

NDEP Guidelines for Discovery Events

NDEP DRAFT GUIDELINES FOR DISCOVERY EVENTS

Issues relating to required notification
under NAC 445A.345 to 445A.348

Purpose: Provide guidelines to the regulated community for when the discovery of soil and/or groundwater contamination at a facility should generate a release report to the NDEP Release Hotline. The guidelines are intended to assist facility owners/operators and Certified Environmental Managers to understand reportable triggers and reportable concentrations.

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NDEP Release Reporting

INTRODUCTION

- Release notification required in accordance with NAC 445A.345 to 445A.348
- These guidelines focus on release reporting for soil and groundwater contamination and BCA corrective action case generation for soil and groundwater cleanup particularly as it relates to the discovery of historic contamination

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Two Types of Releases

INTRODUCTION

Contemporaneous Releases

A release that occurs in real-time and is observable or measurable such that a reporting determination can be made based on the volume or quantity of the hazardous substance released.

Determining whether a contemporaneous release is reportable is usually clear-cut based on volume and/or affected media and will not be the focus of these guidelines.

Discovery Events

A historic, or otherwise unobserved, release that can be inferred to have occurred based on the discovery of contaminated soil or groundwater. Reporting determinations are based on the magnitude and extent of discovered contamination.

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Target Audience of Guidelines

INTRODUCTION

- Releases are required to be reported by facility owners and operators or by their designated agent.
- Guidelines are presented so that they can be understood by facility owners but will be targeted to the more technical audience: CEMs.
- These guidelines should be understood by all CEMs as a standard of practice.
- Questions pulled these guidelines may be incorporated into CEM examinations.

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Topics

INTRODUCTION

Discovery Events

- What is a discovery event?
- Existing Open/Closed Cases
- Off-site Sources
- Solid Waste
- Abandoned Containers
- Underground Storage Tanks

Reporting Determinations

- Reportable Triggers
- Reportable Concentrations
- Background
- Anthropogenic Background
- Common Lab Contaminants
- Multiple Releases
- Volume Determinations

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Topics (continued)

INTRODUCTION

CEM Responsibilities

- Report of Findings
- Reporting of Imminent Threats
- Timing of Notification

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What is a Discovery Event

DISCOVERY EVENTS

- Any event that uncovers or brings soil or groundwater contamination to the attention of a facility owner/operator is a discovery event, though it does not become reportable until it exceeds reportable triggers.
- The most common discovery events include Phase II Environmental Site Assessments, large excavation projects, and agency inspections.

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Existing Open/Closed Cases

DISCOVERY EVENTS

- There are mechanisms that allow the BCA to close a case with contamination remaining in place, which leaves this contamination available for re-discovery.
- Contamination that has been left in place should not be reported to the Division upon re-discovery under the following conditions:
 - The present condition of the contamination (extent, magnitude, depth, etc.) is roughly equivalent to the conditions for which the BCA provided closure initially.
 - Site use assumptions that were used to develop action levels and cleanup plans have not changed and are not likely to change in the near future.
- If the contamination is discovered to be inconsistent with initial closure conditions for any reason, the discovery should generate a new release report.
- At sites with open cases, if another release is discovered that is distinct from the release that is the focus of the open case, a separate spill report should be made. If the discovered contamination is just an extension of the release being addressed through the open case, the information should be provided to the existing case officer but will not generate a separate spill report.

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Off-site Sources

DISCOVERY EVENTS

- The reporting regulations make no distinctions regarding the source of discovered contamination.
- Contamination above reportable triggers should be reported when discovered on or below a facility regardless of whether that contamination is from an off-site source since that release still “involves” the facility.
- Innocent land owner defenses are dependent on a facility owner/operator making all necessary notifications and providing cooperation with regulating agencies.

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Off-site Sources (continued)

DISCOVERY EVENTS

- The reporting of contamination from off-site sources assists the NDEP in discovering contaminant releases that need to be addressed, potentially through the identification of an upgradient responsible party.
- The NDEP is still examining its policies and procedures on third-party liability, but in the absence of these policies facilities are still covered by liability relief statutes.
- The only exceptions will be discussed in the section dealing with anthropogenic background.

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Solid Waste

DISCOVERY EVENTS

- Solid waste is not automatically considered a hazardous substance under the reporting regulations.
- Due to the commingled nature of some solid waste streams, however, the discovery of improperly dumped solid waste should be examined to determine whether there is a hazardous substance component that would require reporting.
- Construction debris will not be considered a hazardous substance even with the presence of asphalt.
- When discovered, solid waste on private property with no hazardous substance component and no hazardous waste determination can be dealt with through disposal at an accepting landfill without the involvement of the NDEP.
- Solid waste with a hazardous substance component should be reported to the NDEP as a release, though it will not generate a BCA case if it has not impacted soil or groundwater above reportable triggers.
- Disposal of solid waste that is determined to be hazardous will be followed-up on by the BWM Office of Solid Waste regardless of soil impacts.
- Solid waste on BLM land (“desert dumping”), discovered for instance as an adjacent property, should always be reported to the NDEP.

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Abandoned Containers

DISCOVERY EVENTS

- The federal definition of “release” contains a clause that includes abandoned or discarded containers. The NDEP has determined that the definition of “release” in its reporting regulations does not similarly include abandoned containers.
- When abandoned or discarded containers are discovered at a site, particularly through a property transfer assessment, the containers should be examined to determine whether they contain a hazardous substance and whether a release to surrounding soil or other surfaces of land has occurred.
- The reporting trigger to the NDEP for abandoned containers will be based on determinations of the volume of any substance released from the container or the magnitude of impacts to surrounding soil.
- Multiple containers that have been discarded in one location should be treated as a single source for release determinations.
- Containers should still be properly disposed of according to whether they contain hazardous or non-hazardous wastes regardless of whether a release has occurred.
- Abandoned or discarded containers on BLM land (“desert dumping”) should always be reported to the NDEP.

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Underground Storage Tanks

DISCOVERY EVENTS

- The release reporting regulations require that a confirmed release from an underground storage tank is reported to the NDEP release hotline. Suspected releases should be brought up with the appropriate UST inspector.
- If soil or groundwater contamination is found at a site in the vicinity of an underground storage tank, this will constitute a suspected release.
- Efforts need to be taken either through a system check or site check to confirm that the environmental contamination is a result of a release from the underground storage tank.
- When conducting a site check investigation, the owner, operator, or CEM must consider the nature of the stored substance, the cause for suspicion, the type of backfill, the depth of groundwater, and other factors for identifying the presence and source of contamination.
- Once a release from a UST is confirmed, and the physical source of the release has been identified and repaired, replaced, or removed, all further investigation into the nature and extent of the release is potentially eligible for reimbursement from the Petroleum Fund for enrolled tanks and statutorily included tanks.
- Confirmed releases from USTs are reportable regardless of the volume or concentration of impacted soil.

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Reportable Triggers

REPORTING DETERMINATIONS

- For discovery events, the two most common triggers are the discovery of greater than 3 cubic yards of soil or the discovery of the hazardous substance in or on the groundwater.
- In rare instances, reporting may still be triggered by estimation of the amount of hazardous substance released, particularly for those substances with low reportable quantities, such as mercury (1 lb. RQ).
- USTs are reportable at the point that a “confirmed release” has been determined, so the following discussions do not apply.

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Reportable Concentrations

REPORTING DETERMINATIONS

- For soil, contamination in excess of 3 cubic yards does not need to be reported if concentrations of hazardous substances do not exceed Reportable Concentrations published as Appendix A of these guidelines. Reportable Concentrations are based on the lower of EPA published Regional Screening Levels or Soil Screening Levels.
- For groundwater, contamination does not need to be reported if concentrations are less than Reportable Concentrations published as Appendix B of these guidelines. For pollutants or contaminants without a RC, professional judgment should be used to determine whether the discovery is reportable.

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Reportable Concentrations (continued)

REPORTING DETERMINATIONS

- Reportable Concentrations should be compared to the highest concentrations found for soil and groundwater contamination. Statistical approaches should not be employed for the purposes of determining whether a release is reportable.
- Reportable Concentrations are based on conservative assumptions. A facility owner must report based on RCs as published in the table even if conditions at a site do not match these conservative assumptions.
- Due to land disposal restrictions, if a release to soil is witnessed, the release needs to be reported if greater than 3 cubic yards are impacted regardless of concentrations (for example, a pinhole spray from a pipeline spreads contamination at low concentrations over a great area).

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Background

REPORTING DETERMINATIONS

- The discovery of background concentrations that exceed Reportable Concentrations should not generate a release report to the NDEP because it does not represent a release.
- CEMs should use their best professional judgment in determining appropriate background concentrations, but the following considerations should be made:
 - Inorganic sampling during an assessment shouldn't be undertaken unless there is reason to suspect that past site use may have resulted in their release or if there is another need to collect the information.
 - If there is no reason to anticipate that past site use has resulted in the release of inorganic contaminants, published ranges of background from USGS or NRCS are probably the best source of background information. Concentrations that fall within these published ranges should not require further action.
 - If there is reason to suspect that past site use has resulted in the release of inorganic contaminants, investigation and sampling should be structured to collect site-specific background samples for comparison to areas of potential release.
- The background concentration for organic contaminants in Nevada is considered to be zero, except in the rare instances of recognized anthropogenic backgrounds.

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Anthropogenic Background

REPORTING DETERMINATIONS

- Anthropogenic backgrounds are considered where human activity has resulted in the wide-spread distribution of contaminants such that individual sources are no longer identifiable.
- Only two areas of the state will be considered to have anthropogenic backgrounds of contaminants: 1) Carson River Mercury Site and 2) Truckee Meadows Remediation District.
- When doing property assessments in the Carson River Superfund boundary (which includes the flood plains of the Carson River), frameworks have been developed for cleanup and reporting requirements. It is best to contact Superfund Branch staff to discuss the discovery of mercury in this site prior to official reporting. More structured procedures will hopefully be detailed in the published version of these guidelines.
- A framework for project flow and program operation are still being discussed for volatile organic solvent contamination in the groundwater of the Truckee Meadows. Until agreement is reached on rules, all groundwater contamination discovered above screening levels should be reported to the NDEP. More structured procedures will hopefully be detailed in the published version of these guidelines.
- All other possible instances of anthropogenic background should be handled as though the contamination was from an identifiable off-site source.

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Common Lab Contaminants

REPORTING DETERMINATIONS

- Detections that are reported on laboratory results sheets that are more likely a result of laboratory cross-contamination (or some other non-reportable event) than site contamination should not be reported to the NDEP since it does not represent a release involving the facility.
- The following is a list of recognized common laboratory contaminants:
 - Acetone
 - 2-butanone
 - Methylene chloride
 - Toluene
 - Phthalate esters
- Trihalomethane detections should also be examined to determine whether they represent a non-reportable release of residually chlorinated drinking water.

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Multiple Releases

REPORTING DETERMINATIONS

- NDEP release reporting and corrective action are based on the response to an individual release and (with some exceptions) are not an exercise in facility-wide assessment and cleanup like the federal Superfund program.
- A report is made to the NDEP only when an individual release exceeds reportable quantities, not when multiple releases are identified that when aggregated would exceed the reportable quantity.
- Multiple releases that each individually exceed reportable quantities can be reported through a single notification and handled under a single case.
- All individual releases that are below reportable quantities should be handled without NDEP oversight.
- Indistinguishably comingled contamination should be considered as a single release for the purpose of making a reporting determination.

