

Emergency Response/  
Contingency Plan  
Eagle Mine Superfund Site

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## Contents

	<b>Page</b>
<b>1 Introduction</b>	<b>1</b>
1.1 Site History	1
<b>2 Specific Circumstances</b>	<b>3</b>
<b>3 Emergency Response Actions</b>	<b>5</b>
3.1 Initial Response Actions	5
3.1.1 Shut Off Existing Systems	5
3.1.2 Divert Flows to Existing Collection Points	5
3.1.3 Divert Upslope Runoff Away from Area of Concern	5
3.1.4 Build Temporary Retention Basins to Contain Mine Water	6
3.1.5 Pump Collected Water to Existing Collection Systems	6
3.1.6 Incident Response Equipment	6
3.2 Notification Requirements	6
3.3 Reportable Quantity (RQ) Determination	7
3.4 Potential Impacts to Downstream Users	8
3.5 Notification Procedure	9
3.6 Post Release Sampling	12
3.6.1 Release Flow Rate Verification	12
3.6.2 Water Sampling	12
3.6.3 Soil Sampling	13
3.7 Incident Report	15
<b>4 Follow-Up Actions</b>	<b>16</b>
4.1 Repairs/Preventative Maintenance	16
4.2 Remedial Actions	16
4.3 Restoration	17
4.4 Completion Reporting	17
<b>5 Incident Responder Roles and Responsibilities</b>	<b>18</b>
5.1 Project Manager (PM)/Operations Manager (OM)	18
5.2 Site Coordinator (SC)	18
5.3 Site Personnel	19
5.4 Other Personnel	19
<b>6 References</b>	<b>21</b>

### List of Tables

Table 1	Specific Circumstances	3
Table 2	Immediate Contact List	9
Table 3:	Reportable Quantities (RQ) of Eagle Mine Water	14
Table 4:	Potential Flow Rates to Exceed the Maximum Contaminant Levels (MCLs)	14
Table 5	Site Specific RGs and Subsurface Soil Concentrations	17

**List of Figures**

Figure 1 Site Map

Figure 2 Emergency Response/Contingency Plan Flow Chart

11

**List of Appendices**

Appendix A CDPHE Environmental Spill Reporting and  
CDPHE Reporting Environmental Releases in Colorado

Appendix B Eagle Mine Environmental Incident Contact List

# 1 Introduction

This Emergency Response/Contingency Plan (ER/CP) has been prepared by ENVIRON International Corporation (ENVIRON) on behalf of CBS Operations, Inc. to provide procedures to address emergency situations that could occur at the Eagle Mine Water Treatment Plant (WTP) as part of the Eagle Mine Superfund site (“Site”) as presented on Figure 1. This plan has been prepared to provide clarification and additional response actions above and beyond what is required in the Consent Decree/Remedial Action Plan/Statement of Work. The procedures set forth in this plan are to be followed by all CBS contractors and sub-contractors conducting work at the Site. An emergency situation requires immediate action to prevent or mitigate the unpermitted release of impacted water to the environment that could present a threat to human health or the environment. This ER/CP specifies procedures to be used to identify problems, implement initial corrective actions, notify the appropriate agencies and perform the necessary follow-up activities. The ER/CP addresses actions to be taken in response to several specific circumstances and provides general procedures to respond to emergency incidents that involve releases of impacted water at the Site.

As safety conditions allow, daily inspections (Monday – Friday) are performed by WTP personnel of the treatment plant and conveyance system components including but not limited to the North and East Trenches, the Tip Top adit at the furthest upstream end of the conveyance system, the pipeline from Belden to Rock Creek, the Mine Drawdown (MDD) collection system at Rock Creek which includes the vault and piping components, the pipeline between the MDD vault and the bypass line, and a remote observation of the bypass pipeline in Rex Flats. The identification of a release would typically occur during the daily inspections. In addition, a release may be discovered in other ways, such as observed reduced flow in a pipeline or on the SCADA system, evidence of moist soil or staining near a conveyance structure and so forth.

While on-site personnel strive to identify any problems or potential problems with the remedial components at the Site, it is recognized that some incidents may be noticed first by members of the public. In these cases, efforts have been made to provide the public with the information necessary to promptly notify on-site personnel so that the appropriate emergency response actions, including abating the release and making the required agency notifications, can be initiated according to this plan. These efforts to provide information to the public include: the posting of up-to-date contact information on a sign located at the entry gate to the WTP, providing periodic updates to the emergency call down list maintained by the Eagle River Water and Sanitation District (ERWSD) and the distribution of the call down list to emergency responders and dispatch centers by ERWSD. Members of the public are encouraged to report any suspicious or unusual occurrences at the Site to the on-site personnel as soon as possible.

## 1.1 Site History

The Site consists of the Eagle Mine and associated mining wastes between Gilman and Minturn, in Eagle County, Colorado. The mine is located approximately eight miles southwest of Vail and one hundred miles west of Denver. The 235-acre site includes the Eagle Mine workings, the town of Gilman, three former mine tailings piles, Rock Creek Canyon below

Highway 24, and 14 waste rock piles. The Eagle River flows northwesterly through the Site and past the town of Minturn (population 1,026).

Mining first began in the Gilman area in the late 1880's with the discovery of gold and silver deposits and in 1905 with the mining of lead and zinc deposits. An underground mill, constructed to extract lead and zinc, operated from 1919 to 1979. Copper-silver production continued until 1984 when the mine workings were allowed to flood. The State of Colorado filed notice and a claim against the former mine owners for Natural Resource Damages under the Superfund law in 1985. The site was placed on the list of Superfund sites in June 1986. The constituents of concern in the tailings and waste rock are arsenic, cadmium, copper, lead, and zinc. Copper, cadmium, and zinc seasonally exceed water quality criteria for the Eagle River due to surface water and groundwater contributions from the Site. Tributaries to Eagle River including Rock and Cross Creeks have also been impacted by metals originating from mine wastes within their watersheds. Rock Creek has been impacted from these contaminant sources as well as seepage from underground mine workings. Iron and manganese concentrations in the river are of concern because the river is a source of drinking water to downstream users.

The State of Colorado and the previous mine owner/operator (Gulf + Western Industries) entered into a Consent Decree and Remedial Action Plan to conduct remedial actions in June 1988. CBS is the successor to Gulf +Western. The cleanup plan included flooding the mine workings by bulk heading mine adits, relocating processed mine wastes and impacted soils to one main on-site tailings pile, capping this pile with a multi-layer clean soil cap, and re-vegetating disturbed areas.

A water treatment plant was installed in 1991 to treat the mine water and collected groundwater. The WTP is a lime and settling plant that includes addition of lime, soda ash and polymer to promote settling of solid particles containing metals. Acid is added to reduce the alkalinity of the treated water to acceptable discharge limits. The WTP typically operates continuously in order to maintain the mine pool at an acceptable elevation.

## 2 Specific Circumstances

The purpose of this section is to address specific circumstances associated with the conveyance system and the WTP that could potentially occur resulting in an unpermitted release of impacted water. These specific circumstances and the associated concerns are summarized in Table 1. This table is not meant to summarize every possible incident, but provides examples of potential emergency response situations. Figure 1 provides the locations of the primary components of the collection, conveyance and treatment system.

As noted in Table 1, the material of concern is mine water, impacted groundwater or surface water. ENVIRON has significant experience in conveying and treating mine water, impacted groundwater and surface water at the WTP and other mine sites; consequently this experience will be useful in responding to such events.

**Table 1 Specific Circumstances**

Area	Circumstance	Concern	Initial Actions
MDD Pipeline	Piping failure	Release of mine water	Reduce flow or shut off MDD system at the MDD vault (2 separate valves) or at Adit #5 (2 separate valves). Divert/contain release. Collect released water.
Seep Collection Basins	Piping failure and overtopped basin	Release of mine water	Divert/contain released water. Clear plug in line. Collect released water.
Transportation Pipeline, Tip Top to Rex Flats	Pipe failure/ blockage above Rock Creek	Release of mine water	Close valve at Tip Top adit. Divert flow around blocked area back into pipeline. Build a berm below area to contain water. Collect released water.
	Below Rock Creek	Release of mine water	Reduce or stop MDD and Tip Top flow. Divert inflow around blocked area back into pipeline. Collect released water.
Transportation Pipeline- Trestle supported section from Rex Flats to WTP	Loss of pipe support	Release of mine water	Reduce or stop MDD and Tip Top. Shut off upper valve on Trestle. Build berm below area to contain water. Set up temporary pumps to transfer water back into intact pipeline or to surge ponds using a vacuum truck. Collect released water.
Transportation Pipeline- Bypass across Rex Flats	Pipe failure	Release of mine water	Reduce or stop MDD and Tip Top flow. Shut off upper valve on bypass. Divert flow to trestle pipeline. Build berm below area to contain water. Set up temporary pumps to transfer water to surge ponds using a vacuum truck. Collect released water.

<b>Area</b>	<b>Circumstance</b>	<b>Concern</b>	<b>Initial Actions</b>
WTP Surge Ponds	Sudden drop of water level due to breach in liner or failure of retaining system.	Release of collected mine water and groundwater	Divert inflow to other pond or sludge cell. Reduce or stop MDD flow if required. Pump contents to other pond. Contain leakage, if visible. Repair liner. Build a berm to contain water. Collect released water.
	Overtop pond	Release of collected mine water and groundwater	Upper Pond currently overflows to Lower Pond and Lower Pond overflows to the Sludge Cell. Divert inflow or pump water from full pond to other pond or sludge cell. Reduce or stop MDD if required. Pump contents to other pond. Build a berm around the cells to contain the water. Collect released water.
WTP	Failure of automatic diversion of untreated water to lower pond during plant upsets	Release untreated or partially treated water	Manually divert discharge to the lower pond. Collect released water, if possible.
Waste Rock Pile 8	Fancy Shaft or collection basins plugged	Release of surface water	Build berm below area to contain water. Divert/contain released water. Excavate Fancy Shaft, unplug lines. Collect released water.
CTP Collection Trenches	Pump failure resulting in sump overflow	Release of untreated groundwater	Divert, contain, and collect released water. Replace sump pump with backup pump.

## **3 Emergency Response Actions**

### **3.1 Initial Response Actions**

The first response by onsite personnel should be to quickly assess the situation and determine the source and cause of the release of impacted water. A general process is provided in the flow chart presented as Figure 2. At the time of discovery of a leak or release, the on-site personnel should either directly measure the rate of the release, or take appropriate readings to verify the release rate.

Site personnel shall immediately take all appropriate action to prevent, abate, or minimize the release of impacted water. Immediate corrective actions, such as closing a valve, digging a ditch, constructing a silt fence or creating a berm will be conducted in a safe and expedient manner. Any and all resources onsite are available for use during emergency response situations, including equipment, supplies and stockpiled materials. In the event the release cannot be addressed by onsite personnel, contractors will be brought in to assist in the response actions. Table 1 lists the appropriate initial actions for the specific circumstances. The initial actions listed are familiar to current site personnel using onsite equipment. Activities carried out under ER/CP circumstances can typically be performed in Level D personal protective equipment (PPE). Response actions will be taken in consultation with the USEPA Remedial Project Manager and the CDPHE Project Manager or designated alternates and in accordance with all related plans as described in Section XVI of the Consent Decree with USEPA. The initial actions fall into the following categories.

#### **3.1.1 Shut Off Existing Systems**

In situations that involve the release of mine water from the conveyance system (pipelines), the release can usually be abated quickly by shutting off the valves on the pipelines. Once shut off, the flow in these systems will drop significantly, but not completely due to drainage from the seeps. During winter months when freezing of the water in the pipeline is a concern, additional measures may need to be taken. If it is possible to maintain a lower flow rate in the pipeline without causing a release, the flow may be reduced to prevent freezing of the water in the lines. If the flow needs to be stopped, the MDD or Tip Top may be shut off at the bulkheads and the lines drained; if the bypass line is in use, it may have to be drained at the cleanout in Rex Flats. Another option includes installing a temporary bypass around a leaking section.

#### **3.1.2 Divert Flows to Existing Collection Points**

In Rock Creek, releases from Adit #5 or the seep #7 collection basin may be able to be diverted into the area of former seep S-1 near the bottom of Rock Creek and, from there, into the concrete structure at the base of Rock Creek. Above Belden, it may be possible to divert and collect releases from Adit #143 or Tip Top and pump them into manholes or clean-outs along the subsurface pipeline. Diversion berms may be constructed with available soil and/or rock in the area by hand using shovels or using the backhoe/loader located on site.

