-06 TCR and 1.0 HI apply to soil cleanup at industrial sites as well. To determine groundwater-protective soil levels, the basis is the regulatory PAL concentrations in groundwater, and this basis is the same for non-industrial and industrial sites.

Impact to Groundwater

Basis: SPLP may be used to determine soil levels protective of groundwater-quality.
Citation_Location: <http://www.dnr.wi.gov/org/aw/rr/archives/pubs/RR523.pdf>
Contact_Info: Aristeo.Pelayo@dnr.state.wi.us
Comments: The administrative code on soil cleanup in WI is available at: <http://www.legis.state.wi.us/rsb/code/nr/nr720.pdf>. WI sites are classified either as: non-industrial or industrial. In determining generic non-industrial direct-contact soil cleanup levels that require almost no review on the part of the WDNR, default values of 1.e-07 TCR and 0.2 THQ are used. The generic direct-contact soil cleanup level that applies at a site will be the least of the levels determined from the different d-c pathways. However, site-specific (i.e., requiring WDNR review) cleanup levels can use up to 1.e-06 TCR, and the hazard index (sum of THQs) must not exceed 1. These latter direct-contact constraints of 1.e-06 TCR and 1.0 HI apply to soil cleanup at industrial sites as well. To determine groundwater-protective soil levels, the basis is the regulatory PAL concentrations in groundwater, and this basis is the same for non-industrial and industrial sites.

Ingestion

Basis: If the resulting direct-contact level exceeds the soil saturation concentration (C_{sat}), then C_{sat} will become the basis for cleanup
Citation_Location: <http://www.dnr.wi.gov/org/aw/rr/archives/pubs/RR682.pdf>
Contact_Info: Aristeo.Pelayo@dnr.state.wi.us
Comments: The administrative code on soil cleanup in WI is available at: <http://www.legis.state.wi.us/rsb/code/nr/nr720.pdf>. WI sites are classified either as: non-industrial or industrial. In determining generic non-industrial direct-contact soil cleanup levels that require almost no review on the part of the WDNR, default values of 1.e-07 TCR and 0.2 THQ are used. The generic direct-contact soil cleanup level that applies at a site will be the least of the levels determined from the different d-c pathways. However, site-specific (i.e., requiring WDNR review) cleanup levels can use up to 1.e-06 TCR, and the hazard index (sum of THQs) must not exceed 1. These latter direct-contact constraints of 1.e-06 TCR and 1.0 HI apply to soil cleanup at industrial sites as well. To determine groundwater-protective soil levels, the basis is the regulatory PAL concentrations in groundwater, and this basis is the same for non-industrial and industrial sites.

Inhalation

Basis: If the resulting direct-contact level exceeds the soil saturation concentration (C_{sat}), then C_{sat} will become the basis for cleanup
Citation_Location: <http://www.dnr.wi.gov/org/aw/rr/archives/pubs/RR682.pdf>
Contact_Info: Aristeo.Pelayo@dnr.state.wi.us
Comments: The administrative code on soil cleanup in WI is available at: <http://www.legis.state.wi.us/rsb/code/nr/nr720.pdf>. WI sites are classified either as: non-industrial or industrial. In determining generic non-industrial direct-contact soil cleanup levels that require almost no review on the part of the WDNR, default values of 1.e-07 TCR and 0.2 THQ are used. The generic direct-contact soil cleanup level that applies at a site will be the least of the levels determined from the different d-c pathways. However, site-specific (i.e., requiring WDNR review) cleanup levels can use up to 1.e-06 TCR, and the hazard index (sum of THQs) must not exceed 1. These latter direct-contact constraints of 1.e-06 TCR and 1.0 HI apply to soil cleanup at industrial sites as well. To determine groundwater-protective soil levels, the basis is the regulatory PAL concentrations in groundwater, and this basis is the same for non-industrial and industrial sites.

Other

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Guidelines

Basis: If the resulting direct-contact level exceeds the soil saturation concentration (C_{sat}), then C_{sat} will become the basis for cleanup
 Citation_Location: <http://www.dnr.wi.gov/org/aw/rr/archives/pubs/RR682.pdf>
 Contact_Info: Aristeo.Pelayo@dnr.state.wi.us
 Comments: The administrative code on soil cleanup in WI is available at: <http://www.legis.state.wi.us/rsb/code/nr/nr720.pdf>. WI sites are classified either as: non-industrial or industrial. In determining generic non-industrial direct-contact soil cleanup levels that require almost no review on the part of the WDNR, default values of 1.e-07 TCR and 0.2 THQ are used. The generic direct-contact soil cleanup level that applies at a site will be the least of the levels determined from the different d-c pathways. However, site-specific (i.e., requiring WDNR review) cleanup levels can use up to 1.e-06 TCR, and the hazard index (sum of THQs) must not exceed 1. These latter direct-contact constraints of 1.e-06 TCR and 1.0 HI apply to soil cleanup at industrial sites as well. To determine groundwater-protective soil levels, the basis is the regulatory PAL concentrations in groundwater, and this basis is the same for non-industrial and industrial sites.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Groundwater

Drinking (Ingestion)

Basis:
 Citation_Location: Preventive Action Limits in Table 1 of NR 140, Wis. Adm. Code
 Contact_Info: William.Phelps@dnr.state.wi.us
 Comments: The administrative code containing established WI state groundwater quality standards, NR 140, Wis. Adm. Code, is available at: <http://www.legis.state.wi.us/rsb/code/nr/nr140.pdf>. State groundwater quality standards for substances of public health concern are listed in Table 1 of NR 140.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Vapor Intrusion

Inhalation

Basis: U.S. EPA OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils, <http://www.epa.gov/correctiveaction/eis/vapor.htm>
 Citation_Location:
 Contact_Info: Theresa.Evanson@dnr.state.wi.us
 Comments: Investigation and cleanup of vapor intrusion impacts of indoor air target a one in one million increased cancer risk or hazard index of 1.0. Initial default exposure assumptions and the resulting target concentrations are consistent with the EPA Region III Risk Based Concentration Table entry for Ambient Air Quality. Background concentrations (e.g. benzene) and site specific exposure assumptions may be considered when appropriate.

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other

Sediment

Other

Basis:
 Citation_Location: We currently use EPA's Sediment Guidelines and State guidance entitled: "Consensus Based Sediment Quality Guidelines"
 Contact_Info:
 Comments:

- RCRA_CA Brownfields DrinkingWater SurfaceWater AirQuality (Clean Air Act)
 SolidWsteLndfill VoluntaryClnUp SafeDrinkingWaterAct UST WetlandsProgram Other