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Determining Volume

REPORTING DETERMINATIONS

- Laboratory samples give information about the magnitude of contamination at a particular location (particularly for grab samples); it is the CEM's responsibility to make informed decisions about the lateral and vertical extent of contamination when determining whether it is reportable based on the 3 cubic yard trigger.
- For petroleum based substances, visual or olfactory information may be the best means of determining extent.
- For contaminants that are not visible and do not have an odor, the CEM must rely on other information to make volume determinations including sampling density, composite sampling approaches, knowledge of past disposal practices, mobility and persistence properties of the chemical, etc.

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Report of Findings

CEM RESPONSIBILITIES

- The CEM has a contractual relationship with the individual who commissions the site assessment or investigation, and the report of findings is to be presented to that individual. Findings are not required to be reported directly to the NDEP.
- If a reportable release has been discovered through a site assessment, the requirement to notify the NDEP must be clearly presented in a written report to the facility owner/operator (NAC 459.9729(1)(d)), even if the assessment was commissioned by a prospective purchaser.
- It is the responsibility of the owner of the facility where the release is located to make notification to the NDEP. It is not the responsibility of the CEM, unless the owner designates the CEM to make notification.
- The CEM has no liability for failure to notify the NDEP of a reportable release if the requirement to do so has been documented in a written report and provided to the owner of the facility.
- If the report of findings has been commissioned by a prospective purchaser, the prospective purchaser is not required to make notification until the land transfer has progressed to the point where the purchaser holds title to the property.

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Reporting of Imminent Threats

CEM RESPONSIBILITIES

- The NDEP release reporting regulations require immediate reporting by a facility owner/operator to the NDEP in certain situations. A CEM should advise their client about immediate reporting requirements for the following release events:
 - A release of a CERCLA listed hazardous substance in excess of federal reportable quantities;
 - A release of a hazardous substance directly to surface water; and
 - A release that threatens a vulnerable resource including schools, hospitals, elderly care facilities, etc.; drinking water wellheads; and storm drains.
- Immediate reporting by a CEM directly to the NDEP, in addition to their obligations to a client, is required for a release that presents an “imminent and substantial hazard to human health, public safety or the environment” (NAC 459.9729(1)(e)). When determining whether a release presents an imminent and substantial hazard, a CEM may use the immediate reporting regulations established for owner/operators as a guide.
- A CEM should use his professional judgment to determine whether any other release presents an imminent threat based on knowledge of the release and site conditions.

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Timing of Notification

CEM RESPONSIBILITIES

- Because the requirement to make a written report to an owner/operator advising them of a reportable release that has been discovered at their facility must be made within 24 hours, this written report will most likely be a separate document from the Phase II or other site investigation report to accommodate this timeframe.
- The release is “discovered” after all information has been received that would allow a CEM to make a reportable determination. The final information is usually the receipt of laboratory sample results.
- The facility owner/operator has one working day after receipt of the CEM’s written report to make notification to the NDEP.

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Appendix

NDEP Draft Guidelines for Discovery Events (Soil RCs)

Appendix A1--Reportable Concentrations for common soil contaminants

Version: 01/28/2009

Contaminant Class	Reportable Concentration	Source	Comments
Contaminant	(mg/kg)		
<i>Total Petroleum Hydrocarbons</i>	1.0E+02	NDEP derived concentration	The TPH Reportable Concentration is only applicable to petroleum releases or the discovery of soil contamination that was likely the result of a petroleum release. Other substances, such as vegetable oil, bio-diesel, or vegetable based hydraulic fluids with no petroleum component, are only regulated based on threats to waters of the State, as determined by gross contamination, regardless of whether laboratory samples show a TPH signature.
<i>Common VOCs</i>			
Benzene	3.0E-02	Soil Screening Level, DAF 20	Where the Reportable Concentration of a contaminant is based on the Soil Screening Level, a facility owner/operator may not make additional considerations about depth to groundwater or the presence of confining layers when determining whether the levels of a contaminant discovered in soil are reportable; the Reportable Concentration must be used as is.
Carbon Tetrachloride	7.0E-02	Soil Screening Level, DAF 20	
Ethylbenzene	5.7E+00	EPA Regional Screening Level, Residential Soil	
Methyl tert-Butyl Ether (MTBE)	1.6E-01	NDEP calculated SSL, DAF 20	
Toluene	1.2E+01	Soil Screening Level, DAF 20	
Tetrachloroethylene (PCE)	6.0E-02	Soil Screening Level, DAF 20	
Trichloroethylene (TCE)	6.0E-02	Soil Screening Level, DAF 20	
Vinyl Chloride	1.0E-02	Soil Screening Level, DAF 20	
Xylene, Mixture	2.1E+02	Soil Screening Level, DAF 20	
<i>PAHs</i>			
Benz[a]anthracene	1.5E-01	EPA Regional Screening Level, Residential Soil	
Benzo[a]pyrene	1.5E-02	EPA Regional Screening Level, Residential Soil	
Naphthalene	3.9E+00	EPA Regional Screening Level, Residential Soil	
<i>Metals</i>			
Arsenic, inorganic	3.9E-01	EPA Regional Screening Level, Residential Soil	A facility owner/operator is not required to make notification if metal concentrations are within an appropriately determined background, irrespective of their discovery above the Reportable Concentration.
Beryllium and compounds	6.3E+01	Soil Screening Level, DAF 20	
Cadmium	8.0E+00	Soil Screening Level, DAF 20	
Chromium, Total	3.8E+01	Soil Screening Level, DAF 20	
Cobalt	2.3E+01	EPA Regional Screening Level, Residential Soil	
Copper	3.1E+03	EPA Regional Screening Level, Residential Soil	
Lead and Compounds	4.0E+02	EPA Regional Screening Level, Residential Soil	
Manganese	1.8E+03	EPA Regional Screening Level, Residential Soil	
Mercury (elemental)	6.7E+00	EPA Regional Screening Level, Residential Soil	
Selenium	5.0E+00	Soil Screening Level, DAF 20	
Silver	3.4E+01	Soil Screening Level, DAF 20	
Zinc (Metallic)	1.2E+04	Soil Screening Level, DAF 20	
<i>Miscellaneous</i>			
Ethylene Glycol	1.2E+05	EPA Regional Screening Level, Residential Soil	The selection of these miscellaneous contaminants for this table does not signify that a facility owner/operator must sample for these or that sampling should be limited to these.
Perchlorate and Perchlorate Salts	5.5E+01	EPA Regional Screening Level, Residential Soil	
Propylene Glycol	1.2E+06	EPA Regional Screening Level, Residential Soil	

NDEP Draft Guidelines for Discovery Events (Soil RCs)

Appendix A2--Full list of Reportable Concentrations in soil

Version: 01/28/2009

Analyte	CAS No.	Reportable Concentration (mg/kg)	Source
Acephate	30560-19-1	5.6E+01	EPA Regional Screening Level, Residential Soil
Acetaldehyde	75-07-0	1.1E+01	EPA Regional Screening Level, Residential Soil
Acetochlor	34256-82-1	1.2E+03	EPA Regional Screening Level, Residential Soil
Acetone	67-64-1	1.6E+01	Soil Screening Level, DAF 20
Acetone Cyanohydrin	75-86-5	2.0E+02	EPA Regional Screening Level, Residential Soil
Acetonitrile	75-05-8	8.7E+02	EPA Regional Screening Level, Residential Soil
Acetophenone	98-86-2	7.8E+03	EPA Regional Screening Level, Residential Soil
Acrolein	107-02-8	1.6E-01	EPA Regional Screening Level, Residential Soil
Acrylamide	79-06-1	1.1E-01	EPA Regional Screening Level, Residential Soil
Acrylic Acid	79-10-7	3.0E+04	EPA Regional Screening Level, Residential Soil
Acrylonitrile	107-13-1	2.4E-01	EPA Regional Screening Level, Residential Soil
Adiponitrile	111-69-3	8.5E+06	EPA Regional Screening Level, Residential Soil
Alachlor	15972-60-8	8.7E+00	EPA Regional Screening Level, Residential Soil
ALAR	1596-84-5	9.2E+03	EPA Regional Screening Level, Residential Soil
Aldicarb	116-06-3	6.1E+01	EPA Regional Screening Level, Residential Soil
Aldicarb Sulfone	1646-88-4	6.1E+01	EPA Regional Screening Level, Residential Soil
Aldrin	309-00-2	2.9E-02	EPA Regional Screening Level, Residential Soil
Allyl	74223-64-6	1.5E+04	EPA Regional Screening Level, Residential Soil
Allyl Alcohol	107-18-6	3.1E+02	EPA Regional Screening Level, Residential Soil
Allyl Chloride	107-05-1	1.8E+00	EPA Regional Screening Level, Residential Soil
Aluminum	7429-90-5	7.7E+04	EPA Regional Screening Level, Residential Soil
Aluminum Phosphide	20859-73-8	3.1E+01	EPA Regional Screening Level, Residential Soil
Amdro	67485-29-4	1.8E+01	EPA Regional Screening Level, Residential Soil
Ametryn	834-12-8	5.5E+02	EPA Regional Screening Level, Residential Soil
Aminophenol, m-	591-27-5	4.9E+03	EPA Regional Screening Level, Residential Soil
Aminophenol, p-	123-30-8	1.2E+03	EPA Regional Screening Level, Residential Soil
Amitraz	33089-61-1	1.5E+02	EPA Regional Screening Level, Residential Soil
Ammonia	7664-41-7	1.4E+08	EPA Regional Screening Level, Residential Soil
Ammonium Perchlorate	7790-98-9	5.5E+01	EPA Regional Screening Level, Residential Soil
Ammonium Sulfamate	7773-06-0	1.6E+04	EPA Regional Screening Level, Residential Soil
Aniline	62-53-3	8.5E+01	EPA Regional Screening Level, Residential Soil
Antimony (metallic)	7440-36-0	5.0E+00	Soil Screening Level, DAF 20
Antimony Pentoxide	1314-60-9	3.9E+01	EPA Regional Screening Level, Residential Soil
Antimony Potassium Tartrate	11071-15-1	7.0E+01	EPA Regional Screening Level, Residential Soil
Antimony Tetroxide	1332-81-6	3.1E+01	EPA Regional Screening Level, Residential Soil
Antimony Trioxide	1309-64-4	3.1E+01	EPA Regional Screening Level, Residential Soil
Apollo	74115-24-5	7.9E+02	EPA Regional Screening Level, Residential Soil
Aramite	140-57-8	1.9E+01	EPA Regional Screening Level, Residential Soil
Arsenic, Inorganic	7440-38-2	3.9E-01	EPA Regional Screening Level, Residential Soil
Arsine	7784-42-1	7.1E+04	EPA Regional Screening Level, Residential Soil
Assure	76578-14-8	5.5E+02	EPA Regional Screening Level, Residential Soil
Asulam	3337-71-1	3.1E+03	EPA Regional Screening Level, Residential Soil
Atrazine	1912-24-9	2.1E+00	EPA Regional Screening Level, Residential Soil
Avermectin B1	65195-55-3	2.4E+01	EPA Regional Screening Level, Residential Soil
Azobenzene	103-33-3	4.9E+00	EPA Regional Screening Level, Residential Soil
Barium	7440-39-3	1.6E+03	Soil Screening Level, DAF 20
Baygon	114-26-1	2.4E+02	EPA Regional Screening Level, Residential Soil
Bayleton	43121-43-3	1.8E+03	EPA Regional Screening Level, Residential Soil
Baythroid	68359-37-5	1.5E+03	EPA Regional Screening Level, Residential Soil
Benefin	1861-40-1	1.8E+04	EPA Regional Screening Level, Residential Soil
Benomyl	17804-35-2	3.1E+03	EPA Regional Screening Level, Residential Soil
Bentazon	25057-89-0	1.8E+03	EPA Regional Screening Level, Residential Soil
Benzaldehyde	100-52-7	7.8E+03	EPA Regional Screening Level, Residential Soil
Benzene	71-43-2	3.0E-02	Soil Screening Level, DAF 20
Benzenethiol	108-98-5	7.8E-01	EPA Regional Screening Level, Residential Soil
Benzidine	92-87-5	5.0E-04	EPA Regional Screening Level, Residential Soil
Benzoic Acid	65-85-0	4.0E+02	Soil Screening Level, DAF 20
Benzotrithloride	98-07-7	4.9E-02	EPA Regional Screening Level, Residential Soil
Benzyl Alcohol	100-51-6	3.1E+04	EPA Regional Screening Level, Residential Soil
Benzyl Chloride	100-44-7	3.8E+00	EPA Regional Screening Level, Residential Soil