#### **3.1.3 Divert Upslope Runoff Away from Area of Concern**

Clean water that may originate in upslope areas should be diverted away from the area of concern by constructing diversion berms upslope of the area with available soil and/or rock in the area by hand using shovels or using the backhoe/loader located on site. Diverting upslope

runoff will prevent clean water from contacting materials of concern and will make other response actions easier to implement.

### **3.1.4 Build Temporary Retention Basins to Contain Mine Water**

Where it is not possible to divert released water into an existing collection system, efforts will be made to contain and/or control the impacted water by building temporary retention basins in topographically suitable areas. In all instances, basins will be built with available soil and/or rock in the area by hand using shovels or using the backhoe/loader located on site. Because these basins will likely be larger than the diversion berms discussed earlier, the backhoe/loader will likely be required for their construction. If a temporary retention basin is constructed to abate an incident and it appears that the amount of time to repair the cause of the release will be more than 24 hours, then the temporary basin will be lined with plastic sheeting.

### **3.1.5 Pump Collected Water to Existing Collection Systems**

Unless the release of impacted water is either very limited or abated very quickly, the collection of water in berms, as described above, will need to be done in conjunction with pumping to prevent the water from overflowing the construction berms. Site personnel have access to several pumps and associated lengths and sizes of hose. Rapid mobilization of an appropriate pump with hoses may allow the timely transfer of collected water to a nearby collection system. For releases in the buried segment of the pipeline from Tip Top to Rex Flats, there are manholes located every 300 feet, which may allow discharge of the collected water into the conveyance system. In the event the collected water cannot be returned to the conveyance system, a vacuum truck will be used to collect the water and transport it to the surge ponds where it will be discharged into the ponds and treated in the WTP. There are several local subcontractors with the ability to collect and transport the water.

### **3.1.6 Incident Response Equipment**

ENVIRON will maintain an "Incident Response Kit" on-site that can be used to respond to emergency incidents. The kit will include, at a minimum: pipe repair kits (i.e., repair couplings), supplies of replacement valves/fittings, plastic sheeting, 5 gallon bucket, stop watch, pH and conductivity meters, and water sampling supplies. The WTP maintains hand tools, various pumps, a backhoe, a pickup truck and other tools and equipment as part of normal operations that will also be used to respond to emergency incidents.

## **3.2 Notification Requirements**

In accordance with the 1988 Consent Decree, VI. Performance of Work, Section D, ENVIRON will immediately notify the USEPA and CDPHE orally or in writing if there has been or probably will be a failure of a component of the work which may have a material adverse effect on the environment. ENVIRON will include detail regarding the failure or possibility of failure and the timetable by which ENVIRON intends to implement the contingency plan described herein, the steps ENVIRON has taken, is taking or plans to take to comply with the USEPA and CDPHE.

Pursuant to the 1996 Consent Decree, Section XI. Reporting Requirements Section 33, ENVIRON will report any incident in accordance with regulations promulgated under Section 103 of CERCLA or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), within 24 hours of when ENVIRON or a subcontractor knew or should have known of

the onset of such event, shall orally notify the USEPA Project Coordinator (see Table 2), or, in the event that the USEPA Coordinator is unavailable, the Emergency Response Section, Region VIII, United States Environmental Protection Agency, and the State Project Coordinator or the Alternate State Project Coordinator, or in the event that both the State Coordinators are unavailable, the CDPHE Environmental Incident Reporting Line (see Table 2 for all contact information). These reporting requirements apply only to releases which exceed a Reportable Quantity (RQ) under CERCLA (See Section 3.3). In addition, this section of the Consent Decree requires that within 20 days of the onset of an event requiring notification under CERCLA or EPCRA, a written report setting forth the events which occurred and the measures taken, and to be taken in response to the incident be submitted to the agencies. Within 30 days of the conclusion of the incident, a report shall be submitted setting forth all actions taken in response to the incident.

The Federal Clean Water Act requires the facility to immediately report discharges of oil or designated hazardous substances which are included on the CERCLA list to the National Response Center. The Clean Water Act also requires National Pollutant Discharge Elimination System (NPDES) permit holders to report any unanticipated bypasses or upsets that cause an exceedance of the effluent limits in the NPDES permit to the National Response Center within 24 hours of becoming aware of the exceedance. An incident release report associated with the WTP that is regulated under the CDPS permit requires an initial report within five days.

Under the Colorado Clean Water Act, a release of any chemical, oil, petroleum product, sewage, etc., which may enter waters of the state of Colorado (which include surface water, ground water and dry gullies and storm sewers leading to surface water) must be reported immediately to CDPHE. This information is provided in Appendix A.

Because each of these notification requirements are different, the most conservative approach, as specified by the paragraph above (immediate notification to CDPHE of any release based on the Clean Water Act) is the notification approach that is adopted under this plan.

While this plan is designed to address emergency situations that occur at the site, it is also recognized that a situation could arise where a release has not yet occurred, but may occur due to extenuating circumstances. Such events could include an unexpected rise in the mine pool to an elevation that could cause inactive seeps to discharge to the river, or freezing conditions/blockage in the pipeline. Even though these events may not be causing a release, the fact that a significant release is imminent will trigger notification to CDPHE and USEPA. Once CDPHE and USEPA are notified of the threat of the release, the agencies will instruct CBS regarding further notifications that may be necessary (for example, CDPHE and USEPA may instruct CBS to notify the CDPHE Environmental Release Incident Reporting Line and/or the downstream users).

### **3.3 Reportable Quantity (RQ) Determination**

Reporting requirements in SARA Title III for hazardous substances list the limiting amount of a substance, given in pounds, which can be released in a 24 hour period. The hazardous substances associated with the Eagle Mine water collection system are dissolved in the collected water and are not readily evaluated in terms of pounds. ENVIRON has therefore

converted the RQ amounts for the metals of concern at the Site into a liquid volume basis. Table 3, which lists the reporting requirements in both pounds and gallons, has been prepared using the concentration of each metal measured at various locations from 1997 through 2011. The use of the latest measured concentration values provides the most representative flow volume that would exceed the RQ.

It is clear from Table 3 that zinc is the controlling constituent with respect to SARA Title III reporting requirements (i.e., based on the concentrations of metals in the various sources of water, zinc was the metal with the lowest calculated volume of water that would cause an exceedance of the RQ). The calculated equivalent rate assumes the RQ volume is released at a uniform rate for 24 hours.

### **3.4 Potential Impacts to Downstream Users**

An analysis was also conducted to estimate potential effects on downstream drinking water supplies. Assuming a river flow rate of 15 cfs (acute low flow referred to as 1E3 from the Eagle Mine WWTP Water Quality Assessment, June 2009) and using the recent sampling data, a range of impacted water release flow rates were calculated to determine when a drinking water Maximum Contaminant Level (MCL) might be exceeded. The results show that a release of ~30 GPM to >17,000 GPM is needed to exceed an MCL. This calculation assumes that the drinking water is supplied directly (without treatment) from the Eagle River immediately downstream of the release; that is, there are no intervening tributaries or sources of dilution. The most conservative scenario would be a release from the Tip Top Mine which would exceed the MCL for cadmium if it entered the Eagle River at 30 GPM. Cadmium is the controlling metal for the MCL calculation for all the different sources with the exception of the North and East Trenches where the controlling metal was zinc.

In some cases, the amount of impacted water needed to exceed an RQ is more than the maximum observed discharge rate for the source. For example, the Tip Top mine in Belden area would have to discharge at a rate of 438 GPM for 24 hours to generate an RQ release and 952 GPM to exceed the MCLs in Eagle River. However, the maximum measured discharge rate for the Belden area seeps is about 70 GPM. Likewise, the maximum flow rate historically reported for the Rock Creek seeps is about 15 GPM compared with an equivalent rate of 1,412 GPM required to exceed the RQ assuming 24 hours of discharge. The MDD would have to discharge at a rate of 993 GPM for 24 hours to generate an RQ release and 547 GPM to exceed the MCLs in the Eagle River which are both significantly higher than the maximum MDD withdrawal rate that does not overload the conveyance system of approximately 300 GPM.

The lowest estimated flow rate in these calculations is 30 GPM, which represents the most conservative potential release rate that would cause an exceedance of the MCL. This calculation is based on a release from the Tip Top mine at Belden (referred to as "Belden Area Seeps" on Tables 4-6.) The typical flow rate from Tip Top is approximately 10 GPM. The 30 GPM flow rate was calculated using the highest recorded concentration data for cadmium. More recent sampling results (2012) are an order of magnitude lower and would equate to a flow rate of approximately 300 GPM before the MCL is exceeded. It should be noted that the next most conservative release flow rate to cause an MCL exceedance of cadmium is 106 GPM (Table 4) from the WTP and Surge Ponds.

An increase in iron and manganese from a release at the site may affect the disinfection process at downstream drinking water facilities. In order to assess the potential impacts to iron and manganese concentrations in the river, similar calculations were conducted. These calculations showed that a release of 15 GPM or less would have little measurable effect on the iron and manganese concentrations in the Eagle River below its confluence with Gore Creek.

### 3.5 Notification Procedure

After appropriate initial response to prevent, abate, or minimize the release of impacted water, on-site personnel (including subcontractors) who find, recognize or otherwise become aware of an incident will be responsible for immediately initiating the notification process. On-site personnel will immediately notify the ENVIRON Project Manager, who will in turn notify the CDPHE Project Manager, USEPA Remedial Project Manager and the CDPHE Environmental Release Incident Reporting Line. Once the initial notification to the ENVIRON Project Manager has occurred, the remaining notifications are the responsibility of the ENVIRON Project Manager. This frees up the on-site personnel to mitigate the incident rather than spending additional time notifying others. [Also note that once the CDPHE Environmental Release Incident Reporting Line has been notified, CDPHE may initiate further notification as part of CDPHE Emergency Response protocols.] If the circumstances of the incident appear to meet the criteria for the release of a Reportable Quantity, or if the release is associated with the WTP, the USEPA National Response Center will also be notified.

For purposes of this notification requirement, “immediately” shall be defined as “as soon as practicable under the circumstances.” If onsite personnel are unable to contact the ENVIRON Project Manager, the onsite personnel shall have the obligation to immediately contact the CDPHE Environmental Release Incident Reporting Line, CDPHE Project Manager and USEPA Remedial Project Manager. If on-site personnel or the ENVIRON Project Manager are unable to immediately contact the USEPA and CDPHE, ENVIRON Managers and/or CBS will continue to attempt to contact the USEPA and CDPHE, or their alternates.