NDEP Draft Guidelines for Discovery Events (Soil RCs)

Appendix A2--Full list of Reportable Concentrations in soil

Version: 01/28/2009

Analyte	CAS No.	Reportable Concentration (mg/kg)	Source
Beryllium and compounds	7440-41-7	6.3E+01	Soil Screening Level, DAF 20
Bidrin	141-66-2	6.1E+00	EPA Regional Screening Level, Residential Soil
Bifenox	42576-02-3	5.5E+02	EPA Regional Screening Level, Residential Soil
Biphenthrin	82657-04-3	9.2E+02	EPA Regional Screening Level, Residential Soil
Biphenyl, 1,1'-	92-52-4	3.9E+03	EPA Regional Screening Level, Residential Soil
Bis(2-chloroethoxy)methane	111-91-1	1.8E+02	EPA Regional Screening Level, Residential Soil
Bis(2-chloroethyl)ether	111-44-4	4.0E-04	Soil Screening Level, DAF 20
Bis(2-chloro-1-methylethyl) ether	108-60-1	3.5E+00	EPA Regional Screening Level, Residential Soil
Bis(2-ethylhexyl)phthalate	117-81-7	3.5E+01	EPA Regional Screening Level, Residential Soil
Bis(chloromethyl)ether	542-88-1	2.7E-04	EPA Regional Screening Level, Residential Soil
Bisphenol A	80-05-7	3.1E+03	EPA Regional Screening Level, Residential Soil
Boron And Borates Only	7440-42-8	1.6E+04	EPA Regional Screening Level, Residential Soil
Boron Trifluoride	7637-07-2	9.9E+05	EPA Regional Screening Level, Residential Soil
Bromate	15541-45-4	9.1E-01	EPA Regional Screening Level, Residential Soil
Bromobenzene	108-86-1	9.4E+01	EPA Regional Screening Level, Residential Soil
Bromodichloromethane	75-27-4	6.0E-01	Soil Screening Level, DAF 20
Bromoform	75-25-2	8.0E-01	Soil Screening Level, DAF 20
Bromomethane	74-83-9	2.0E-01	Soil Screening Level, DAF 20
Bromophos	2104-96-3	3.1E+02	EPA Regional Screening Level, Residential Soil
Bromoxynil	1689-84-5	1.2E+03	EPA Regional Screening Level, Residential Soil
Bromoxynil Octanoate	1689-99-2	1.2E+03	EPA Regional Screening Level, Residential Soil
Butadiene, 1,3-	106-99-0	7.7E-02	EPA Regional Screening Level, Residential Soil
Butanol, N-	71-36-3	1.7E+01	Soil Screening Level, DAF 20
Butyl Benzyl Phthlate	85-68-7	2.6E+02	EPA Regional Screening Level, Residential Soil
Butylate	2008-41-5	3.1E+03	EPA Regional Screening Level, Residential Soil
Butylphthalyl Butylglycolate	85-70-1	6.1E+04	EPA Regional Screening Level, Residential Soil
Cacodylic Acid	75-60-5	1.2E+03	EPA Regional Screening Level, Residential Soil
Cadmium (Diet)	7440-43-9	8.0E+00	Soil Screening Level, DAF 20
Caprolactam	105-60-2	3.1E+04	EPA Regional Screening Level, Residential Soil
Captafol	2425-06-1	3.2E+00	EPA Regional Screening Level, Residential Soil
Captan	133-06-2	2.1E+02	EPA Regional Screening Level, Residential Soil
Carbaryl	63-25-2	6.1E+03	EPA Regional Screening Level, Residential Soil
Carbofuran	1563-66-2	3.1E+02	EPA Regional Screening Level, Residential Soil
Carbon Disulfide	75-15-0	3.2E+01	Soil Screening Level, DAF 20
Carbon Tetrachloride	56-23-5	7.0E-02	Soil Screening Level, DAF 20
Carbosulfan	55285-14-8	6.1E+02	EPA Regional Screening Level, Residential Soil
Carboxin	5234-68-4	6.1E+03	EPA Regional Screening Level, Residential Soil
Chloral Hydrate	302-17-0	6.1E+03	EPA Regional Screening Level, Residential Soil
Chloramben	133-90-4	9.2E+02	EPA Regional Screening Level, Residential Soil
Chloranil	118-75-2	1.2E+00	EPA Regional Screening Level, Residential Soil
Chlordane	12789-03-6	1.6E+00	EPA Regional Screening Level, Residential Soil
Chlordecone (Kepone)	143-50-0	3.0E-02	EPA Regional Screening Level, Residential Soil
Chlorimuron, Ethyl-	90982-32-4	1.2E+03	EPA Regional Screening Level, Residential Soil
Chlorine	7782-50-5	7.5E+03	EPA Regional Screening Level, Residential Soil
Chlorine Dioxide	10049-04-4	2.3E+03	EPA Regional Screening Level, Residential Soil
Chlorite (Sodium Salt)	7758-19-2	2.3E+03	EPA Regional Screening Level, Residential Soil
Chloro-1,1-difluoroethane, 1-	75-68-3	5.9E+04	EPA Regional Screening Level, Residential Soil
Chloro-1,3-butadiene, 2-	126-99-8	8.6E+00	EPA Regional Screening Level, Residential Soil
Chloro-2-methylaniline HCl, 4-	3165-93-3	1.1E+00	EPA Regional Screening Level, Residential Soil
Chloro-2-methylaniline, 4-	95-69-2	1.8E+00	EPA Regional Screening Level, Residential Soil
Chloroacetic Acid	79-11-8	1.2E+02	EPA Regional Screening Level, Residential Soil
Chloroacetophenone, 2-	532-27-4	4.3E+04	EPA Regional Screening Level, Residential Soil
Chloroaniline, p-	106-47-8	7.0E-01	Soil Screening Level, DAF 20
Chlorobenzene	108-90-7	1.0E+00	Soil Screening Level, DAF 20
Chlorobenzilate	510-15-6	4.4E+00	EPA Regional Screening Level, Residential Soil
Chlorobenzotrifluoride, 4-	98-56-6	2.1E+02	EPA Regional Screening Level, Residential Soil
Chlorobutane, 1-	109-69-3	3.1E+03	EPA Regional Screening Level, Residential Soil
Chlorodifluoromethane	75-45-6	5.3E+04	EPA Regional Screening Level, Residential Soil
Chloroform	67-66-3	3.0E-01	EPA Regional Screening Level, Residential Soil
Chloromethane	74-87-3	1.7E+00	EPA Regional Screening Level, Residential Soil

NDEP Draft Guidelines for Discovery Events (Soil RCs)

Appendix A2--Full list of Reportable Concentrations in soil

Version: 01/28/2009

Analyte	CAS No.	Reportable Concentration (mg/kg)	Source
Chloronaphthalene, Beta-	91-58-7	6.3E+03	EPA Regional Screening Level, Residential Soil
Chloronitrobenzene, o-	88-73-3	5.0E+01	EPA Regional Screening Level, Residential Soil
Chloronitrobenzene, p-	100-00-5	6.1E+01	EPA Regional Screening Level, Residential Soil
Chlorophenol, 2-	95-57-8	4.0E+00	Soil Screening Level, DAF 20
Chlorothalonil	1897-45-6	1.6E+02	EPA Regional Screening Level, Residential Soil
Chlorotoluene, o-	95-49-8	1.6E+03	EPA Regional Screening Level, Residential Soil
Chlorotoluene, p-	106-43-4	5.5E+03	EPA Regional Screening Level, Residential Soil
Chlorpropham	101-21-3	1.2E+04	EPA Regional Screening Level, Residential Soil
Chlorpyrifos	2921-88-2	1.8E+02	EPA Regional Screening Level, Residential Soil
Chlorpyrifos Methyl	5598-13-0	6.1E+02	EPA Regional Screening Level, Residential Soil
Chlorsulfuron	64902-72-3	3.1E+03	EPA Regional Screening Level, Residential Soil
Chlorthiophos	60238-56-4	4.9E+01	EPA Regional Screening Level, Residential Soil
Chromium (III) (Insoluble Salts)	16065-83-1	1.2E+05	EPA Regional Screening Level, Residential Soil
Chromium VI (particulates)	18540-29-9	3.8E+01	Soil Screening Level, DAF 20
Chromium, Total (1:6 ratio Cr VI : Cr III)	7440-47-3	3.8E+01	Soil Screening Level, DAF 20
Cobalt	7440-48-4	2.3E+01	EPA Regional Screening Level, Residential Soil
Coke Oven Emissions	8007-45-2		EPA Regional Screening Level, Residential Soil
Copper	7440-50-8	3.1E+03	EPA Regional Screening Level, Residential Soil
Cresol, m-	108-39-4	3.1E+03	EPA Regional Screening Level, Residential Soil
Cresol, o-	95-48-7	3.1E+03	EPA Regional Screening Level, Residential Soil
Cresol, p-	106-44-5	3.1E+02	EPA Regional Screening Level, Residential Soil
Crotonaldehyde, trans-	123-73-9	3.4E-01	EPA Regional Screening Level, Residential Soil
Cumene	98-82-8	2.2E+03	EPA Regional Screening Level, Residential Soil
Cyanazine	21725-46-2	5.8E-01	EPA Regional Screening Level, Residential Soil
Cyclohexane	110-82-7	7.2E+03	EPA Regional Screening Level, Residential Soil
Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	2.1E+01	EPA Regional Screening Level, Residential Soil
Cyclohexanone	108-94-1	3.1E+05	EPA Regional Screening Level, Residential Soil
Cyclohexylamine	108-91-8	1.2E+04	EPA Regional Screening Level, Residential Soil
Cyhalothrin/karate	68085-85-8	3.1E+02	EPA Regional Screening Level, Residential Soil
Cypermethrin	52315-07-8	6.1E+02	EPA Regional Screening Level, Residential Soil
Cyromazine	66215-27-8	4.6E+02	EPA Regional Screening Level, Residential Soil
Cyanides			
Calcium Cyanide	592-01-8	3.1E+03	EPA Regional Screening Level, Residential Soil
Copper Cyanide	544-92-3	3.9E+02	EPA Regional Screening Level, Residential Soil
Cyanide (CN-)	57-12-5	1.6E+03	EPA Regional Screening Level, Residential Soil
Cyanogen	460-19-5	3.1E+03	EPA Regional Screening Level, Residential Soil
Cyanogen Bromide	506-68-3	7.0E+03	EPA Regional Screening Level, Residential Soil
Cyanogen Chloride	506-77-4	3.9E+03	EPA Regional Screening Level, Residential Soil
Hydrogen Cyanide	74-90-8	1.6E+03	EPA Regional Screening Level, Residential Soil
Potassium Cyanide	151-50-8	3.9E+03	EPA Regional Screening Level, Residential Soil
Potassium Silver Cyanide	506-61-6	1.6E+04	EPA Regional Screening Level, Residential Soil
Silver Cyanide	506-64-9	7.8E+03	EPA Regional Screening Level, Residential Soil
Sodium Cyanide	143-33-9	3.1E+03	EPA Regional Screening Level, Residential Soil
Thiocyanate	463-56-9	1.6E+01	EPA Regional Screening Level, Residential Soil
Zinc Cyanide	557-21-1	3.9E+03	EPA Regional Screening Level, Residential Soil
Dacthal	1861-32-1	6.1E+02	EPA Regional Screening Level, Residential Soil
Dalapon	75-99-0	1.8E+03	EPA Regional Screening Level, Residential Soil
DDD	72-54-8	2.0E+00	EPA Regional Screening Level, Residential Soil
DDE, p,p'-	72-55-9	1.4E+00	EPA Regional Screening Level, Residential Soil
DDT	50-29-3	1.7E+00	EPA Regional Screening Level, Residential Soil
Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	4.3E+02	EPA Regional Screening Level, Residential Soil
Demeton	8065-48-3	2.4E+00	EPA Regional Screening Level, Residential Soil
Di(2-ethylhexyl)adipate	103-23-1	4.0E+02	EPA Regional Screening Level, Residential Soil
Diallate	2303-16-4	8.0E+00	EPA Regional Screening Level, Residential Soil
Diazinon	333-41-5	5.5E+01	EPA Regional Screening Level, Residential Soil
Dibromo-3-chloropropane, 1,2-	96-12-8	5.6E-03	EPA Regional Screening Level, Residential Soil
Dibromobenzene, 1,4-	106-37-6	6.1E+02	EPA Regional Screening Level, Residential Soil
Dibromochloromethane	124-48-1	4.0E-01	Soil Screening Level, DAF 20
Dibromoethane, 1,2- (EDB)	106-93-4	3.4E-02	EPA Regional Screening Level, Residential Soil
Dibromomethane (Methylene Bromide)	74-95-3	7.8E+02	EPA Regional Screening Level, Residential Soil

NDEP Draft Guidelines for Discovery Events (Soil RCs)

Appendix A2--Full list of Reportable Concentrations in soil

Version: 01/28/2009

Analyte	CAS No.	Reportable Concentration (mg/kg)	Source
Dibutyl Phthalate	84-74-2	2.3E+03	Soil Screening Level, DAF 20
Dibutyltin Compounds	NA	1.8E+01	EPA Regional Screening Level, Residential Soil
Dicamba	1918-00-9	1.8E+03	EPA Regional Screening Level, Residential Soil
Dichloro-2-butene, 1,4-	764-41-0	3.2E-03	EPA Regional Screening Level, Residential Soil
Dichloroacetic Acid	79-43-6	9.7E+00	EPA Regional Screening Level, Residential Soil
Dichlorobenzene, 1,2-	95-50-1	1.7E+01	Soil Screening Level, DAF 20
Dichlorobenzene, 1,4-	106-46-7	2.0E+00	Soil Screening Level, DAF 20
Dichlorobenzidine, 3,3'-	91-94-1	7.0E-03	Soil Screening Level, DAF 20
Dichlorodifluoromethane	75-71-8	1.9E+02	EPA Regional Screening Level, Residential Soil
Dichloroethane, 1,1-	75-34-3	3.4E+00	EPA Regional Screening Level, Residential Soil
Dichloroethane, 1,2- (EDC)	107-06-2	2.0E-02	Soil Screening Level, DAF 20
Dichloroethylene, 1,1-	75-35-4	6.0E-02	Soil Screening Level, DAF 20
Dichloroethylene, 1,2- (Mixed Isomers)	540-59-0	7.0E+02	EPA Regional Screening Level, Residential Soil
Dichloroethylene, 1,2-cis-	156-59-2	4.0E-01	Soil Screening Level, DAF 20
Dichloroethylene, 1,2-trans-	156-60-5	7.0E-01	Soil Screening Level, DAF 20
Dichlorophenol, 2,4-	120-83-2	1.0E+00	Soil Screening Level, DAF 20
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	6.9E+02	EPA Regional Screening Level, Residential Soil
Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6	4.9E+02	EPA Regional Screening Level, Residential Soil
Dichloropropane, 1,2-	78-87-5	3.0E-02	Soil Screening Level, DAF 20
Dichloropropane, 1,3-	142-28-9	1.6E+03	EPA Regional Screening Level, Residential Soil
Dichloropropanol, 2,3-	616-23-9	1.8E+02	EPA Regional Screening Level, Residential Soil
Dichloropropene, 1,3-	542-75-6	4.0E-03	Soil Screening Level, DAF 20
Dichlorvos	62-73-7	1.7E+00	EPA Regional Screening Level, Residential Soil
Dicyclopentadiene	77-73-6	2.9E+01	EPA Regional Screening Level, Residential Soil
Dieldrin	60-57-1	4.0E-03	Soil Screening Level, DAF 20
Diethyl Phthalate	84-66-2	4.9E+04	EPA Regional Screening Level, Residential Soil
Diethylene Glycol Monobutyl Ether	112-34-5	6.1E+02	EPA Regional Screening Level, Residential Soil
Diethylene Glycol Monoethyl Ether	111-90-0	3.7E+03	EPA Regional Screening Level, Residential Soil
Diethylformamide	617-84-5	6.1E+01	EPA Regional Screening Level, Residential Soil
Diethylstilbestrol	56-53-1	1.4E-03	EPA Regional Screening Level, Residential Soil
Difenzoquat	43222-48-6	4.9E+03	EPA Regional Screening Level, Residential Soil
Diflubenzuron	35367-38-5	1.2E+03	EPA Regional Screening Level, Residential Soil
Difluoroethane, 1,1-	75-37-6	5.3E+04	EPA Regional Screening Level, Residential Soil
Diisopropyl Ether (DIPE)	108-20-3	1.2E+03	EPA Regional Screening Level, Residential Soil
Diisopropyl Methylphosphonate	1445-75-6	6.3E+03	EPA Regional Screening Level, Residential Soil
Dimethipin	55290-64-7	1.2E+03	EPA Regional Screening Level, Residential Soil
Dimethoate	60-51-5	1.2E+01	EPA Regional Screening Level, Residential Soil
Dimethoxybenzidine, 3,3'-	119-90-4	3.5E+01	EPA Regional Screening Level, Residential Soil
Dimethyl methylphosphonate	756-79-6	2.9E+02	EPA Regional Screening Level, Residential Soil
Dimethylaniline HCl, 2,4-	21436-96-4	8.4E-01	EPA Regional Screening Level, Residential Soil
Dimethylaniline, 2,4-	95-68-1	6.5E-01	EPA Regional Screening Level, Residential Soil
Dimethylaniline, N,N-	121-69-7	1.6E+02	EPA Regional Screening Level, Residential Soil
Dimethylbenzidine, 3,3'-	119-93-7	4.4E-02	EPA Regional Screening Level, Residential Soil
Dimethylformamide	68-12-2	6.1E+03	EPA Regional Screening Level, Residential Soil
Dimethylphenol, 2,4-	105-67-9	9.0E+00	Soil Screening Level, DAF 20
Dimethylphenol, 2,6-	576-26-1	3.7E+01	EPA Regional Screening Level, Residential Soil
Dimethylphenol, 3,4-	95-65-8	6.1E+01	EPA Regional Screening Level, Residential Soil
Dimethylterephthalate	120-61-6	7.8E+03	EPA Regional Screening Level, Residential Soil
Dinitro-o-cresol, 4,6-	534-52-1	6.1E+00	EPA Regional Screening Level, Residential Soil
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	1.2E+02	EPA Regional Screening Level, Residential Soil
Dinitrobenzene, 1,2-	528-29-0	6.1E+00	EPA Regional Screening Level, Residential Soil
Dinitrobenzene, 1,3-	99-65-0	6.1E+00	EPA Regional Screening Level, Residential Soil
Dinitrobenzene, 1,4-	100-25-4	6.1E+00	EPA Regional Screening Level, Residential Soil
Dinitrophenol, 2,4-	51-28-5	3.0E-01	Soil Screening Level, DAF 20
Dinitrotoluene Mixture, 2,4/2,6-	25321-14-6	8.0E-04	Soil Screening Level, DAF 20
Dinitrotoluene, 2,4-	121-14-2	8.0E-04	Soil Screening Level, DAF 20
Dinitrotoluene, 2,6-	606-20-2	7.0E-04	Soil Screening Level, DAF 20
Dinitrotoluene, 2-Amino-4,6-	35572-78-2	1.5E+02	EPA Regional Screening Level, Residential Soil
Dinitrotoluene, 4-Amino-2,6-	19406-51-0	1.5E+02	EPA Regional Screening Level, Residential Soil
Dinoseb	88-85-7	6.1E+01	EPA Regional Screening Level, Residential Soil

NDEP Draft Guidelines for Discovery Events (Soil RCs)