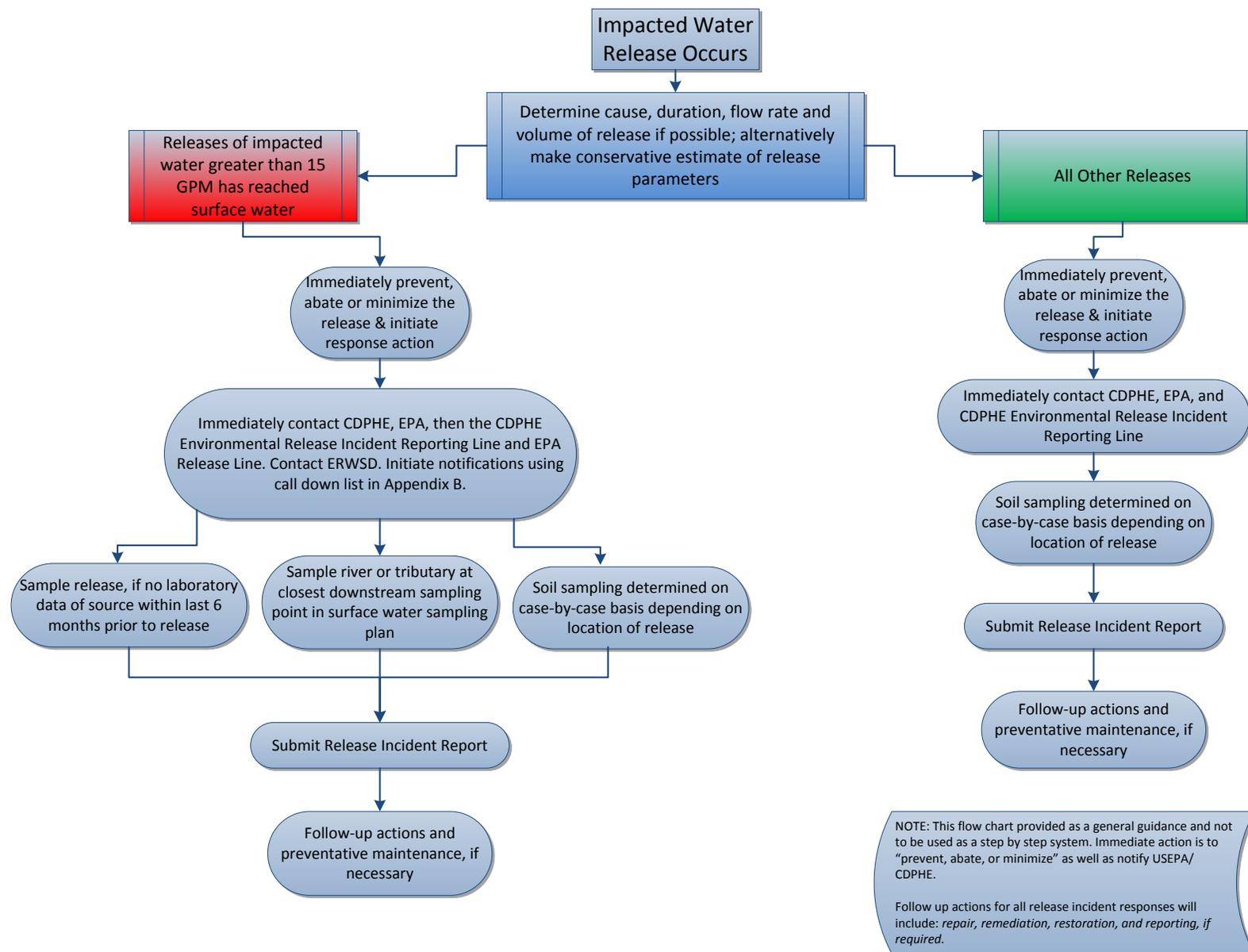
**Table 2 Immediate Contact List**

Company	Name	Phone Number	E-Mail Address
ENVIRON International Corp.	David Heinze Project Manager	303-382-5474 (office) 303-990-4100 (cell)	dheinze@environcorp.com
Colorado Department of Public Health and Environment (CDPHE)	Environmental Release and Incident Reporting Line	877-518-5608	N/A
Environmental Protection Agency (EPA)	Leslie Simms – Project Manager	303-312-6224 (office) 303-358-0015 (cell)	<a href="mailto:sims.leslie@epa.gov">sims.leslie@epa.gov</a>
Colorado Department of Public Health and Environment (CDPHE)	Wendy Naugle – Project Manager	303-692-3394 (office) 303-691-7878 (fax)	<a href="mailto:Wendy.naugle@state.co.us">Wendy.naugle@state.co.us</a>
U.S. Environmental Protection Agency	National Response Center	800-424-8802	N/A

Downstream water users have requested immediate notification of incidents at the Eagle Mine in order to allow them to shut off their intakes before a surge of potentially contaminated water reaches the intakes. In addition, several other agencies and organizations have requested notification of releases to the Eagle River, including Colorado Parks and Wildlife. Through a cooperative effort with the Eagle River Water and Sanitation District, an Emergency Contact List has been established. The contact list, included herein as Appendix B, is updated every 6 months by ERWSD and distributed to everyone on the list, emergency response coordinators and dispatch call centers. When a call is made to ERWSD to "activate" the notification process, ERWSD can initiate an automated call-out to phone numbers on the list.

Recognizing that not all releases that are reported under the Consent Decree or Clean Water Act will measurably impact the Eagle River, the calculations performed in Section 3.4 were used to establish a Best Management Practice for notification to the downstream users and activation of the call down list. Consequently, any release that reaches the river at a flow rate equal to or greater than 15 GPM will trigger notification to downstream users, using the list included as Appendix B. The 15 GPM flow rate represents a potential release rate that may cause changes to the iron and manganese concentrations at a downstream water treatment facility. The ENVIRON Project Manager will continue to notify downstream users on a daily basis if an incident continues beyond 24 hours. A flowchart outlining the notification/response process is provided as Figure 2.

**Figure 2– Emergency Response/Contingency Plan Flow Chart**



### **3.6 Post Release Sampling**

#### **3.6.1 Release Flow Rate Verification**

Upon identifying an impacted water release, field personnel will attempt to measure the magnitude of the release. This is important in terms of determining if the release may exceed a Reportable Quantity and will determine what other notifications are necessary and whether or not sampling activities need to be undertaken. In order to estimate the flow rate of a release, a flow meter reading will be used for releases from the MDD and a 5 gallon bucket in combination with a stop watch will be used for pipe leaks/drips. If a reasonable estimate of the flow rate cannot be made, and the release source has the capability of flowing more than 15 gpm and the release is reaching the river, then it will be assumed that the release exceeds the 15 GPM threshold.

#### **3.6.2 Water Sampling**

After appropriate initial responses to contain the impacted water release or prevent further release, pH and conductivity measurements will be taken on a water sample representing the release and similar measurements will be conducted on any ponded water on the ground. In addition, sampling of the release and the river will only occur if it is determined that a release of greater than 15 GPM has reached the Eagle River or tributaries. If the release exceeds 15 GPM, sampling of the release itself may need to be conducted at the same time as the initial response actions to abate the release. As discussed in Section 3.4, this flow rate represents a conservative potential release flow rate that could cause an increase in the iron and manganese concentrations at a downstream drinking water facility. Water samples will be collected at the release to determine the concentrations of the constituents of concern to be able to determine if a Reportable Quantity release had occurred for notification/reporting purposes.

If determined to be necessary, river water samples may be collected upstream of the release area for background comparison purposes. For comparison purposes, samples of the river will be collected at the closest downstream sampling location where samples are routinely collected as part of the Surface Water Sampling and Analysis Plan (Dames & Moore, 1996) prepared for the Eagle Mine Site. Samples will be collected in general accordance with standard surface water sampling procedures in flowing water as described in the Surface Water Sampling and Analysis Plan. Typically, for a short term release, representative grab samples will be collected at the sampling locations using a 1-gallon (analytical quality) narrow mouthed plastic container. Samples will be collected into narrow-mouth plastic containers of sufficient volume to meet all processing and analytical requirements. Sample bottles supplied by the laboratory will be filled and preserved as appropriate for unfiltered samples. Samples will be filtered in the field for dissolved metals analysis. All samples will be handled under proper chain-of-custody and analyzed on an expedited basis to obtain the results in a matter of days to be able to help direct response and remedial activities.

For a long term release greater than 15 GPM, samples will be collected over the duration of the release every 24 hours for the first five days of the release and then weekly thereafter until the release is stopped. If the results from the first five days of sampling vary significantly, daily sampling may continue until the results are considered to be consistent. For on-going releases, monitoring will continue until pre-release conditions are met. The cessation of monitoring will not occur until approved by USEPA and CDPHE.

### **3.6.3 Soil Sampling**

In the event the incident may have impacted soil, sampling may be required to determine the nature and extent of impact. Any soil sampling requirements will be determined after consultation with the CDPHE and USEPA. However, as previously discussed, mining has occurred in the area since the 1800's and portions of the site received mine waste from processing activities at Belden. Portions of the Site still contain contaminated soil, so it may be difficult to discern impacts from a release of mine water. The need for soil removal will be governed by the Consent Decree and as determined by USEPA and CDPHE on a case by case basis based on the magnitude of the spill, proximity to the river, impacts to the immediate area and overall risk to the environment.

Table 3: Reportable Quantities (RQ) of Impacted Water					
Area	Units	Metals			
		Cadmium	Copper	Lead	Zinc
Reporting Requirements	CASRN	#7440439	#7440508	#7439921	#7440666
	Final RQ (lb. per day)	10	5,000	10	1,000
Tip Top Mine at Belden <sup>1</sup>	Max. Conc. – mg/l	0.631	12	0.405	190
	Reportable Vol. – gal.	1,898,993	49,927,678	2,958,677	630,665
	Controlling Metal				Zinc
	RQ Volume – (gal/day)				630,665
	Equiv. Rate – (gpm)				437.96
Rock Creek Seeps <sup>1</sup>	Units	Cadmium	Copper	Lead	Zinc
	Max. Conc. – mg/l	0.14	0.013	0.004	59
	Reportable Vol. – gal.	8,559,031	46,087,087,441	299,566,068	2,030,956
	Controlling Metal				Zinc
	RQ Volume – (gal/day)				2,030,956
	Equiv. Rate – (gpm)				1,410
Adit #5 - MDD <sup>2</sup>	Units	Cadmium	Copper	Lead	Zinc
	Max. Conc. – mg/l	0.03653	0.0995	0.09817	30.0878
	Reportable Vol. – gal.	32,802,197	6,021,428,510	12,206,013	3,982,559
	Controlling Metal				Zinc
	RQ Volume – (gal/day)				3,982,559
	Equiv. Rate – (gpm)				2,766
Water Treatment Plant & Surge Ponds <sup>4</sup>	Units	Cadmium	Copper	Lead	Zinc
	Max. Conc. – mg/l	0.17	2.74	0.01	73.84
	Reportable Vol. – gal.	7,048,613	218,661,364	119,826,427	1,622,785
	Controlling Metal				Zinc
	RQ Volume – (gal/day)				1,622,785
	Equiv. Rate – (gpm)				1,127
North Trench <sup>2</sup>	Units	Cadmium	Copper	Lead	Zinc
	Max. Conc. – mg/l	0.001	0.011	0.001	17.37
	Reportable Vol. – gal.	1,198,264,273	54,466,557,884	1,198,264,273	6,896,763
	Controlling Metal				Zinc
	RQ Volume – (gal/day)				6,896,763
	Equiv. Rate – (gpm)				4,789
East Trench <sup>2</sup>	Units	Cadmium	Copper	Lead	Zinc
	Max. Conc. – mg/l	0.006	0.007	0.004	32.839
	Reportable Vol. – gal.	199,710,712	85,590,305,247	299,566,068	3,648,906
	Controlling Metal				Zinc
	RQ Volume – (gal/day)				3,648,906
	Equiv. Rate – (gpm)				2,534

Notes:  
<sup>1</sup> As of 1997 Measurements from Eagle Engineering Services. Inc.  
<sup>2</sup> As of 9.2011 measurements from ENVIRON  
<sup>3</sup> As of 6.2011 measurements from ENVIRON  
<sup>4</sup> As of 1.2010 measurements from ENVIRON  
<sup>5</sup> Volume of water containing RQ amount of constituent of concern  
<sup>6</sup> Equivalent rate assumes discharge occurs at a uniform rate for 24 hours

Table 4: Potential Flow Rates of Impacted Water to Exceed the Maximum Contaminant Levels (MCLs)			
Max Release Flow Rate to Attain Drinking Water Standard at Downstream Intake			
Area	Metals	CFS	GPM
Tip Top Mine <sup>1</sup>	Zinc	0.33	150
	Cadmium	0.06	28
	Copper	1.80	808
	Lead	0.50	224
Rock Creek Seeps <sup>1</sup>	Zinc	1.14	514
	Cadmium	0.29	130
	Copper	max concentration < MCL	
	Lead	max concentration < MCL	
MDD (Adit #6) <sup>3</sup>	Zinc	2.46	1,105
	Cadmium	1.22	547
	Copper	max concentration < MCL	
	Lead	2.34	1,052
WTP & Surge Ponds <sup>4</sup>	Zinc	0.90	403
	Cadmium	0.24	106
	Copper	13.39	6,007
	Lead	max concentration of < MCL	
North Trench <sup>2</sup>	Zinc	4.99	2,241
	Cadmium	max concentration < MCL	
	Copper	max concentration < MCL	
	Lead	max concentration < MCL	
East Trench <sup>2</sup>	Zinc	2.22	996
	Cadmium	39.00	17,503
	Copper	max concentration < MCL	
	Lead	max concentration < MCL	