Appendix A2--Full list of Reportable Concentrations in soil

Version: 01/28/2009

Analyte	CAS No.	Reportable Concentration (mg/kg)	Source
Dioxane, 1,4-	123-91-1	4.4E+01	EPA Regional Screening Level, Residential Soil
Diphenamid	957-51-7	1.8E+03	EPA Regional Screening Level, Residential Soil
Diphenyl Sulfone	127-63-9	1.8E+02	EPA Regional Screening Level, Residential Soil
Diphenylamine	122-39-4	1.5E+03	EPA Regional Screening Level, Residential Soil
Diphenylhydrazine, 1,2-	122-66-7	6.1E-01	EPA Regional Screening Level, Residential Soil
Diquat	85-00-7	1.3E+02	EPA Regional Screening Level, Residential Soil
Direct Black 38	1937-37-7	6.6E-02	EPA Regional Screening Level, Residential Soil
Direct Blue 6	2602-46-2	6.6E-02	EPA Regional Screening Level, Residential Soil
Direct Brown 95	16071-86-6	7.2E-02	EPA Regional Screening Level, Residential Soil
Disulfoton	298-04-4	2.4E+00	EPA Regional Screening Level, Residential Soil
Dithiane, 1,4-	505-29-3	6.1E+02	EPA Regional Screening Level, Residential Soil
Diuron	330-54-1	1.2E+02	EPA Regional Screening Level, Residential Soil
Dodine	2439-10-3	2.4E+02	EPA Regional Screening Level, Residential Soil
Dioxins			
Hexachlorodibenzo-p-dioxin	34465-46-8	4.5E-05	EPA Regional Screening Level, Residential Soil
Hexachlorodibenzo-p-dioxin, Mixture	19408-74-3	9.4E-05	EPA Regional Screening Level, Residential Soil
HpCDD, 2,3,7,8-	37871-00-4	4.5E-04	EPA Regional Screening Level, Residential Soil
OCDD	3268-87-9	1.5E-02	EPA Regional Screening Level, Residential Soil
PeCDD, 2,3,7,8-	36088-22-9	4.5E-06	EPA Regional Screening Level, Residential Soil
TCDD, 2,3,7,8-	1746-01-6	4.5E-06	EPA Regional Screening Level, Residential Soil
Endosulfan	115-29-7	1.8E+01	Soil Screening Level, DAF 20
Endothall	145-73-3	1.2E+03	EPA Regional Screening Level, Residential Soil
Endrin	72-20-8	1.0E+00	Soil Screening Level, DAF 20
Epichlorohydrin	106-89-8	1.8E+01	EPA Regional Screening Level, Residential Soil
Epoxybutane, 1,2-	106-88-7	1.5E+02	EPA Regional Screening Level, Residential Soil
EPTC	759-94-4	2.0E+03	EPA Regional Screening Level, Residential Soil
Ethephon	16672-87-0	3.1E+02	EPA Regional Screening Level, Residential Soil
Ethion	563-12-2	3.1E+01	EPA Regional Screening Level, Residential Soil
Ethoxyethanol Acetate, 2-	111-15-9	1.8E+04	EPA Regional Screening Level, Residential Soil
Ethoxyethanol, 2-	110-80-5	2.4E+04	EPA Regional Screening Level, Residential Soil
Ethyl Acetate	141-78-6	7.0E+04	EPA Regional Screening Level, Residential Soil
Ethyl Acrylate	140-88-5	1.3E+01	EPA Regional Screening Level, Residential Soil
Ethyl Chloride	75-00-3	1.5E+04	EPA Regional Screening Level, Residential Soil
Ethyl Ether	60-29-7	1.6E+04	EPA Regional Screening Level, Residential Soil
Ethyl Methacrylate	97-63-2	7.0E+03	EPA Regional Screening Level, Residential Soil
Ethyl-p-nitrophenyl Phosphonate	2104-64-5	6.1E-01	EPA Regional Screening Level, Residential Soil
Ethylbenzene	100-41-4	5.7E+00	EPA Regional Screening Level, Residential Soil
Ethylene Cyanohydrin	109-78-4	1.8E+03	EPA Regional Screening Level, Residential Soil
Ethylene Diamine	107-15-3	5.5E+03	EPA Regional Screening Level, Residential Soil
Ethylene Glycol	107-21-1	1.2E+05	EPA Regional Screening Level, Residential Soil
Ethylene Glycol Monobutyl Ether	111-76-2	3.1E+04	EPA Regional Screening Level, Residential Soil
Ethylene Oxide	75-21-8	1.6E-01	EPA Regional Screening Level, Residential Soil
Ethylene Thiourea	96-45-7	4.9E+00	EPA Regional Screening Level, Residential Soil
Ethylphthalyl Ethyl Glycolate	84-72-0	1.8E+05	EPA Regional Screening Level, Residential Soil
Express	101200-48-0	4.9E+02	EPA Regional Screening Level, Residential Soil
Fenamiphos	22224-92-6	1.5E+01	EPA Regional Screening Level, Residential Soil
Fenpropathrin	39515-41-8	1.5E+03	EPA Regional Screening Level, Residential Soil
Fluometuron	2164-17-2	7.9E+02	EPA Regional Screening Level, Residential Soil
Fluorine (Soluble Fluoride)	7782-41-4	4.7E+03	EPA Regional Screening Level, Residential Soil
Fluridone	59756-60-4	4.9E+03	EPA Regional Screening Level, Residential Soil
Flurprimidol	56425-91-3	1.2E+03	EPA Regional Screening Level, Residential Soil
Flutolanil	66332-96-5	3.7E+03	EPA Regional Screening Level, Residential Soil
Fluvalinate	69409-94-5	6.1E+02	EPA Regional Screening Level, Residential Soil
Folpet	133-07-3	1.4E+02	EPA Regional Screening Level, Residential Soil
Fomesafen	72178-02-0	2.6E+00	EPA Regional Screening Level, Residential Soil
Fonofos	944-22-9	1.2E+02	EPA Regional Screening Level, Residential Soil
Formaldehyde	50-00-0	1.2E+04	EPA Regional Screening Level, Residential Soil
Formic Acid	64-18-6	1.2E+05	EPA Regional Screening Level, Residential Soil
Fosetyl-AL	39148-24-8	1.8E+05	EPA Regional Screening Level, Residential Soil
Furazolidone	67-45-8	1.3E-01	EPA Regional Screening Level, Residential Soil

NDEP Draft Guidelines for Discovery Events (Soil RCs)

Appendix A2--Full list of Reportable Concentrations in soil

Version: 01/28/2009

Analyte	CAS No.	Reportable Concentration (mg/kg)	Source
Furfural	98-01-1	1.8E+02	EPA Regional Screening Level, Residential Soil
Furium	531-82-8	3.2E-01	EPA Regional Screening Level, Residential Soil
Furmecyclohex	60568-05-0	1.6E+01	EPA Regional Screening Level, Residential Soil
Furans			
Furan	110-00-9	7.8E+01	EPA Regional Screening Level, Residential Soil
HpCDF, 2,3,7,8-	38998-75-3	3.7E-04	EPA Regional Screening Level, Residential Soil
HxCDF, 2,3,7,8-	55684-94-1	3.7E-05	EPA Regional Screening Level, Residential Soil
OCDF	39001-02-0	1.2E-02	EPA Regional Screening Level, Residential Soil
PeCDF, 1,2,3,7,8-	57117-41-6	1.2E-04	EPA Regional Screening Level, Residential Soil
PeCDF, 2,3,4,7,8-	57117-31-4	1.2E-05	EPA Regional Screening Level, Residential Soil
TCDF, 2,3,7,8-	51207-31-9	3.7E-05	EPA Regional Screening Level, Residential Soil
Glufosinate, Ammonium	77182-82-2	2.4E+01	EPA Regional Screening Level, Residential Soil
Glycidyl	765-34-4	2.4E+01	EPA Regional Screening Level, Residential Soil
Glyphosate	1071-83-6	6.1E+03	EPA Regional Screening Level, Residential Soil
Goal	42874-03-3	1.8E+02	EPA Regional Screening Level, Residential Soil
Haloxypop, Methyl	69806-40-2	3.1E+00	EPA Regional Screening Level, Residential Soil
Harmony	79277-27-3	7.9E+02	EPA Regional Screening Level, Residential Soil
Heptachlor	76-44-8	1.1E-01	EPA Regional Screening Level, Residential Soil
Heptachlor Epoxide	1024-57-3	5.3E-02	EPA Regional Screening Level, Residential Soil
Hexabromobenzene	87-82-1	1.2E+02	EPA Regional Screening Level, Residential Soil
Hexachlorobenzene	118-74-1	3.0E-01	EPA Regional Screening Level, Residential Soil
Hexachlorobutadiene	87-68-3	2.0E+00	Soil Screening Level, DAF 20
Hexachlorocyclohexane, Alpha-	319-84-6	5.0E-04	Soil Screening Level, DAF 20
Hexachlorocyclohexane, Beta-	319-85-7	3.0E-03	Soil Screening Level, DAF 20
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	9.0E-03	Soil Screening Level, DAF 20
Hexachlorocyclohexane, Technical	608-73-1	3.0E-03	Soil Screening Level, DAF 20
Hexachlorocyclopentadiene	77-47-4	3.7E+02	EPA Regional Screening Level, Residential Soil
Hexachloroethane	67-72-1	5.0E-01	Soil Screening Level, DAF 20
Hexachlorophene	70-30-4	1.8E+01	EPA Regional Screening Level, Residential Soil
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	5.5E+00	EPA Regional Screening Level, Residential Soil
Hexamethylene Diisocyanate, 1,6-	822-06-0	3.7E+00	EPA Regional Screening Level, Residential Soil
Hexane, N-	110-54-3	5.7E+02	EPA Regional Screening Level, Residential Soil
Hexanedioic Acid	124-04-9	1.2E+05	EPA Regional Screening Level, Residential Soil
Hexazinone	51235-04-2	2.0E+03	EPA Regional Screening Level, Residential Soil
Hydrazine	302-01-2	2.1E-01	EPA Regional Screening Level, Residential Soil
Hydrazine Sulfate	10034-93-2	2.1E-01	EPA Regional Screening Level, Residential Soil
Hydrogen Chloride	7647-01-0	2.8E+07	EPA Regional Screening Level, Residential Soil
Hydrogen Sulfide	7783-06-4	2.8E+06	EPA Regional Screening Level, Residential Soil
Hydroquinone	123-31-9	8.7E+00	EPA Regional Screening Level, Residential Soil
Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	1.6E+01	EPA Regional Screening Level, Residential Soil
Imazalil	35554-44-0	7.9E+02	EPA Regional Screening Level, Residential Soil
Imazaquin	81335-37-7	1.5E+04	EPA Regional Screening Level, Residential Soil
Iprodione	36734-19-7	2.4E+03	EPA Regional Screening Level, Residential Soil
Iron	7439-89-6	5.5E+04	EPA Regional Screening Level, Residential Soil
Isobutyl Alcohol	78-83-1	2.3E+04	EPA Regional Screening Level, Residential Soil
Isophorone	78-59-1	5.0E-01	Soil Screening Level, DAF 20
Isopropalin	33820-53-0	9.2E+02	EPA Regional Screening Level, Residential Soil
Isopropyl Methyl Phosphonic Acid	1832-54-8	6.1E+03	EPA Regional Screening Level, Residential Soil
Isoxaben	82558-50-7	3.1E+03	EPA Regional Screening Level, Residential Soil
Kerb	23950-58-5	4.6E+03	EPA Regional Screening Level, Residential Soil
Lactofen	77501-63-4	1.2E+02	EPA Regional Screening Level, Residential Soil
Linuron	330-55-2	1.2E+02	EPA Regional Screening Level, Residential Soil
Lithium	7439-93-2	1.6E+02	EPA Regional Screening Level, Residential Soil
Lithium Perchlorate	7791-03-9	5.5E+01	EPA Regional Screening Level, Residential Soil
Londax	83055-99-6	1.2E+04	EPA Regional Screening Level, Residential Soil
Lead Compounds			
Lead and Compounds	7439-92-1	4.0E+02	EPA Regional Screening Level, Residential Soil
Tetraethyl Lead	78-00-2	6.1E-03	EPA Regional Screening Level, Residential Soil
Malathion	121-75-5	1.2E+03	EPA Regional Screening Level, Residential Soil
Maleic Anhydride	108-31-6	6.1E+03	EPA Regional Screening Level, Residential Soil

NDEP Draft Guidelines for Discovery Events (Soil RCs)