Notes:  
<sup>1</sup> As of 1997 measurements from Eagle Engineering Services. Inc.  
<sup>2</sup> As of 9.2011 measurements from ENVIRON  
<sup>3</sup> As of 6.2011 measurements from ENVIRON  
<sup>4</sup> As of 1.2010 measurements from ENVIRON  
<sup>5</sup> Volume of water containing RQ amount of constituent of concern  
<sup>6</sup> Equivalent rate assumes discharge occurs at a uniform rate for 24 hours  
\*Assumes complete mixing and a critical Eagle River flow rate of 15 CFS  
\*Upstream river concentrations and critical flow rate are derived from the Eagle Mine WWTP Water Quality Assessment CO-0042480

**Calculation for Max Release Flow Rate:**

$$[(\text{Max release conc.})(\text{Release Flow Rate})] + [(\text{Upstream River conc.})(\text{critical Eagle River flow rate})] = [(\text{drinking water std.})(\text{Release Flow Rate})] + (\text{drinking water std.} \times \text{critical flow rate})$$

### **3.7 Incident Report**

Once the initial emergency response actions have been performed and the necessary notifications been completed, a written Incident Report will be prepared. As discussed in Section 3.2, the reporting requirements are different between the CDPS permit and the Consent Decrees. For an incident associated with the WTP that is regulated under the CDPS permit, an initial incident report is required within five days. This report will be sent to the USEPA Remedial Project Manager, the CDPHE Project Manager and the CDPHE Water Quality Control Division. For other releases at the site, a report will be submitted to USEPA and CDPHE within twenty days of the date of the event, as required by the Consent Decree. At a minimum, the report will include:

- 1) Description of the event and its cause, including the nature and quantity of material released.
- 2) The duration of the event, including exact dates and times.
- 3) The date and time the event will be corrected if it is still occurring.
- 4) Measures taken to clean up the release.
- 5) Steps taken or planned to prevent reoccurrence of the event.
- 6) Whether the materials reached a surface water of the state and the receiving water body and volume.
- 7) Analytical results from water samples if the release has reached surface water at greater than 15 GPM or soil samples if determined to be necessary based on the release location.

## 4 Follow-Up Actions

In the event follow-up actions are required, ENVIRON will prepare plans and procure additional materials, equipment and personnel as needed for cleanup and repair. Such additional work may be prepared as a contingency activity or as a non-scheduled maintenance activity.

### 4.1 Repairs/Preventative Maintenance

In the event the initial response actions did not effectively repair the cause of the release, additional repair activities may be required. This may be associated with time required to redesign the failed component or due to delays associated with weather or the acquisition of parts. Depending on the size of the repair required, Work Plans may be required by USEPA and/or CDPHE providing details of the planned work. The need for a formal work plan will be determined upon notification to USEPA and CDPHE in accordance with the Consent Decree. Work will not commence until USEPA and CDPHE approve the Work Plan.

The purpose of the repairs or preventative maintenance is to prevent reoccurrence of the event. This may include repair or replacement of portions of the conveyance system such as piping, valves or other monitoring or control equipment, repair of the surge ponds, repair of the various WTP components, etc.

### 4.2 Remedial Actions

Remedial actions may be required to address impacted soil or remove temporary diversion or collection structures built as part of emergency response activities. In the event remedial actions are required, a Work Plan may be required by USEPA and/or CDPHE providing details of the planned work. The need for a formal Work Plan will be determined upon notification to USEPA and CDPHE in accordance with the Consent Decree. Work will not commence until USEPA and CDPHE approve the Work Plan.

The remedial actions will be performed in accordance with the Work Plan to properly address media determined to have been impacted by the incident. Work may include excavation of impacted soil, relocation of the soil to the temporary cell, sludge cell or off-site permitted disposal facility. The requirement for soil sampling was discussed in Section 3.6.3. Post excavation confirmatory soil sampling may be required to verify removal of soil contaminated with metals from a release. Soil sample results will be compared to the Remediation Goals for soil (RGs) from the Battle Mountain Remedial Investigation as summarized in Table 5. However, as previously discussed, soil sampling will be performed on a case-by-case basis taking into consideration any existing information regarding pre-release concentrations. Investigation and confirmatory soil samples will be compared to the site-specific RGs as provided in Table 5 below which also provides background soil concentrations for comparison purposes.

Site-specific cleanup standards will be used if a release occurs where background/historical concentrations are lower than the RG. However, if historical values exceed the RG, the need for remedial actions will be discussed with the agencies to best determine if cleanup is required to pre-existing conditions given historical data as a baseline.

The Site Coordinator will perform a follow up inspection of all release location(s) after cleanup is completed. If determined to be necessary, site personnel will add the release location(s) to their daily inspections and will continue until it is determined that follow up inspections are no longer required.

**Table 5 Site Specific RGs and Subsurface Soil Concentrations**

<b>Metal</b>	<b>Site-specific RG (mg/kg)</b>		<b>Bolts Lake (mg/kg)</b>	<b>OTP/ Sump #3 (mg/kg)</b>	<b>Rex Flats (mg/kg)</b>
Arsenic	40	min	<1.3	0.65	<0.63
		max	25	220	1,000
Cadmium	37	min	<0.21	<0.1	<0.1
		max	2.3	2	2.1
Chromium	210	min	8.1	5.8	6.7
		max	36	92	31
Copper	3,100	min	5.6	6.5	5.5
		max	23	74	250
Lead	400	min	2.8	1.7	2.4
		max	70	230	2,400
Manganese	1,800	min	57	25	73
		max	940	2,200	1,200
Zinc	23,000	min	14	12	20
		max	460	1,000	940

### 4.3 Restoration

Restoration activities will be conducted in areas where intrusive remedial actions were performed. The goal of restoration activities is to return disturbed areas to pre-release conditions. Restoration activities may include re-grading, top soil replacement, re-vegetation with native seed blends, etc. Monitoring of the restoration area(s) will be performed until it is determined that follow up inspections are no longer required.

### 4.4 Completion Reporting

A completion report will be prepared following completion of follow-up actions that documents any repairs, remedial actions and/or restoration actions performed. The completion report will include a summary of the actions completed following the incident, figures, photographs and any continuing monitoring or maintenance required.

## 5 Incident Responder Roles and Responsibilities

To maintain a state of readiness, certain ENVIRON personnel have been delegated the appropriate authorities and assigned duties and responsibilities to ensure incidents at the Site are handled properly. During an incident response, the “Incident Responders” work collectively as a team with a common goal of accomplishing release containment and clean ups expeditiously and in a manner that ensures the safety and protection of the Incident Responders, the general public, and the environment.

The on-site personnel who discover or become aware of an incident will be responsible for the initial notification. The individuals that have direct or indirect incident response duties at the Site, and their specific responsibilities, are described below:

### 5.1 Project Manager (PM)/Operations Manager (OM)

The ENVIRON PM, assisted by the OM and a supervisory staff, will oversee project activities and is responsible for ensuring all necessary incident response labor and equipment resources are available to properly respond to incidents. ENVIRON’s PM is responsible for notifying the CDPHE Environmental Incident Reporting Line, the USEPA Remedial Project Manager and the CDPHE Project Manager. ENVIRON’s PM is also responsible for monitoring the work effort, schedule, costs and communication. The PM or OM will also provide the focal point for communications between the USEPA, state, local community, on-site contractors, and project staff. This liaison activity will provide a clear line of communication between all parties to minimize the chance for misconceptions concerning any aspect of the project. The ENVIRON PM or OM will report to CBS and will coordinate any support required from ENVIRON and/or its subcontractors. The ENVIRON PM or OM will ensure that the activities of all Site personnel comply with the approved Work Plans and will recommend or provide disciplinary action, as appropriate, if non-compliances occur. The Project Manager is not required to be on-site during incident responses.

The ENVIRON PM for this project is: Mr. David Heinze, PE

The ENVIRON OM for this project is: Mr. Don Houston

### 5.2 Site Coordinator (SC)

The ENVIRON Site Coordinator (SC) is responsible for overseeing day-to-day Site activities performed by ENVIRON and its subcontractors including incident response activities. The ENVIRON SC’s principal responsibility will be to coordinate and document all on-site work necessary to fulfill approved work plans.

In the event of an emergency, the ENVIRON SC will also function as the Site Emergency Response Coordinator (SERC). The SC/SERC will be available for counsel and will implement and coordinate emergency response procedures described in this Emergency Response Plan and the Health & Safety Plan. The ENVIRON SC/SERC is also responsible for notifying and assisting the Site Health and Safety Officer (SHSO) in the event of an emergency.

Prior to the initiation of response or follow-up activities, the ENVIRON SC will coordinate communications with WTP personnel, subcontractors or agency personnel as necessary to provide new information on site-specific hazards and potential types of emergencies that could occur during Site activities.

The ENVIRON SC has responsibilities for incidents that occur at the Site. To the extent practicable, the ENVIRON SC will respond on-site during responses to all major incidents. The SC is not required to be on-site to respond to minor incidents. Depending on the nature of the incident, the ENVIRON SC will have the following responsibilities:

- Make notifications to the PM or at the PM's direction, the appropriate governmental agencies depending upon the magnitude of the incident, according to Section 3.2.
- Provide technical assistance as necessary to minimize environmental impacts due to incident response operations and/or procedures.
- Prepare written reports for the USEPA, State, and Local agencies.
- Develop and implement environmental procedures and protocols to ensure compliance with local, state, and federal regulations.
- Conduct inspections and follow-up incident response investigations to ensure proper remediation.
- Initiate post-cleanup environmental sampling and confirm proper disposal.
- Maintain a incident response database.
- Review Inventory of Incident Response Kit supplies, prepared by EMWTP personnel.
- Record costs incurred.

The ENVIRON SC for this project is Mr. David Heinze, PE.

### **5.3 Site Personnel**

The on-Site personnel will take the lead in incident response for all release containment activities. Incident response operations will be supported by contractors as needed. Depending on the nature of the incident, on-Site personnel duties may include:

- Direct and coordinate Incident Responders in all containment and cleanup activities. Follow guidelines set forth in Section 3 of this report.
- Contact all appropriate parties including those listed in Table 2 and Appendix B.
- Confirm containment of release and perform sampling if necessary.
- Reference flow chart (Figure 2) for more detailed instructions.

### **5.4 Other Personnel**

ENVIRON's and/or CBS's consultants or subcontractors (e.g., NewFields), if needed, will plan, manage and carry out activities at the Site, including but not limited to security, demolition, construction, site restoration, environmental sampling, remediation tasks, etc. as well as incident response activities. Depending on the nature of the work, the subcontractor may be

required to prepare their own company health and safety plan (HASP) which shall specifically govern the work performed by its employees. Any subcontractor that works at the Site will also be required to comply with this Contingency Plan and its requirements. In the event a subcontractor observes a release or other system failure, they are required to report the incident as described in this document.

All subcontractors will also provide a Health and Safety Site Coordinator (HSSC) who will assist the ENVIRON SC. The subcontractor HSSC will ensure that their personnel have received appropriate health and safety training and if required, are participating in a medical surveillance program.

## 6 References

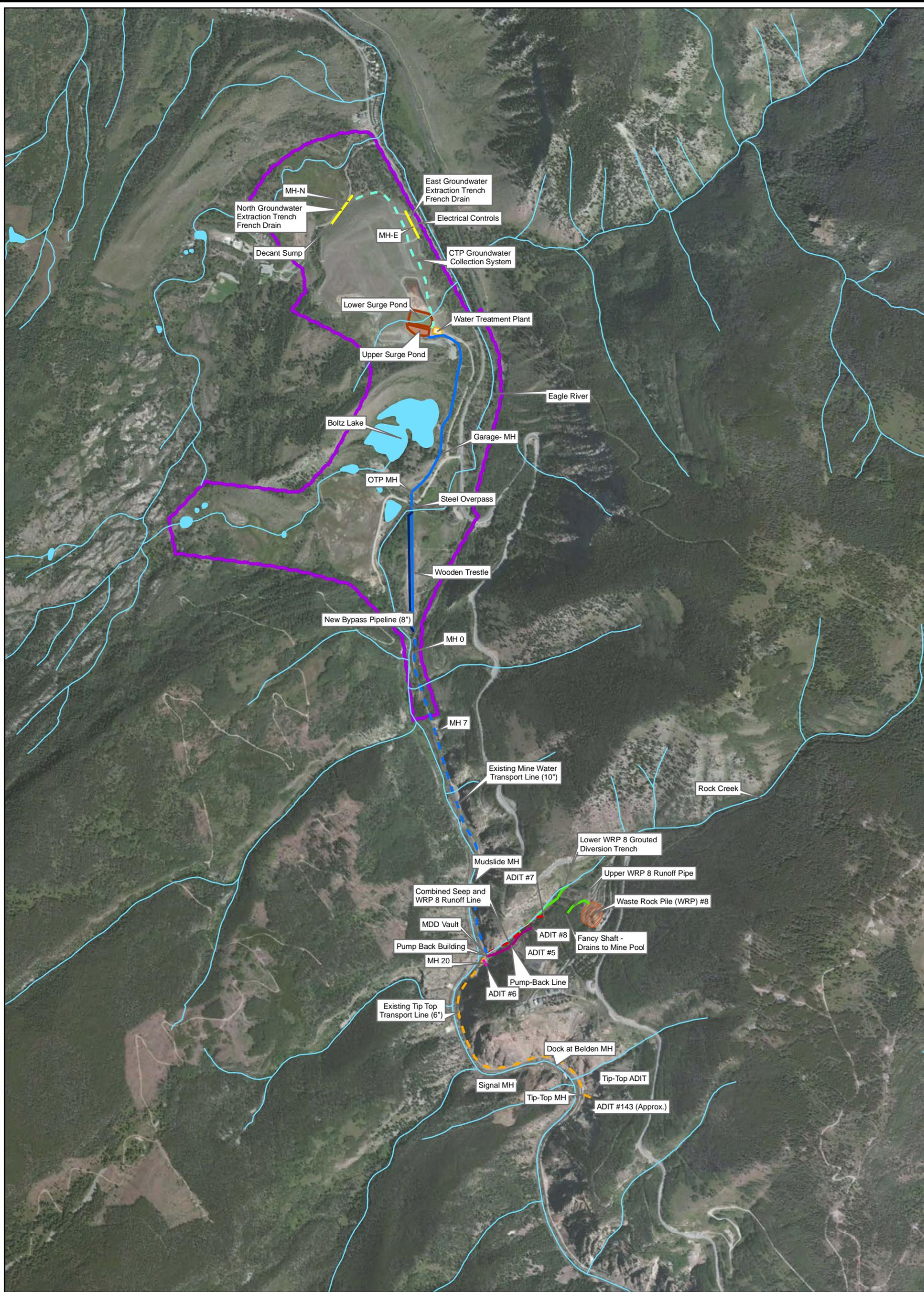
Dames & Moore. 1996. "Surface-Water Sampling and Analysis Plan for the Eagle Mine Site," September 6.

Eagle Engineering Services, Inc. 1998. "Seep System Inspection and Maintenance Plan (SIMP)," June and 23<sup>rd</sup>.

United States District Court for the District of Colorado. 1996. "Consent Decree Civil Action No. 95 N 2360," SDMS Document ID 385860 June and 12.

United States District Court for the District of Colorado. 1983. "Consent Decree Civil Action No. 83 C 2387," SDMS Document ID 384210-R8 December and 9.

## Figures



**Legend**

- |                                   |                             |  |
|-----------------------------------|-----------------------------|--|
| ADIT 6 Line                       | Pump-Back Line              | Approximate Northern Property Boundary |
| CTP Groundwater Collection System | Seepage Lines               | Lower Surge Pond; Upper Surge Pond     |
| French Drain                      | WRP 8 Drainage              | Waste Rock Pile (WRP) #8               |
| MDD Lines                         | Buried WRP 8 Drainage       | Water Treatment Plant                  |
| MDD ADIT 5 Line                   | Water Transport Line        |  |
| New Bypass Line                   | Buried Water Transport Line |  |

Note: Dashed lines are buried; Solid lines are above ground

**SEEPAGE COLLECTION AND CONVEYANCE SYSTEMS  
EAGLE MINE  
EAGLE COUNTY, COLORADO**

Figure 1



**Appendix A**  
**Environmental Spill Reporting – CDPHE Fact Sheet**  
**and**  
**Reporting Environmental Releases in Colorado**

involving a radioactive or infectious material, or there is a release of a marine pollutant.

Spills and incidents that have or may result in a spill along a highway must be reported to the nearest law enforcement agency immediately. The Colorado State Patrol and CDPHE must also be notified as soon as possible. In the event of a spill of hazardous waste at a transfer facility, the transporter must notify CDPHE within 24 hours if the spill exceeds 55 gallons or if there is a fire or explosion.

The National Response Center should be notified as soon as possible after discovery of a release of a hazardous liquid or carbon dioxide from a pipeline system if a person is killed or injured, there is a fire or explosion, there is property damage of \$50,000 or more, or any nearby water body is contaminated.

The National Response Center and the Colorado Public Utilities Commission Gas Pipeline Safety Section must be notified as soon as possible, but not more than two hours after discovery of a release of gas from a natural gas pipeline or liquefied natural gas facility if a person is killed or injured, there is an emergency shutdown of the facility, or there is property damage of \$50,000 or more. The Colorado Public Utilities Commission should also be notified if there is a gas leak from a pipeline, liquefied natural gas system, master meter system or a propane system that results in the evacuation of 50 or more people from an occupied building or the closure of a roadway.

### **Oil and Gas Exploration**

All Class I major events on federal lands, including releases of hazardous substances in excess of the CERCLA reportable quantity and spills of more than 100 barrels of fluid and/or 500 MCF of gas released, must be reported to the Bureau of Land Management (BLM) immediately. Spills of oil, gas, salt water, toxic liquids and waste materials must also be reported to the BLM and the surface management agency.

Spills of exploration and production (E&P) waste on state or private lands in excess of 20 barrels, and spills of any size that impact or threaten to impact waters of the state, an occupied structure, or public byway must be reported to the Colorado Oil and Gas Conservation Commission as soon as practicable, but not more than 24 hours after discovery. Spills of any

size that impact or threaten to impact waters of the state must be reported to CDPHE immediately. Spills that impact or threaten to impact a surface water intake must be reported to the emergency contact for that facility immediately after discovery. Spills of more than five (5) barrels of E&P waste must be reported in writing to the Oil and Gas Conservation Commission within 10 days of discovery.

## **REPORTING NUMBERS**

National Response Center (24-hour)  
**1-800-424-8802**

CDPHE Colorado Environmental Release and Incident Reporting Line (24-hour)  
**1-877-518-5608**

Radiation Incident Reporting Line (24-hour)  
**303-877-9757**

Colorado State Patrol (24-hour)  
**303-239-4501**

Division of Oil and Public Safety  
(business hours)  
**303-318-8547**

Oil and Gas Conservation Commission  
(business hours)  
**303-894-2100**

Colorado Public Utilities Commission Gas Pipeline Safety Section (business hours)  
**303-894-2851**

Local Emergency Planning Committees  
(to obtain list, business hours)  
**720-852-6603**



**Colorado Department  
of Public Health  
and Environment**

# **Environmental Spill Reporting**

Colorado Department of Public  
Health and Environment  
4300 Cherry Creek Drive South  
Denver, CO 80246-1530

<http://www.cdphe.state.co.us>

January 2009

When a release of a hazardous material or other substance occurs to the environment, there are a number of reporting and notification requirements that must be followed by the company or individual responsible for the release. Most spills are covered by more than one reporting requirement, and all requirements must be met. In addition to verbal notification, written reports are generally required. This brochure briefly explains the major requirements. A more detailed description is provided in the "Reporting Environmental Releases in Colorado" Guidance Document, available on the web.

Releases that must be reported to the Colorado Department of Public Health and Environment (CDPHE) may be reported to the Colorado Environmental Release and Incident Reporting Line.

## ENVIRONMENTAL SPILL REPORTING

### CERCLA, EPCRA and RCRA

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Emergency Planning and Community Right-to-Know Act (EPCRA) require that a release of a reportable quantity or more of a hazardous substance to the environment be reported immediately to the appropriate authorities when the release is discovered.

Under CERCLA, reportable quantities were established for hazardous substances listed or designated under other environmental statutes. These include:

- all hazardous air pollutants (HAPs) listed under Section 112(b) of the Clean Air Act.
- all toxic pollutants designated under Section 307(a) or Section 311(b)(2)(A) of the Clean Water Act.
- all Resource Conservation and Recovery Act (RCRA) characteristic and listed hazardous wastes.
- any element, compound, or substance designated under Section 102 of CERCLA.

EPCRA established a list of extremely hazardous substances (EHS) that could cause serious irreversible health effects from accidental releases. Many substances appear on both the CERCLA and EPCRA lists. EPCRA extremely hazardous substances that are also CERCLA hazardous substances have the same reportable quantity (RQ) as under CERCLA. EPCRA extremely hazardous substances that are not listed under CERCLA have a reportable quantity that is equal to their threshold planning quantity (TPQ). A list of CERCLA reportable quantities is included in 40 CFR Section 302.4. A list of EPCRA threshold planning quantities is included in 40 CFR Part 355 Appendices A & B.

CERCLA-reportable releases must be reported immediately to the National Response Center (NRC), while EPCRA-reportable releases must be reported immediately to the National Response Center, the State Emergency Response Commission (SERC) and the affected Local Emergency Planning Committee (LEPC). If the release is an EPCRA extremely

hazardous substance, but not a CERCLA hazardous substance, and there is absolutely no potential to affect off-site persons, then only the State Emergency Planning Commission (represented by CDPHE for reporting purposes) and the Local Emergency Planning Committee need to be notified.

In the case of a release of hazardous waste stored in tanks, RCRA-permitted facilities and large quantity generators must also notify CDPHE within 24 hours of any release to the environment that is greater than one (1) pound.

### Radiation Control

Each licensee or registrant must report to the Radiation Incident Reporting Line in the event of lost, stolen or missing licensed or registered radioactive materials or radiation machines, releases of radioactive materials, contamination events, and fires or explosions involving radioactive materials. Releases of radionuclides are reportable under CERCLA.

### Clean Water Act

The Clean Water Act requires the person in charge of a facility or vessel to immediately report to the National Response Center all discharges of oil or designated hazardous substances to water. Oil means oil of any kind or form. Designated hazardous substances are included in the CERCLA list.

The Clean Water Act also requires that facilities with a National Pollutant Discharge Elimination System (NPDES) permit report to the National Response Center within 24 hours of becoming aware of any unanticipated bypasses or upsets that cause an exceedance of the effluent limits in their permit and any violations of their maximum daily discharge limits for pollutants listed in their permit.

A release of any chemical, oil, petroleum product, sewage, etc., which may enter waters of the state of Colorado (which include surface water, ground water and dry gullies and storm sewers leading to surface water) must be reported immediately to CDPHE. Any accidental discharge to the sanitary sewer system must be reported immediately to the local sewer authority and the affected wastewater treatment plant. For additional regarding releases to water, please see "Guidance for Reporting Spills under the Colorado

Water Quality Control Act and Colorado Discharge Permits" at <http://www.cdphe.state.co.us/op/wqcc/Resources/Guidance/spillguidance.pdf>.

### Clean Air Act

Hazardous air pollutants (HAPs) are designated as hazardous substances under CERCLA. If a facility has an air permit but the permit does not allow for or does not specify the release of a substance, or if the facility does not have an air permit, then all releases in excess of the CERCLA / EPCRA reportable quantity for that substance must be reported to the National Response Center and CDPHE. If the facility releases more of a substance than is allowed under its air permit, the facility must also report the release. Discharges of a substance that are within the allowable limits specified in the facility's permit do not need to be reported.

### Regulated Storage Tanks

Owners and operators of regulated storage tank systems must report a release or suspected release of regulated substances to the Division of Oil and Public Safety at the Colorado Department of Labor and Employment within 24 hours. Under this program, the reportable quantity for petroleum releases is 25 gallons or more, or any amount that causes a sheen on nearby surface water. Spills of less than 25 gallons of petroleum must be immediately contained and cleaned up. If cleanup cannot be accomplished within 24 hours, the Division of Oil and Public Safety must be notified immediately.

Spills of hazardous substances from tanks in excess of the CERCLA or EPCRA reportable quantity must be reported immediately to the National Response Center, CDPHE and the local fire authority, and to the Division of Oil and Public Safety within 24 hours.