Appendix A2--Full list of Reportable Concentrations in soil

Version: 01/28/2009

Analyte	CAS No.	Reportable Concentration (mg/kg)	Source
Maleic Hydrazide	123-33-1	3.1E+04	EPA Regional Screening Level, Residential Soil
Malononitrile	109-77-3	6.1E+00	EPA Regional Screening Level, Residential Soil
Mancozeb	8018-01-7	1.8E+03	EPA Regional Screening Level, Residential Soil
Maneb	12427-38-2	3.1E+02	EPA Regional Screening Level, Residential Soil
Manganese (Water)	7439-96-5	1.8E+03	EPA Regional Screening Level, Residential Soil
MCPA	94-74-6	3.1E+01	EPA Regional Screening Level, Residential Soil
MCPB	94-81-5	6.1E+02	EPA Regional Screening Level, Residential Soil
MCPP	93-65-2	6.1E+01	EPA Regional Screening Level, Residential Soil
Mephosfolan	950-10-7	5.5E+00	EPA Regional Screening Level, Residential Soil
Mepiquat Chloride	24307-26-4	1.8E+03	EPA Regional Screening Level, Residential Soil
Merphos	150-50-5	1.8E+00	EPA Regional Screening Level, Residential Soil
Merphos Oxide	78-48-8	1.8E+00	EPA Regional Screening Level, Residential Soil
Metalaxyl	57837-19-1	3.7E+03	EPA Regional Screening Level, Residential Soil
Methacrylonitrile	126-98-7	3.2E+00	EPA Regional Screening Level, Residential Soil
Methamidophos	10265-92-6	3.1E+00	EPA Regional Screening Level, Residential Soil
Methanol	67-56-1	3.1E+04	EPA Regional Screening Level, Residential Soil
Methidathion	950-37-8	6.1E+01	EPA Regional Screening Level, Residential Soil
Methomyl	16752-77-5	1.5E+03	EPA Regional Screening Level, Residential Soil
Methoxy-5-nitroaniline, 2-	99-59-2	9.9E+00	EPA Regional Screening Level, Residential Soil
Methoxychlor	72-43-5	1.6E+02	Soil Screening Level, DAF 20
Methoxyethanol Acetate, 2-	110-49-6	1.2E+02	EPA Regional Screening Level, Residential Soil
Methoxyethanol, 2-	109-86-4	1.8E+02	EPA Regional Screening Level, Residential Soil
Methyl Acetate	79-20-9	7.8E+04	EPA Regional Screening Level, Residential Soil
Methyl Acrylate	96-33-3	2.3E+03	EPA Regional Screening Level, Residential Soil
Methyl Ethyl Ketone (2-Butanone)	78-93-3	2.8E+04	EPA Regional Screening Level, Residential Soil
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	5.3E+03	EPA Regional Screening Level, Residential Soil
Methyl Methacrylate	80-62-6	4.7E+03	EPA Regional Screening Level, Residential Soil
Methyl Parathion	298-00-0	1.5E+01	EPA Regional Screening Level, Residential Soil
Methyl Styrene (Mixed Isomers)	25013-15-4	1.9E+02	EPA Regional Screening Level, Residential Soil
Methyl tert-Butyl Ether (MTBE)	1634-04-4	3.9E+01	NDEP calculated SSL, DAF 20
Methyl-5-Nitroaniline, 2-	99-55-8	1.5E+01	EPA Regional Screening Level, Residential Soil
Methylaniline Hydrochloride, 2-	636-21-5	3.7E+00	EPA Regional Screening Level, Residential Soil
Methylarsonic acid	124-58-3	6.1E+02	EPA Regional Screening Level, Residential Soil
Methylene Chloride	75-09-2	2.0E-02	Soil Screening Level, DAF 20
Methylene-bis(2-chloroaniline), 4,4'	101-14-4	1.2E+00	EPA Regional Screening Level, Residential Soil
Methylene-bis(N,N-dimethyl) Aniline, 4,4'	101-61-1	1.1E+01	EPA Regional Screening Level, Residential Soil
Methylenebisbenzenamine, 4,4'	101-77-9	3.0E-01	EPA Regional Screening Level, Residential Soil
Methylenediphenyl Diisocyanate	101-68-8	8.5E+05	EPA Regional Screening Level, Residential Soil
Methylstyrene, Alpha-	98-83-9	5.5E+03	EPA Regional Screening Level, Residential Soil
Metolachlor	51218-45-2	9.2E+03	EPA Regional Screening Level, Residential Soil
Metribuzin	21087-64-9	1.5E+03	EPA Regional Screening Level, Residential Soil
Mirex	2385-85-5	2.7E-02	EPA Regional Screening Level, Residential Soil
Molinate	2212-67-1	1.2E+02	EPA Regional Screening Level, Residential Soil
Molybdenum	7439-98-7	3.9E+02	EPA Regional Screening Level, Residential Soil
Monochloramine	10599-90-3	7.8E+03	EPA Regional Screening Level, Residential Soil
Monomethylaniline	100-61-8	1.2E+02	EPA Regional Screening Level, Residential Soil
Mercury Compounds			
Mercuric Chloride	7487-94-7	2.3E+01	EPA Regional Screening Level, Residential Soil
Mercuric Sulfide	1344-48-5	2.3E+01	EPA Regional Screening Level, Residential Soil
Mercury (elemental)	7439-97-6	6.7E+00	EPA Regional Screening Level, Residential Soil
Mercury, Inorganic Salts	NA	2.3E+01	EPA Regional Screening Level, Residential Soil
Methyl Mercury	22967-92-6	7.8E+00	EPA Regional Screening Level, Residential Soil
Phenylmercuric Acetate	62-38-4	4.9E+00	EPA Regional Screening Level, Residential Soil
N,N'-Diphenyl-1,4-benzenediamine	74-31-7	1.8E+01	EPA Regional Screening Level, Residential Soil
Naled	300-76-5	1.2E+02	EPA Regional Screening Level, Residential Soil
Napropamide	15299-99-7	6.1E+03	EPA Regional Screening Level, Residential Soil
Nickel Refinery Dust	NA	1.4E+04	EPA Regional Screening Level, Residential Soil
Nickel Soluble Salts	7440-02-0	1.3E+02	Soil Screening Level, DAF 20
Nickel Subulfide	12035-72-2	6.9E+03	EPA Regional Screening Level, Residential Soil
Nitrate	14797-55-8	1.3E+05	EPA Regional Screening Level, Residential Soil

NDEP Draft Guidelines for Discovery Events (Soil RCs)

Appendix A2--Full list of Reportable Concentrations in soil

Version: 01/28/2009

Analyte	CAS No.	Reportable Concentration (mg/kg)	Source
Nitrite	14797-65-0	7.8E+03	EPA Regional Screening Level, Residential Soil
Nitroaniline, 3-	99-09-2	1.8E+01	EPA Regional Screening Level, Residential Soil
Nitroaniline, 4-	100-01-6	2.3E+01	EPA Regional Screening Level, Residential Soil
Nitrobenzene	98-95-3	1.0E-01	Soil Screening Level, DAF 20
Nitrofurantoin	67-20-9	4.3E+03	EPA Regional Screening Level, Residential Soil
Nitrofurazone	59-87-0	3.7E-01	EPA Regional Screening Level, Residential Soil
Nitroglycerin	55-63-0	6.1E+00	EPA Regional Screening Level, Residential Soil
Nitroguanidine	556-88-7	6.1E+03	EPA Regional Screening Level, Residential Soil
Nitromethane	75-52-5	4.7E+00	EPA Regional Screening Level, Residential Soil
Nitropropane, 2-	79-46-9	1.2E-02	EPA Regional Screening Level, Residential Soil
Nitroso-di-N-butylamine, N-	924-16-3	9.3E-02	EPA Regional Screening Level, Residential Soil
Nitroso-di-N-propylamine, N-	621-64-7	5.0E-05	Soil Screening Level, DAF 20
Nitroso-N-ethylurea, N-	759-73-9	4.3E-03	EPA Regional Screening Level, Residential Soil
Nitrosodiethanolamine, N-	1116-54-7	1.7E-01	EPA Regional Screening Level, Residential Soil
Nitrosodiethylamine, N-	55-18-5	7.7E-04	EPA Regional Screening Level, Residential Soil
Nitrosodimethylamine, N-	62-75-9	2.3E-03	EPA Regional Screening Level, Residential Soil
Nitrosodiphenylamine, N-	86-30-6	1.0E+00	Soil Screening Level, DAF 20
Nitrosomethylethylamine, N-	10595-95-6	2.2E-02	EPA Regional Screening Level, Residential Soil
Nitrosopyrrolidine, N-	930-55-2	2.3E-01	EPA Regional Screening Level, Residential Soil
Nitrotoluene, m-	99-08-1	1.2E+03	EPA Regional Screening Level, Residential Soil
Nitrotoluene, o-	88-72-2	2.9E+00	EPA Regional Screening Level, Residential Soil
Nitrotoluene, p-	99-99-0	3.0E+01	EPA Regional Screening Level, Residential Soil
Norflurazon	27314-13-2	2.4E+03	EPA Regional Screening Level, Residential Soil
Nustar	85509-19-9	4.3E+01	EPA Regional Screening Level, Residential Soil
Octabromodiphenyl Ether	32536-52-0	1.8E+02	EPA Regional Screening Level, Residential Soil
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetra (HMX)	2691-41-0	3.8E+03	EPA Regional Screening Level, Residential Soil
Octamethylpyrophosphoramide	152-16-9	1.2E+02	EPA Regional Screening Level, Residential Soil
Oryzalin	19044-88-3	3.1E+03	EPA Regional Screening Level, Residential Soil
Oxadiazon	19666-30-9	3.1E+02	EPA Regional Screening Level, Residential Soil
Oxamyl	23135-22-0	1.5E+03	EPA Regional Screening Level, Residential Soil
Paclobutrazol	76738-62-0	7.9E+02	EPA Regional Screening Level, Residential Soil
Paraquat Dichloride	1910-42-5	2.7E+02	EPA Regional Screening Level, Residential Soil
Parathion	56-38-2	3.7E+02	EPA Regional Screening Level, Residential Soil
Pebulate	1114-71-2	3.1E+03	EPA Regional Screening Level, Residential Soil
Pendimethalin	40487-42-1	2.4E+03	EPA Regional Screening Level, Residential Soil
Pentabromodiphenyl Ether	32534-81-9	1.2E+02	EPA Regional Screening Level, Residential Soil
Pentabromodiphenyl ether, 2,2',4,4',5'- (BDE-99)	60348-60-9	7.8E+00	EPA Regional Screening Level, Residential Soil
Pentachlorobenzene	608-93-5	4.9E+01	EPA Regional Screening Level, Residential Soil
Pentachloroethane	76-01-7	5.4E+00	EPA Regional Screening Level, Residential Soil
Pentachloronitrobenzene	82-68-8	1.9E+00	EPA Regional Screening Level, Residential Soil
Pentachlorophenol	87-86-5	3.0E-02	Soil Screening Level, DAF 20
Perchlorate and Perchlorate Salts	14797-73-0	5.5E+01	EPA Regional Screening Level, Residential Soil
Permethrin	52645-53-1	3.1E+03	EPA Regional Screening Level, Residential Soil
Phenmedipham	13684-63-4	1.5E+04	EPA Regional Screening Level, Residential Soil
Phenol	108-95-2	1.0E+02	Soil Screening Level, DAF 20
Phenylenediamine, m-	108-45-2	3.7E+02	EPA Regional Screening Level, Residential Soil
Phenylenediamine, o-	95-54-5	1.0E+01	EPA Regional Screening Level, Residential Soil
Phenylenediamine, p-	106-50-3	1.2E+04	EPA Regional Screening Level, Residential Soil
Phenylphenol, 2-	90-43-7	2.5E+02	EPA Regional Screening Level, Residential Soil
Phorate	298-02-2	1.2E+01	EPA Regional Screening Level, Residential Soil
Phosgene	75-44-5	4.0E-01	EPA Regional Screening Level, Residential Soil
Phosmet	732-11-6	1.2E+03	EPA Regional Screening Level, Residential Soil
Phosphine	7803-51-2	2.3E+01	EPA Regional Screening Level, Residential Soil
Phosphoric Acid	7664-38-2	1.4E+07	EPA Regional Screening Level, Residential Soil
Phosphorus, White	7723-14-0	1.6E+00	EPA Regional Screening Level, Residential Soil
Phthalic Acid, P-	100-21-0	6.1E+04	EPA Regional Screening Level, Residential Soil
Phthalic Anhydride	85-44-9	1.2E+05	EPA Regional Screening Level, Residential Soil
Picloram	1918-02-1	4.3E+03	EPA Regional Screening Level, Residential Soil
Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	1.2E+02	EPA Regional Screening Level, Residential Soil
Pirimiphos, Methyl	29232-93-7	6.1E+02	EPA Regional Screening Level, Residential Soil

NDEP Draft Guidelines for Discovery Events (Soil RCs)