### Transportation and Pipelines

The person in physical possession of a hazardous material must notify the National Response Center as soon as practical, but not to exceed 12 hours after the incident, if as a direct result of the hazardous material, a person is killed or injured, there is an evacuation of the general public lasting more than an hour, a major transportation artery is shut down for an hour or more, the flight pattern of an aircraft is altered, there is fire, spillage or suspected contamination

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**REPORTING  
ENVIRONMENTAL RELEASES  
IN COLORADO**



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**Colorado Department  
of Public Health  
and Environment**

Hazardous Materials and Waste Management Division  
(303) 692-3300

**January 2009**

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## ***Purpose of this Guidance***

*This guidance is intended to provide an overview of various reporting requirements for a variety of releases to the environment. Please check all of the possible requirements for reporting. This guidance does not cover all potential release scenarios. This guidance is not intended to modify or replace statutes or regulations, which undergo periodic revisions. In the event of a conflict between this guidance and statutes or regulations, the statutes and regulations govern.*

*Some reporting requirements are complex and overlapping, and this guidance does not go into details of all situations. If a release situation is not described in this guidance, or if clarification is desired, please obtain an official interpretation from the governing agency enforcing the statute or regulation.*

# Table of Contents

Contact Information .....	ii
Colorado Environmental Release Reporting.....	1
A. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).....	1
B. Emergency Planning and Community Right-to-Know Act (EPCRA).....	3
Reportable Quantities Under CERCLA and EPCRA .....	4
Exceptions and Exclusions.....	5
C. Resource Conservation and Recovery Act (RCRA) .....	7
D. Radiation Control .....	9
E. Clean Water Act .....	9
F. Safe Drinking Water Act .....	10
G. Clean Air Act .....	10
H. Underground Storage Tanks (USTs) and Aboveground Storage Tanks (ASTs) .....	11
I. Hazardous Materials Transportation.....	12
J. Oil and Gas Exploration and Production.....	15
K. Polychlorinated Biphenyls .....	16
Abbreviations & Definitions .....	17

## Contact Information

### Release Reporting Numbers

National Response Center (NRC) 24-hour reporting	1 (800) 424-8802
Colorado Environmental Release and Incident Reporting Line 24-hour reporting	1 (877) 518-5608
Radiation Incident Reporting Line 24-hour reporting	(303) 877-9757
Colorado State Patrol 24-hour reporting	(303) 239-4501
US EPA Region 8 Emergency Response Spill Report Line 24-hour reporting	1 (800) 227-8914
Division of Oil and Public Safety (Dept. of Labor and Employment) Fax	(303) 318-8547 (303) 318-8546
Oil and Gas Conservation Commission (Dept. of Natural Resources)	(303) 894-2100
Division of Reclamation, Mining and Safety (Dept. of Natural Resources)	(303) 866-3567
Colorado Public Utilities Commission Gas Pipeline Safety Section (Dept. of Regulatory Agencies)	(303) 894-2851
Local Emergency Planning Committee (Dept. of Local Affairs) Business hours only - to obtain a list of LEPC contacts	(720) 852-6603

### Colorado Department of Public Health and Environment

#### Mailing Address:

Colorado Department of Public Health and Environment  
4300 Cherry Creek Drive South  
Denver, CO 80246-1530

#### Office Hours:

Monday – Friday, except holidays 8:00 am – 5:00 pm

### Environmental Divisions

Air Pollution Control Division Website	(303) 692-3100 <a href="http://www.cdphe.state.co.us/ap/comments.apcd@state.co.us">http://www.cdphe.state.co.us/ap/ comments.apcd@state.co.us</a>
Consumer Protection Division Website	(303) 692-3620 <a href="http://www.cdphe.state.co.us/cp/comments.cpd@state.co.us">http://www.cdphe.state.co.us/cp/ comments.cpd@state.co.us</a>
Hazardous Materials and Waste Management Division Website	(303) 692-3300 <a href="http://www.cdphe.state.co.us/hm/comments.hmwm@state.co.us">http://www.cdphe.state.co.us/hm/ comments.hmwm@state.co.us</a>
Water Quality Control Division Website	(303) 692-3500 <a href="http://www.cdphe.state.co.us/wq/comments.wqcd@state.co.us">http://www.cdphe.state.co.us/wq/ comments.wqcd@state.co.us</a>
Email	

## Colorado Environmental Release Reporting

When a release of a hazardous material or other substance occurs to the environment, there are a number of reporting and notification requirements that must be followed by the company or individual responsible for the release. Environmental releases must be reported to the appropriate authorities so that necessary response actions are taken in a timely fashion to ensure maximum protection of human health and the environment.

However, taking appropriate and timely response actions do not relieve you of your responsibility to report a release. In addition, the responsible party is always liable for any damages that may result from a release, and is responsible for appropriate clean up actions whether or not the release is required to be reported.

Additional reporting requirements may be found in permits, licenses, registrations, contingency and pollution prevention plans, fire codes, and local ordinances.

There is no penalty for over-reporting, but there are for failing to report a release. If you are unsure if a release needs to be reported, the Colorado Department of Public Health and Environment (the Department) recommends that releases be reported immediately even if the quantity of the release has not yet been determined. Your follow-up report will provide details that explain why the release was or was not reportable.

“Release” includes any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, including abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance, pollutant, or contaminant.

“Environment” is generally defined as any surface water, ground water, drinking water supply, land surface, subsurface strata, or ambient air. Releases into containment devices and those completely contained within a building or other structure are not releases into the environment as long as the

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hazardous substance does not volatilize into the ambient air or otherwise have the potential to enter the environment (e.g., through the floor or cracks in the floor). Releases of a substance into a storm drain or sewer, or onto a parking lot or roadway, are considered to be releases to the environment.

Release reporting requirements are based on the type of material released and/or the situation under which the release occurred. Additional reporting requirements may be found in permits, licenses, registrations, contingency and pollution prevention plans, fire codes, and local ordinances. Please check all of the possible requirements for reporting. Most spills and releases are covered by more than one reporting requirement, and ALL requirements must be met. Enforcement action may be taken against those who fail to provide required notifications or reports.

### A. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

The Comprehensive Environmental Response, Compensation and Liability Act, commonly known as Superfund or CERCLA, provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. This Act also enabled revision of the National Contingency Plan, which provides the guidelines and

procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants.

Under CERCLA, the US EPA was directed to establish reporting quantities for all hazardous substances. The term "hazardous substance" is defined in CERCLA Section 101(14). These are defined by reference to substances that are listed or designated under other environmental statutes.

They include:

- all hazardous air pollutants (HAPs) listed under Section 112(b) of the Clean Air Act (CAA). Radio-nuclides are hazardous substances because EPA designated them generically as hazardous air pollutants under Section 112(b) of the Clean Air Act. Even though the source of their listing is the Clean Air Act, releases of radionuclides to all media, not just to air, are covered by CERCLA's reporting requirements.
- toxic pollutants that are subject to pretreatment standards under Section 307(a) of the Clean Water Act (CWA) and toxic pollutants that present an imminent danger to public health when discharged to waters of the United States as designated under Section 311(b)(2)(A) of the Clean Water Act. All Clean Water Act hazardous substances are CERCLA hazardous substances, but only some CERCLA hazardous substances are Clean Water Act hazardous substances.
- wastes that are regulated as listed and/or characteristic hazardous wastes under the Resource Conservation and Recovery Act (RCRA). This includes thousands of hazardous wastes that are not specifically listed but that exhibit one or more of the characteristics of ignitability, reactivity, corrosivity or toxicity. A material is considered to be a release of a CERCLA hazardous substance if the material was a waste prior to release, or if the substance is not cleaned up for reuse and thus must be disposed of as a RCRA hazardous waste after release.
- any element, compound, mixture solution or substance designated under Section 102 of CERCLA that may present substantial danger to public health or welfare or the environment.
- any imminently hazardous chemical substance or mixture that EPA has taken action against under Section 7 of the Toxic Substances Control Act (TSCA). Any hazardous chemical substance or mixture that EPA has taken action against under this Act would automatically become a hazardous substance. To date, EPA hasn't designated any hazardous substances under the Toxic Substances Control Act.

Report releases at or above the reportable quantity (RQ) within 24 hours:

- Hazardous air pollutants under Section 112(b) of Clean Air Act
- Toxic pollutants under Section 307(a) or under Section 311(b)(2)(A) of Clean Water Act
- RCRA hazardous wastes
- Elements, compounds or substances under Section 102 of CERCLA

The person in charge of a facility or vessel must immediately report a release to the National Response Center (NRC) as soon as they have knowledge of a release to the environment of a CERCLA hazardous substance at or above the reportable quantity assigned to that substance within a 24-hour period. If the release is a mixture or solution of hazardous substances, it must be reported if the reportable quantity for any hazardous constituents is met or exceeded. If the responsible party doesn't know the quantity of one or more of the hazardous constituents contained in a mixture or solution, they must report the release if the total amount of the mixture or solution released equals or exceeds the reportable quantity for the hazardous constituent with the lowest reportable quantity.

Reporting is also required if a non-CERCLA substance is released into the environment and rapidly degrades into a CERCLA hazardous substance in an amount that equals or exceeds the reportable quantity for the newly formed CERCLA hazardous substance.

These notification and reporting requirements are included in 40 CFR Part 302. A list of CERCLA hazardous substances is included in Table 302.4 of these regulations.

## **B. Emergency Planning and Community Right-to-Know Act (EPCRA)**

The Superfund Amendments and Reauthorization Act of 1986 reauthorized the Comprehensive Response, Compensation and Liability Act to continue cleanup activities around the country. Several amendments, definitions, clarifications and technical requirements were added to the legislation, including additional enforcement authorities. Title III of the Superfund Amendments also authorized the Emergency Planning and Community Right-to-Know Act (EPCRA), which established the community's right to information about the chemicals that are stored, used at and/or released from local facilities. It also established a framework for developing emergency plans for responding to releases and reporting requirements for facilities.

A list of EPCRA threshold planning quantities (TPQ) is included in 40 CFR Part 355 Appendices A & B.

Under this Act, owners or operators of facilities at which a hazardous substance or extremely hazardous substance is produced, used or stored must provide immediate notification to the National Response Center (NRC), the State Emergency Response Commission (SERC) and the affected Local Emergency Planning Committee (LEPC) when there is a release of a hazardous substance or extremely hazardous substance with the potential to affect off-site persons that equals or exceeds its reportable quantity within a 24-hour period. If the release is an EPCRA extremely hazardous substance, but not a CERCLA hazardous substance, then only the SERC and LEPC need to be notified. Note – there may be more than one SERC and/or LEPC potentially affected by a release. Don't wait until there is a release to contact the SERC and LEPC(s) to ensure that the correct contacts will be made in the event of a spill. For a list of LEPCs, contact the Colorado Department of Local Affairs.

The owner or operator of the facility must report a release as soon as they know about it. In addition to immediate telephone notification, the responsible party must also send a follow-up written report as soon as practicable after the release to both the State Emergency Response Commission (in this case, to the Colorado Department of Public Health and Environment) and the Local Emergency Planning Committee. This report must describe the release, associated response actions taken, and any known or anticipated health risks associated with the release.

Although EPCRA requires notification only for releases that have the potential to affect persons beyond the facility boundary, EPA and the Colorado

A table of CERCLA reportable quantities (RQ) is included in 40 CFR Section 302.4.

Department of Public Health and Environment strongly encourage facilities to report onsite releases if there is ANY potential for the release to migrate offsite. The burden of proof is on the facility to show that any release into the environment of a reportable quantity or more of a hazardous substance or extremely hazardous substance has NO POTENTIAL for offsite migration (e.g., via groundwater, the wind or getting tracked offsite by workers and vehicles).

The State Emergency Response Commission (SERC) in Colorado is called the Colorado Emergency Planning Commission (CEPC). It consists of representatives of the Colorado Department of Public Health and Environment – Hazardous Materials and Waste Management Division, the Colorado Department of Local Affairs – Colorado Division of Emergency Management and the Division of Local Government, the Colorado Department of Public Safety –

Fire Safety Division, and the Colorado State Patrol. The Commission also includes representatives of affected industries, local governments, public interest or community groups and the Local Emergency Planning Committee (LEPC) community. The Colorado Department of Public Health and Environment represents the Commission for reporting purposes.

## Reportable Quantities Under CERCLA and EPCRA

All reportable quantities are listed in pounds (except radionuclides, which are in curies). Congress established a one pound reportable quantity for all hazardous substances and extremely hazardous substances until EPA could evaluate each substance and adjust the reportable quantity to a level more appropriate for the substance. During this assessment, each hazardous substance was evaluated for six primary criteria: aquatic toxicity, mammalian toxicity, ignitability, reactivity, chronic toxicity, and potential carcinogenicity. Reportable quantities for CERCLA hazardous substances are listed in 40 CFR Section 302.4.

EPCRA extremely hazardous substances that are also hazardous substances under CERCLA have the same reportable quantity that is applicable under CERCLA. If not also listed as a CERCLA hazardous substance, extremely hazardous substances have a reportable quantity equal to the EPCRA threshold planning quantity (TPQ) for that substance. The threshold planning quantity is the quantity designated for each chemical in 40 CFR Part 355 Appendices A and B that triggers notification by facilities to the State Emergency Response Commission that those facilities are subject to emergency planning requirements.

For convenience, reportable quantities for hazardous substances and extremely hazardous substances can also be found in the EPA List of Lists (EPA 550-B-01-003). Bear in mind that because this document is only updated periodically, it may not contain recently added substances.

All concurrent releases of the same substance from a single facility must be combined to determine if a reportable quantity has been met or exceeded. Releases of different substances from a single facility should not be combined for purposes of determining if the releases need to be reported. Rather, each substance should be evaluated separately to determine if one or more reportable quantities have been met or exceeded. For example, spilling a mixture containing half the

EPCRA extremely hazardous substances that are also CERCLA hazardous substances have the same RQ as under CERCLA.

EPCRA extremely hazardous substances that are not listed under CERCLA have an RQ equal to their TPQ under EPCRA.

reportable quantity of one hazardous substance and half the reportable quantity of another hazardous substance does not trigger the reporting requirement. Releases from separate facilities should be treated as separate releases and should not be combined to determine if a reportable quantity has been met or exceeded.

### Mixtures

Most hazardous substances and extremely hazardous substances are not used or stored in pure form, but are mixtures or solutions. If a mixture of hazardous substances or extremely hazardous substances is released and the concentration of all hazardous substances and extremely hazardous substances in the mixture is known, then you must calculate the amount of each hazardous substance and extremely hazardous substance that has been released. If there is more than one hazardous substance or extremely hazardous substance in a mixture, you must check the reportable quantity for each substance. The release must be reported if the reportable quantity for any

hazardous substance or extremely hazardous substance has been met or exceeded. If the concentrations of the hazardous substances or extremely hazardous substances in the mixture are not known, then the release must be reported when the total amount of the mixture released equals or exceeds the reportable quantity for the constituent with the lowest reportable quantity.

### Radionuclides

Releases of radionuclides in a mixture are additive. These releases are subject to reporting:

- if each radionuclide in a released mixture or solution is known, then the ratio between the quantity released and the reportable quantity for the radionuclide must be determined for each radionuclide. If the sum of the ratios for the radionuclides in the mixture or solution released is equal to or greater than one, it must be reported.
- if all of the radionuclides in the mixture are known but the quantity released of one or more of the radionuclides is unknown, it must be reported if the total quantity released is equal to or greater than the lowest reportable quantity of any one radionuclide in the mixture.
- if one or more radionuclides in the mixture is unknown, it must be reported if the total quantity released is equal to or greater than either one curie or the lowest reportable quantity of any of the known radionuclides in the mixture (whichever is lower).

### Exceptions and Exclusions

#### Petroleum Products

Under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), petroleum products are excluded from the definition of hazardous substance. "Petroleum product" includes crude oil, any fraction of crude oil that is not specifically listed as a hazardous substance, natural and synthetic gases, and mixtures of natural and synthetic gases. EPA interprets petroleum as including those amounts of hazardous substances, like benzene, that are indigenous to crude oil or its fractions or that are normally added during the refining process.

*Hazardous substances added to the petroleum or increased in concentration solely as a result of contamination during use are not included in the petroleum exclusion.*

A release of a petroleum product containing a reportable quantity of an EPCRA extremely hazardous substance is reportable.

Unlike the petroleum exclusion under CERCLA, extremely hazardous substances that are naturally occurring in petroleum products or that are normally added during refining are subject to reporting under the Emergency Planning and Community Right-to-Know Act (EPCRA). Therefore, a release of a petroleum product containing a reportable quantity of one or more extremely hazardous substances is reportable to the Colorado Emergency Planning Commission (CERC) and the Local Emergency Planning Committee (LEPC) if a reportable quantity is met or exceeded.

The responsible party is always responsible for appropriate clean up actions whether or not the release is required to be reported.

**Note:** releases of oil and petroleum to water are also covered under the Clean Water Act (Section E of this document). Releases of petroleum from regulated storage tanks are covered under the Colorado storage tank regulations (Section H of this document).

## **Metals**

Under normal handling and use, solid forms of most metals present few health hazards. Metal fines and metal dust may cause irritation of the eyes, skin, and respiratory system, and fine particles of certain metals, including antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver, thallium, or zinc, dispersed in the air can be an explosion and/or health hazard. EPA has determined that releases of these metals with particles larger than 100 micrometers would not normally require response action due to the unlikely inhalation of such large particles. However, notification of the release of a reportable quantity of antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver, thallium, or zinc is required if the mean diameter of the particles released is less than 100 micrometers (0.004 inches). An exception to this is a release of a metal classified as a radionuclide, which does not qualify for this exemption even if the particles meet the size criteria.

## **Naturally Occurring Radionuclides**

Notification of the release of naturally occurring radionuclides from large land holdings, like parks or golf courses, is not required. EPA broadened this exemption to include land containing ore reserves even if the undisturbed ores contain elevated natural concentrations of radionuclides, and to land disturbance activities including farming, construction, and disturbance incidental to extraction activities at all mines except uranium, phosphate, tin, zircon, hafnium, vanadium, monazite, and rare earth mines. Land disturbance incidental to extraction activities includes land clearing, overburden removal and stockpiling, and excavating, handling, transporting and storing ores and other raw materials. Land disturbance incidental to extraction also includes replacing materials in mined-out areas as long as those materials have not been processed and don't contain elevated radionuclide concentrations. Notification of the release of naturally occurring radionuclides from sites where coal and coal ash (fly ash, bottom ash, boiler slag) are stored or disposed is also not required.

## **Federally Permitted Releases**

Releases that are regulated under one or more of the following programs are exempt from CERCLA and EPCRA reporting requirements:

- permitted discharges under the National Pollutant Discharge Elimination System (NPDES);
- permitted dredge and fill discharges under Section 404 of the Clean Water Act;
- permitted and interim status hazardous waste units under the Resource Conservation and Recovery Act;
- permitted discharges under the Marine Protection, Research and Sanctuaries Act;
- permitted injection of fluids under the Underground Injection Control (UIC) program in accordance with the Safe Drinking Water Act;
- air emissions subject to permit or control regulations under the Clean Air Act;
- permitted or allowed injection of fluids to develop crude oil or natural gas supplies;
- discharges of contaminants to Publicly Owned Treatment Works (POTW) if in compliance with pretreatment requirements under the Clean Water Act;
- releases of certain nuclear materials if in compliance with a license, permit, regulation or order issued in accordance with the Atomic Energy Act.

## **Registered Pesticides**

The normal application of a pesticide product registered under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) is exempt from CERCLA and EPCRA reporting. This exemption includes the handling and storage of the product by an agricultural producer, but does not include

any spills of the pesticide. Pesticide spills are reportable if the amount spilled meets or exceeds the reportable quantity.

### **Continuous Releases**

A continuous release is a release that occurs without interruption or abatement or that is routine, anticipated, intermittent, and incidental to normal operations or treatment processes. When a release of this type occurs, officials do not have to be notified each time. Instead, the facility can report it as a continuous release to the National Response Center, the Colorado Emergency Planning Commission and the Local Emergency Planning Committee(s) by telephone. This should be followed by a written report submitted to EPA Region 8, the Colorado Department of Public Health and Environment and the Local Emergency Planning Committee within 30 days of the initial telephone call. The written report should provide information about the source, composition, and normal range of the release. Periodic follow-up reports may also be required. Any release that exceeds the normal range (called a "statistically significant increase") must be reported immediately to the National Response Center, the Colorado Department of Public Health and Environment and the Local Emergency Planning Committee as if they were new release events. The normal range is determined by the amount of a hazardous substance released over any 24-hour period under normal operating conditions during the preceding year. Only releases that are both continuous and stable in quantity and rate can be included in the normal range.

Continuous release of an extremely hazardous substance that is not a CERCLA hazardous substance need only be reported to the Colorado Department of Public Health and Environment and the Local Emergency Planning Committee. A written report should also be sent to these two agencies within 30 days and any statistically significant increases in the release should be reported to both agencies. Periodic follow-up reports may also be required.

### **C. Resource Conservation and Recovery Act (RCRA)**

All Resource Conservation and Recovery Act (RCRA) listed and characteristic hazardous wastes are designated as hazardous substances under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). For more information on listed and characteristic hazardous wastes, please review the Hazardous Waste Identification Guidance Document from the Hazardous Materials and Waste Management Division (<http://www.cdphe.state.co.us/hm/hwid.pfd>).

The reportable quantity for F- and K-listed hazardous wastes is based on the hazardous waste code. If the composition and concentrations of all included constituents is not known, the reportable quantity would be as listed for the waste code in 40 CFR Section 302.4. If the waste is analyzed and the concentrations of ALL of its hazardous constituents are identified, then reportable quantities of the specific constituents can be used to determine when reporting is required. For example, if a release of an F005 listed hazardous waste occurred and the concentrations of the constituents making up the waste were unknown, the reportable quantity would be 100 pounds. If it were known that the F005 waste was comprised of 50% toluene (reportable quantity 1000 pounds) and 50% methyl ethyl ketone (reportable quantity 5000 pounds), then the release would be reported when 2000 pounds of the mixture were released. [Since the reportable quantity for toluene is less than that for methyl ethyl ketone, the amount of toluene released will determine when the release must be reported. Since the mixture is 50% toluene, it would take 2000 pounds of the mixture to meet the reportable quantity of 1000 pounds for toluene.]

P- and U-listed hazardous wastes are reported based on the reportable quantity for the hazardous substance that the waste is listed for. For example, the reportable quantity for hazardous waste code U122 (formaldehyde) is 100 pounds. For the purposes of release reporting, it doesn't matter if the formaldehyde is used or unused or is the "sole active ingredient" in order to be reportable. (Related note: Colorado's hazardous waste regulations (6 CCR 1007-3) do not include the footnote regarding sole active ingredients. In Colorado, chemicals may have more than one active ingredient and still meet the listing description.)

All RCRA listed and characteristic hazardous wastes are designated as hazardous substances under CERCLA.

Unlisted hazardous wastes exhibiting the characteristics of ignitability, corrosivity and/or reactivity have a reportable quantity of 100 pounds unless the concentrations of all the constituents in the waste are known. If the waste is analyzed and the concentrations of ALL its hazardous constituents are identified, the reportable quantities of the specific constituents should be used to determine when reporting is required. For example, a corrosive-only waste of unknown composition has a reportable quantity of 100 pounds. If the waste is analyzed to determine that it was a 50% solution of hydrochloric acid in water, then the reportable quantity of the solution would be 10,000 pounds. [The reportable quantity for hydrochloric acid is 5000 pounds. Therefore it would take 10,000 pounds of the 50% solution to meet the reportable quantity for hydrochloric acid.]

Unlisted hazardous wastes that exhibit toxicity have reportable quantities specific to the constituent on which the characteristic of toxicity is based. The reportable quantity applies to the waste itself, not just to the toxic contaminant. If an unlisted hazardous waste exhibits toxicity on the basis of more than one contaminant, the reportable quantity for the waste is the lowest of the reportable quantities for those contaminants. For example, if a waste exhibits toxicity characteristics for the heavy metals lead (D008) and selenium (D010), with reportable quantities of 10 and 100 pounds respectively, the reportable quantity would be 10 pounds of the waste, or the lower of the two reportable quantities. If a waste exhibits a toxicity characteristic and one or more other hazardous waste characteristics, the reportable quantity for that waste is the lowest of the applicable reportable quantities.

These notification and reporting requirements are included in 40 CFR Part 302.