Appendix A2--Full list of Reportable Concentrations in soil

Version: 01/28/2009

Analyte	CAS No.	Reportable Concentration (mg/kg)	Source
Polybrominated Biphenyls	59536-65-1	1.6E-02	EPA Regional Screening Level, Residential Soil
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	8.5E+05	EPA Regional Screening Level, Residential Soil
Potassium Perchlorate	7778-74-7	5.5E+01	EPA Regional Screening Level, Residential Soil
Prochloraz	67747-09-5	3.2E+00	EPA Regional Screening Level, Residential Soil
Profluralin	26399-36-0	3.7E+02	EPA Regional Screening Level, Residential Soil
Prometon	1610-18-0	9.2E+02	EPA Regional Screening Level, Residential Soil
Prometryn	2787-19-6	2.4E+02	EPA Regional Screening Level, Residential Soil
Propachlor	1918-16-7	7.9E+02	EPA Regional Screening Level, Residential Soil
Propanil	709-98-8	3.1E+02	EPA Regional Screening Level, Residential Soil
Propargite	2312-35-8	1.2E+03	EPA Regional Screening Level, Residential Soil
Propargyl Alcohol	107-19-7	1.2E+02	EPA Regional Screening Level, Residential Soil
Propazine	139-40-2	1.2E+03	EPA Regional Screening Level, Residential Soil
Propham	122-42-9	1.2E+03	EPA Regional Screening Level, Residential Soil
Propiconazole	60207-90-1	7.9E+02	EPA Regional Screening Level, Residential Soil
Propylene Glycol	57-55-6	1.2E+06	EPA Regional Screening Level, Residential Soil
Propylene Glycol Dinitrate	6423-43-4	6.0E+01	EPA Regional Screening Level, Residential Soil
Propylene Glycol Monoethyl Ether	1569-02-4	4.3E+04	EPA Regional Screening Level, Residential Soil
Propylene Glycol Monomethyl Ether	107-98-2	4.3E+04	EPA Regional Screening Level, Residential Soil
Propylene Oxide	75-56-9	1.9E+00	EPA Regional Screening Level, Residential Soil
Pursuit	81335-77-5	1.5E+04	EPA Regional Screening Level, Residential Soil
Pydrin	51630-58-1	1.5E+03	EPA Regional Screening Level, Residential Soil
Pyridine	110-86-1	7.8E+01	EPA Regional Screening Level, Residential Soil
Polychlorinated Biphenyls (PCBs)			
Aroclor 1016	12674-11-2	3.9E+00	EPA Regional Screening Level, Residential Soil
Aroclor 1221	11104-28-2	1.7E-01	EPA Regional Screening Level, Residential Soil
Aroclor 1232	11141-16-5	1.7E-01	EPA Regional Screening Level, Residential Soil
Aroclor 1242	53469-21-9	2.2E-01	EPA Regional Screening Level, Residential Soil
Aroclor 1248	12672-29-6	2.2E-01	EPA Regional Screening Level, Residential Soil
Aroclor 1254	11097-69-1	2.2E-01	EPA Regional Screening Level, Residential Soil
Aroclor 1260	11096-82-5	2.2E-01	EPA Regional Screening Level, Residential Soil
Heptachlorobiphenyl, 2,2',3,3',4,4',5- (PCB 170)	35065-30-6	3.4E-02	EPA Regional Screening Level, Residential Soil
Heptachlorobiphenyl, 2,2',3,4,4',5,5'- (PCB 180)	35065-29-3	3.4E-01	EPA Regional Screening Level, Residential Soil
Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	1.1E-01	EPA Regional Screening Level, Residential Soil
Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	1.1E-01	EPA Regional Screening Level, Residential Soil
Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	1.1E-01	EPA Regional Screening Level, Residential Soil
Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	1.1E-01	EPA Regional Screening Level, Residential Soil
Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	1.1E-04	EPA Regional Screening Level, Residential Soil
Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	1.1E-01	EPA Regional Screening Level, Residential Soil
Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	1.1E-01	EPA Regional Screening Level, Residential Soil
Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	1.1E-01	EPA Regional Screening Level, Residential Soil
Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	1.1E-01	EPA Regional Screening Level, Residential Soil
Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	3.4E-05	EPA Regional Screening Level, Residential Soil
Polychlorinated Biphenyls (high risk)	1336-36-3	2.4E-01	EPA Regional Screening Level, Residential Soil
Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	3.4E-02	EPA Regional Screening Level, Residential Soil
Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	1.1E-02	EPA Regional Screening Level, Residential Soil
Polynuclear Aromatic Hydrocarbons (PAHs)			
Acenaphthene	83-32-9	5.7E+02	Soil Screening Level, DAF 20
Anthracene	120-12-7	1.2E+04	Soil Screening Level, DAF 20
Benz[a]anthracene	56-55-3	1.5E-01	EPA Regional Screening Level, Residential Soil
Benzo[a]pyrene	50-32-8	1.5E-02	EPA Regional Screening Level, Residential Soil
Benzo[b]fluoranthene	205-99-2	1.5E-01	EPA Regional Screening Level, Residential Soil
Benzo[k]fluoranthene	207-08-9	1.5E+00	EPA Regional Screening Level, Residential Soil
Chrysene	218-01-9	1.5E+01	EPA Regional Screening Level, Residential Soil
Dibenz[a,h]anthracene	53-70-3	1.5E-02	EPA Regional Screening Level, Residential Soil
Fluoranthene	206-44-0	2.3E+03	EPA Regional Screening Level, Residential Soil
Fluorene	86-73-7	5.6E+02	Soil Screening Level, DAF 20
Indeno[1,2,3-cd]pyrene	193-39-5	1.5E-01	EPA Regional Screening Level, Residential Soil
Methylnaphthalene, 1-	90-12-0	2.2E+01	EPA Regional Screening Level, Residential Soil
Methylnaphthalene, 2-	91-57-6	3.1E+02	EPA Regional Screening Level, Residential Soil
Naphthalene	91-20-3	3.9E+00	EPA Regional Screening Level, Residential Soil

NDEP Draft Guidelines for Discovery Events (Soil RCs)

Appendix A2--Full list of Reportable Concentrations in soil

Version: 01/28/2009

Analyte	CAS No.	Reportable Concentration (mg/kg)	Source
Pyrene	129-00-0	1.7E+03	EPA Regional Screening Level, Residential Soil
Quinalphos	13593-03-8	3.1E+01	EPA Regional Screening Level, Residential Soil
Quinoline	91-22-5	1.6E-01	EPA Regional Screening Level, Residential Soil
Refractory Ceramic Fibers	NA	4.3E+07	EPA Regional Screening Level, Residential Soil
Resmethrin	10453-86-8	1.8E+03	EPA Regional Screening Level, Residential Soil
Ronnel	299-84-3	3.1E+03	EPA Regional Screening Level, Residential Soil
Rotenone	83-79-4	2.4E+02	EPA Regional Screening Level, Residential Soil
Savay	78587-05-0	1.5E+03	EPA Regional Screening Level, Residential Soil
Selenious Acid	7783-00-8	3.9E+02	EPA Regional Screening Level, Residential Soil
Selenium	7782-49-2	5.0E+00	Soil Screening Level, DAF 20
Selenourea	630-10-4	3.1E+02	EPA Regional Screening Level, Residential Soil
Sethoxydim	74051-80-2	5.5E+03	EPA Regional Screening Level, Residential Soil
Silver	7440-22-4	3.4E+01	Soil Screening Level, DAF 20
Simazine	122-34-9	4.0E+00	EPA Regional Screening Level, Residential Soil
Sodium Acifluorfen	62476-59-9	7.9E+02	EPA Regional Screening Level, Residential Soil
Sodium Azide	26628-22-8	3.1E+02	EPA Regional Screening Level, Residential Soil
Sodium Diethyldithiocarbamate	148-18-5	1.8E+00	EPA Regional Screening Level, Residential Soil
Sodium Fluoroacetate	62-74-8	1.2E+00	EPA Regional Screening Level, Residential Soil
Sodium Metavanadate	13718-26-8	7.8E+01	EPA Regional Screening Level, Residential Soil
Sodium Perchlorate	7601-89-0	5.5E+01	EPA Regional Screening Level, Residential Soil
Stirofos (Tetrachlorovinphos)	961-11-5	2.0E+01	EPA Regional Screening Level, Residential Soil
Strontium, Stable	7440-24-6	4.7E+04	EPA Regional Screening Level, Residential Soil
Strychnine	57-24-9	1.8E+01	EPA Regional Screening Level, Residential Soil
Styrene	100-42-5	4.0E+00	Soil Screening Level, DAF 20
Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	3.1E+02	EPA Regional Screening Level, Residential Soil
Sythane	88671-89-0	1.5E+03	EPA Regional Screening Level, Residential Soil
TCMTB	21564-17-0	1.8E+03	EPA Regional Screening Level, Residential Soil
Tebuthiuron	34014-18-1	4.3E+03	EPA Regional Screening Level, Residential Soil
Temephos	3383-96-8	1.2E+03	EPA Regional Screening Level, Residential Soil
Terbacil	5902-51-2	7.9E+02	EPA Regional Screening Level, Residential Soil
Terbufos	13071-79-9	1.5E+00	EPA Regional Screening Level, Residential Soil
Terbutryn	886-50-0	6.1E+01	EPA Regional Screening Level, Residential Soil
Tetrachlorobenzene, 1,2,4,5-	95-94-3	1.8E+01	EPA Regional Screening Level, Residential Soil
Tetrachloroethane, 1,1,1,2-	630-20-6	2.0E+00	EPA Regional Screening Level, Residential Soil
Tetrachloroethane, 1,1,2,2-	79-34-5	3.0E-03	Soil Screening Level, DAF 20
Tetrachloroethylene (PCE)	127-18-4	6.0E-02	Soil Screening Level, DAF 20
Tetrachlorophenol, 2,3,4,6-	58-90-2	1.8E+03	EPA Regional Screening Level, Residential Soil
Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	2.4E-02	EPA Regional Screening Level, Residential Soil
Tetraethyl Dithiopyrophosphate	3689-24-5	3.1E+01	EPA Regional Screening Level, Residential Soil
Tetrafluoroethane, 1,1,1,2-	811-97-2	1.1E+05	EPA Regional Screening Level, Residential Soil
Tetryl (Trinitrophenylmethylnitramine)	479-45-8	2.4E+02	EPA Regional Screening Level, Residential Soil
Thallium (I) Nitrate	10102-45-1	7.0E+00	EPA Regional Screening Level, Residential Soil
Thallium (Soluble Salts)	7440-28-0	5.1E+00	EPA Regional Screening Level, Residential Soil
Thallium Acetate	563-68-8	7.0E+00	EPA Regional Screening Level, Residential Soil
Thallium Carbonate	6533-73-9	6.3E+00	EPA Regional Screening Level, Residential Soil
Thallium Chloride	7791-12-0	6.3E+00	EPA Regional Screening Level, Residential Soil
Thallium Sulfate	7446-18-6	6.3E+00	EPA Regional Screening Level, Residential Soil
Thiobencarb	28249-77-6	6.1E+02	EPA Regional Screening Level, Residential Soil
Thiofanox	39196-18-4	1.8E+01	EPA Regional Screening Level, Residential Soil
Thiophanate, Methyl	23564-05-8	4.9E+03	EPA Regional Screening Level, Residential Soil
Thiram	137-26-8	3.1E+02	EPA Regional Screening Level, Residential Soil
Tin	7440-31-5	4.7E+04	EPA Regional Screening Level, Residential Soil
Toluene	108-88-3	1.2E+01	Soil Screening Level, DAF 20
Toluene diisocyanate mixture (TDI)	26471-62-5	5.4E+01	EPA Regional Screening Level, Residential Soil
Toluene-2,4-diamine	95-80-7	1.3E-01	EPA Regional Screening Level, Residential Soil
Toluene-2,5-diamine	95-70-5	3.7E+04	EPA Regional Screening Level, Residential Soil
Toluene-2,6-diamine	823-40-5	1.8E+03	EPA Regional Screening Level, Residential Soil
Toluidine, o- (Methylaniline, 2-)	95-53-4	2.7E+00	EPA Regional Screening Level, Residential Soil
Toluidine, p-	106-49-0	2.6E+00	EPA Regional Screening Level, Residential Soil
Total Petroleum Hydrocarbons		1.0E+02	NDEP derived concentration

NDEP Draft Guidelines for Discovery Events (Soil RCs)

Appendix A2--Full list of Reportable Concentrations in soil

Version: 01/28/2009

Analyte	CAS No.	Reportable Concentration (mg/kg)	Source
Toxaphene	8001-35-2	4.4E-01	EPA Regional Screening Level, Residential Soil
Tralomethrin	66841-25-6	4.6E+02	EPA Regional Screening Level, Residential Soil
Triallate	2303-17-5	7.9E+02	EPA Regional Screening Level, Residential Soil
Triasulfuron	82097-50-5	6.1E+02	EPA Regional Screening Level, Residential Soil
Tribromobenzene, 1,2,4-	615-54-3	3.1E+02	EPA Regional Screening Level, Residential Soil
Tributyl Phosphate	126-73-8	5.3E+01	EPA Regional Screening Level, Residential Soil
Tributyltin Compounds	NA	1.8E+01	EPA Regional Screening Level, Residential Soil
Tributyltin Oxide	56-35-9	1.8E+01	EPA Regional Screening Level, Residential Soil
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	4.3E+04	EPA Regional Screening Level, Residential Soil
Trichloroaniline HCl, 2,4,6-	33663-50-2	1.7E+01	EPA Regional Screening Level, Residential Soil
Trichloroaniline, 2,4,6-	634-93-5	1.4E+01	EPA Regional Screening Level, Residential Soil
Trichlorobenzene, 1,2,4-	120-82-1	5.0E+00	Soil Screening Level, DAF 20
Trichloroethane, 1,1,1-	71-55-6	2.0E+00	Soil Screening Level, DAF 20
Trichloroethane, 1,1,2-	79-00-5	2.0E-02	Soil Screening Level, DAF 20
Trichloroethylene (TCE)	79-01-6	6.0E-02	Soil Screening Level, DAF 20
Trichlorofluoromethane	75-69-4	8.0E+02	EPA Regional Screening Level, Residential Soil
Trichlorophenol, 2,4,5-	95-95-4	2.7E+02	Soil Screening Level, DAF 20
Trichlorophenol, 2,4,6-	88-06-2	2.0E-01	Soil Screening Level, DAF 20
Trichlorophenoxy Propionic Acid, 2(2,4,5-	93-72-1	4.9E+02	EPA Regional Screening Level, Residential Soil
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	6.1E+02	EPA Regional Screening Level, Residential Soil
Trichloropropane, 1,1,2-	598-77-6	3.9E+02	EPA Regional Screening Level, Residential Soil
Trichloropropane, 1,2,3-	96-18-4	9.1E-02	EPA Regional Screening Level, Residential Soil
Trichloropropene, 1,2,3-	96-19-5	2.7E+00	EPA Regional Screening Level, Residential Soil
Tridiphane	58138-08-2	1.8E+02	EPA Regional Screening Level, Residential Soil
Triethylamine	121-44-8	1.7E+02	EPA Regional Screening Level, Residential Soil
Trifluralin	1582-09-8	6.3E+01	EPA Regional Screening Level, Residential Soil
Trimethyl Phosphate	512-56-1	1.3E+01	EPA Regional Screening Level, Residential Soil
Trimethylbenzene, 1,2,4-	95-63-6	6.7E+01	EPA Regional Screening Level, Residential Soil
Trimethylbenzene, 1,3,5-	108-67-8	4.7E+01	EPA Regional Screening Level, Residential Soil
Trinitrobenzene, 1,3,5-	99-35-4	2.2E+03	EPA Regional Screening Level, Residential Soil
Trinitrotoluene, 2,4,6-	118-96-7	1.9E+01	EPA Regional Screening Level, Residential Soil
Triphenylphosphine Oxide	791-28-6	1.2E+03	EPA Regional Screening Level, Residential Soil
Tris(2-chloroethyl)phosphate	115-96-8	3.5E+01	EPA Regional Screening Level, Residential Soil
Tris(2-ethylhexyl)phosphate	78-42-2	1.5E+02	EPA Regional Screening Level, Residential Soil
Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1	7.8E+00	EPA Regional Screening Level, Residential Soil
Tri-n-butyltin	688-73-3	1.8E+01	EPA Regional Screening Level, Residential Soil
Uranium (Soluble Salts)	NA	2.3E+02	EPA Regional Screening Level, Residential Soil
Vanadium Pentoxide	1314-62-1	4.0E+02	EPA Regional Screening Level, Residential Soil
Vanadium Sulfate	36907-42-3	1.6E+03	EPA Regional Screening Level, Residential Soil
Vanadium and Compounds	NA	3.9E+02	EPA Regional Screening Level, Residential Soil
Vanadium, Metallic	7440-62-2	5.5E+02	EPA Regional Screening Level, Residential Soil
Vernolate	1929-77-7	6.1E+01	EPA Regional Screening Level, Residential Soil
Vinclozolin	50471-44-8	1.5E+03	EPA Regional Screening Level, Residential Soil
Vinyl Acetate	108-05-4	1.7E+02	Soil Screening Level, DAF 20
Vinyl Bromide	593-60-2	1.1E-01	EPA Regional Screening Level, Residential Soil
Vinyl Chloride	75-01-4	1.0E-02	Soil Screening Level, DAF 20
Warfarin	81-81-2	1.8E+01	EPA Regional Screening Level, Residential Soil
Xylene, Mixture	1330-20-7	2.1E+02	Soil Screening Level, DAF 20
Xylene, P-	106-42-3	2.1E+02	Soil Screening Level, DAF 20
Xylene, m-	108-38-3	2.1E+02	Soil Screening Level, DAF 20
Xylene, o-	95-47-6	2.1E+02	Soil Screening Level, DAF 20
Zinc (Metallic)	7440-66-6	1.2E+04	Soil Screening Level, DAF 20
Zinc Phosphide	1314-84-7	2.3E+01	EPA Regional Screening Level, Residential Soil
Zineb	12122-67-7	3.1E+03	EPA Regional Screening Level, Residential Soil

NDEP Draft Guidelines for Discovery Events (Ground Water RCs)

Appendix B--Reportable Concentrations in Groundwater*

Version: 1/28/2009

Analyte	CAS No.	Reportable Concentrations ** (ug/L)
Alachlor	15972-60-8	2.00E+00
Antimony (metallic) ***	7440-36-0	6.00E+00
Arsenic, Inorganic ***	7440-38-2	1.00E+01
Atrazine	1912-24-9	3.00E+00
Barium ***	7440-39-3	2.00E+03
Benzene	71-43-2	5.00E+00
Benzo[a]pyrene	50-32-8	2.00E-01
Beryllium and compounds ***	7440-41-7	4.00E+00
Bis(2-ethylhexyl)phthalate	117-81-7	6.00E+00
Bromate ***	15541-45-4	1.00E+01
Cadmium (Water) ***	7440-43-9	5.00E+00
Carbofuran	1563-66-2	4.00E+01
Carbon Tetrachloride	56-23-5	5.00E+00
Chlordane	12789-03-6	2.00E+00
Chlorobenzene	108-90-7	1.00E+02
Copper ***	7440-50-8	1.30E+03
Cyanide (CN-)	57-12-5	2.00E+02
Dalapon	75-99-0	2.00E+02
Di(2-ethylhexyl)adipate	103-23-1	4.00E+02
Dibromo-3-chloropropane, 1,2-	96-12-8	2.00E-01
Dibromoethane, 1,2- (EDB)	106-93-4	5.00E-02
Dichlorobenzene, 1,2-	95-50-1	6.00E+02
Dichlorobenzene, 1,4-	106-46-7	7.50E+01
Dichloroethane, 1,2- (EDC)	107-06-2	5.00E+00
Dichloroethylene, 1,1-	75-35-4	7.00E+00
Dichloroethylene, 1,2-cis-	156-59-2	7.00E+01
Dichloroethylene, 1,2-trans-	156-60-5	1.00E+02
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	7.00E+01
Dichloropropane, 1,2-	78-87-5	5.00E+00
Dinoseb	88-85-7	7.00E+00
Diquat	85-00-7	2.00E+01
Endothall	145-73-3	1.00E+02
Endrin	72-20-8	2.00E+00
Ethylbenzene	100-41-4	7.00E+02
Fluorine (Soluble Fluoride) ***	7782-41-4	4.00E+03
Glyphosate	1071-83-6	7.00E+02
Heptachlor	76-44-8	4.00E-01
Heptachlor Epoxide	1024-57-3	2.00E-01
Hexachlorobenzene	118-74-1	1.00E+00
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	2.00E-01
Hexachlorocyclopentadiene	77-47-4	5.00E+01
Lead and Compounds ***	7439-92-1	1.50E+01
Methoxychlor	72-43-5	4.00E+01
Methylene Chloride	75-09-2	5.00E+00
Methyl tert-Butyl Ether (MTBE)	1634-04-4	2.00E+01
Mercury (elemental) ***	7439-97-6	2.00E+00
Nitrate ***	14797-55-8	1.00E+04
Nitrite ***	14797-65-0	1.00E+03
Oxamyl	23135-22-0	2.00E+02
Pentachlorophenol	87-86-5	1.00E+00
Picloram	1918-02-1	5.00E+02
Polychlorinated Biphenyls	1336-36-3	5.00E-01

NDEP Draft Guidelines for Discovery Events (Ground Water RCs)

Appendix B--Reportable Concentrations in Groundwater*

Version: 1/28/2009

Analyte	CAS No.	Reportable Concentrations ** (ug/L)
Selenium ***	7782-49-2	5.00E+01
Simazine	122-34-9	4.00E+00
Styrene	100-42-5	1.00E+02
TCDD, 2,3,7,8-	1746-01-6	3.00E-05
Tetrachloroethylene (PCE)	127-18-4	5.00E+00
Thallium (Soluble Salts) ***	7440-28-0	2.00E+00
Toluene	108-88-3	1.00E+03
Toxaphene	8001-35-2	3.00E+00
Trichlorobenzene, 1,2,4-	120-82-1	7.00E+01
Trichloroethane, 1,1,1-	71-55-6	2.00E+02
Trichloroethane, 1,1,2-	79-00-5	5.00E+00
Trichloroethylene (TCE)	79-01-6	5.00E+00
Trichlorophenoxy Propionic Acid, 2(2,4,5-	93-72-1	5.00E+01
Vinyl Chloride	75-01-4	2.00E+00
Xylene, Mixture	1330-20-7	1.00E+04

Footnotes:

*-This table is only applicable to the discovery of contaminants in groundwater. Any observed release to **surface water** is reportable at the time of observation. If a release to surface water is not observed but is discovered through visual indications or sampling, the release is reportable based on the presence of a visible sheen or concentrations above surface water standards established in NAC 445A.11704 to 445A.225.

**--The reportable concentrations in this table are all based on federal Maximum Contaminant Levels (MCL) with the exception of MTBE, which has an NDEP-derived level. However, reporting requirements for groundwater are not limited to constituents with a promulgated MCL. In determining whether the discovery in groundwater of a pollutant or contaminant without an MCL is reportable, a facility owner may rely on background concentrations, secondary standards, or EPA tap water Regional Screening Levels.

***--Background concentrations are not reportable regardless of whether they are above reportable concentrations.