### **Permitted and Interim Status Treatment, Storage and Disposal Facilities and Large Quantity Generators of Hazardous Waste**

Large quantity generators of hazardous waste and hazardous waste treatment, storage and disposal facilities (TSDF) are required to have and implement a contingency plan that describes the actions facility personnel must take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, surface water or groundwater at the facility. Whenever there is an imminent or actual emergency situation, appropriate State and local agencies with designated response roles as described in the contingency plan must be notified immediately. Appropriate local authorities and the National Response Center or government official designated as the regional on-scene coordinator must be notified immediately if the facility's emergency coordinator determines that the facility has had a release, fire, or explosion that could threaten human health or the environment outside the facility. A treatment, storage, and disposal facility's permit generally requires reporting to the Colorado Department of Public Health and Environment – Hazardous Materials and Waste Management Division of any release, fire or explosion, even if the amount of the release is less than an otherwise reportable quantity.

The Department and local authorities must be notified when the facility is back in compliance and ready to resume operations. In addition, the facility must send a written report to both the EPA Regional Administrator and the Colorado Department of Public Health and Environment within 15 days of any incident that requires implementation of the facility contingency plan.

In the case of a release of hazardous waste stored in tanks, the facility must notify the Hazardous Materials and Waste Management Division within 24 hours of a release to the environment of more than one pound. A leak or spill of hazardous waste that is less than or equal to one pound from a tank or tank system does not need to be reported if the release is immediately contained and cleaned up. Within 30 days of the release, a written report must be submitted to the Division.

These notification and reporting requirements are included in 6 CCR 1007-3 Sections 264.56 and 265.56 and Sections 264.196(d) and 265.196(d).

## D. Radiation Control

The state of Colorado has specific reporting requirements for stolen, lost or missing licensed or registered sources of radiation. Each licensee or registrant must report to the Colorado Department of Public Health and Environment by telephone in the event of lost, stolen or missing licensed or registered radioactive materials, a lost, stolen, or missing radiation machine, releases of radioactive materials, contamination events, and fires or explosions involving radioactive materials. Incidents should be reported to the Radiation Incident Reporting Line. Based on the severity of the event, notification may be required immediately, within 24 hours or within 30 days. A follow-up written report must also be submitted to the Department within 30 days of initial notification. The licensee must also report any additional substantive information regarding a loss or theft incident within 30 days after learning of such information.

Releases of radionuclides are reportable under CERCLA.
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These release and notification requirements are contained in 6 CCR 1007-1 Sections 4.51 - 4.53.

## E. Clean Water Act

The Clean Water Act (CWA) requires the person in charge of a facility or vessel to make an immediate report to the National Response Center of discharges of harmful quantities of oil to navigable waters as soon as they have knowledge of the release. In this case, oil means oil of any kind or in any form including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Discharges of oil that violate applicable water quality standards and those that cause a film, sheen or discoloration of the surface of the water or adjoining shorelines, or cause a sludge or emulsion to be deposited beneath the surface of the water or on adjoining shorelines must be reported. In effect, this means that any discharge of oil to waters of the United States must be reported to the National Response Center. These release and notification requirements are contained in 40 CFR Part 110.

The Clean Water Act (CWA) also requires the person in charge of a facility or vessel to report to the National Response Center the discharge of a designated hazardous substance from the vessel or facility to waters of the United States in quantities that equal or exceed the reportable quantity as soon as they have knowledge of the release. Under the Act, the US EPA was directed to establish reporting quantities for all hazardous substances listed in Table 116.4 A and B (40 CFR Part 116), which were designated as hazardous substances in accordance with Section 311(b)(2)(A) of the

Clean Water Act. This designation includes any isomers and hydrates as well as any solutions and mixtures containing these substances. Each of these substances is included in the CERCLA list of hazardous substances (40 CFR Part 302 Table 302.4) and is assigned the reportable quantity listed in Table 302.4 for that substance. These release and notification requirements are contained in 40 CFR Parts 116 and 117.

Under the Clean Water Act, anyone that has a National Pollutant Discharge Elimination System (NPDES) permit must report to the National Response Center within 24 hours of becoming aware of any unanticipated bypasses or upsets that cause an exceedance of the effluent limits in their permit and any violation of their maximum daily discharge limits for any pollutant listed in the permit. A written report must be provided within five days. Other instances of noncompliance must be reported when monitoring reports are submitted.

The Clean Water Act also requires all industrial users of Publicly Owned Treatment Works (POTWs) to notify their treatment plant immediately if they have a discharge that could cause problems at the treatment plant.

These notification and reporting requirements are included in 40 CFR Parts 122 and 403.

### **State Requirements**

A spill of any chemical, oil, petroleum product, sewage, etc., which may enter waters of the state of Colorado (which include surface water, ground water, and dry gullies and storm sewers leading to surface water) must be reported immediately to the Colorado Department of Public Health and Environment. Any accidental discharge to the sanitary sewer system must be reported immediately to the local sewer authority and the affected wastewater treatment plant. If a release occurs at a mining operation, the Division of Reclamation, Mining and Safety should also be notified.

For more information regarding State reporting requirements under 25-8-601(2) CRS, please refer to the "Guidance for Reporting Spills under the Colorado Water Quality Control Act and Colorado Discharge Permits" adopted by the Water Quality Control Division. This policy is available at <http://www.cdph.state.co.us/op/wqcc/Resources/Guidance/spillguidance.pdf>.

## **F. Safe Drinking Water Act**

The owner or operator of a public water system (community water systems, non-transient non-community water systems, and transient non-community water systems) must immediately report any credible threat to the water supply system to the Colorado Environmental Release and Incident Reporting Line and to the local emergency manager. The local emergency manager may be the county sheriff or a member of the fire department. A list of local emergency managers is available from the Colorado Department of Local Affairs.

## **G. Clean Air Act**

Hazardous air pollutants (HAPs) listed in Section 112(b) of the Clean Air Act (CAA) are designated as hazardous substances under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Hazardous air pollutants are known or suspected to cause cancer or other serious health effects or adverse environmental effects. Health effects can include immunological, neurological, reproductive, developmental, and respiratory problems. In some cases, hazardous air

pollutants can be deposited onto soils or other surfaces, where they are taken in by plants and animals and can accumulate in organic tissue or pass up the food chain due to the inability of organisms to process the substance.

The release (or air emission) of a hazardous air pollutant that is allowed and less than any limit specified in a facility's air permit is considered to be a federally permitted release. If the facility releases more than is allowed under its air permit within a 24 hour period, the facility must report the release if the quantity released exceeded the facility's permitted level by a reportable quantity or more. For example, if a facility has an air permit that allows the release of 30 pounds of a hazardous substance and that substance has a reportable quantity of 100 pounds, the facility would have to report all releases of 130 pounds or more of that substance. Releases of less than 130 pounds would not need to be reported under CERCLA or EPCRA because even though the facility exceeded its permit limit, the amount released did not exceed the permitted level by its reportable quantity (in this case, 100 pounds) or more. If the air permit does not allow or does not specify the release of a hazardous air pollutant, then releases in excess of the CERCLA / EPCRA reportable quantity for that substance must be reported. Please be aware that other reporting requirements are triggered, however, based on the facility's air permit. The Clean Air Act (CAA) requires that permits for stationary air sources have language requiring prompt reporting of any emergencies, upsets and deviations from what is allowed in the permit. Releases must be reported to the National Response Center and to the Colorado Department of Public Health and Environment. Contact the Air Pollution Control Division for details on additional air-related requirements that may also apply.

Hazardous air pollutants are included in the CERCLA list of hazardous substances in 40 CFR Part 302 and are assigned the reportable quantity listed in Table 302.4 for each substance.

### **State Requirements**

In the case of excess emissions during an emergency or malfunction, the owner or operator must notify the Colorado Department of Public Health and Environment as soon as possible, but no later than noon of the next working day, and provide a written follow-up report to the Air Pollution Control Division by the end of the facility's next reporting period.

These notification and reporting requirements are included in 5 CCR 1001-2 Section II.E and 5 CCR 1001-5, Regulation 3 Part C, Section VII.C.

## **H. Underground Storage Tanks (USTs) and Aboveground Storage Tanks (ASTs)**

The reportable quantity for petroleum from a regulated storage tank system is 25 gallons.

Owners and operators of regulated storage tank systems must report a release or suspected release of regulated substances to the Division of Oil and Public Safety at the Colorado Department of Labor and Employment within 24 hours by telephone or facsimile. If outside normal working hours or on a weekend or holiday and emergency assistance is needed, the release can be reported to the Colorado Environmental Release and Incident Reporting line at the Colorado Department of Public Health and Environment. Any suspected release or release of unknown quantity is a reportable quantity unless the owner/operator can conclusively show the release is less than the reportable quantity for the released substance.

Under this program, the reportable quantity for petroleum releases is 25 gallons or more from regulated aboveground and underground storage tank systems, or any amount that causes a sheen on nearby surface water. This is interpreted to include releases from fuel pumps and fuel delivery trucks while connected to the petroleum storage tank system. Releases of less than 25 gallons from regulated petroleum storage tank systems, or a release of a hazardous substance that is less than the CERCLA reportable quantity, do not need to be reported to the Division of Oil and Public Safety if they are immediately contained and cleaned up. If cleanup cannot be accomplished within 24 hours, the Division of Oil and Public Safety must be notified immediately.

Spills or releases of hazardous substances in excess of the CERCLA reportable quantity from regulated underground storage tanks must also be reported to the National Response Center and the local fire authority immediately. Any release, regardless of quantity, that has or may impact waters of the state (including surface water, groundwater, dry gullies leading to surface water or storm sewers) must also be reported to the Colorado Environmental Release and Incident Reporting line immediately.

These notification and reporting requirements are included in 7 CCR 1101-14 Article 4, 8-20.5-208 CRS and 25-8-601 CRS.

## **I. Hazardous Materials Transportation**

### **Highway, Aircraft, Rail and Vessel**

Federal hazardous materials transportation regulations cover the transportation of hazardous materials by highway, aircraft, rail, and vessel. Transportation includes activities related to transportation like loading, unloading, and temporary storage. "Hazardous material" includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials as defined in 49 CFR Section 171.8, materials designated as hazardous in the Hazardous Materials Table in 49 CFR Section 172.101 and materials that meet the criteria for hazardous classes and division in 49 CFR Part 173.

The person in physical possession of the hazardous material during transportation must notify the National Response Center as soon as practical, but not more than 12 hours after an incident, if as a direct result of a hazardous material:

- a person is killed or is injured and requires hospitalization,
- there is an evacuation of the general public that lasts more than an hour,
- a major transportation artery or facility is shut down for an hour or more,
- the operational flight pattern or routine of an aircraft is altered,
- there is fire, breakage, spillage, or suspected contamination involving a radioactive material,
- there is fire, breakage, spillage, or suspected contamination involving an infectious substance other than a regulated medical waste,
- there is a release of a marine pollutant in a quantity exceeding 119 gallons for liquids or 882 pounds for solids,
- or any situation that, in the judgment of the person in possession of the hazardous material, should be reported even though it doesn't meet the above criteria.

Notice of incidents involving an infectious substance may be given to the Director of the Centers for Disease Control and Prevention (1-800-232-0124) instead of notifying the National Response Center.

The person in possession of the hazardous material at the time of the incident must submit a written report within 30 days of the incident to the US Department of Transportation. In addition, a written report must be submitted if there is an unintentional release of a hazardous material or the discharge of any quantity of hazardous waste even though verbal notification may not be required. If the incident involves air transportation, a copy of the report must also be submitted to the Federal Aviation Administration Security Field Office nearest the location of the incident.

These notification and reporting requirements are included in 49 CFR Sections 171.15 and 171.16.

### **State Requirements**

The State also has specific requirements for reporting incidents involving hazardous materials or nuclear materials as cargo during transportation. The driver of a motor vehicle involved in a spill of hazardous material from a fuel tank that provides fuel for the vehicle and/or equipment on that vehicle must immediately notify the nearest law enforcement agency. The driver of a vehicle transporting nuclear or hazardous materials as cargo that is involved in a spill, or an incident which may result in a potential spill, must immediately notify the nearest law enforcement agency. As soon as possible after the initial notification of the spill or incident to the nearest law enforcement agency, the driver or a company representative must notify the Colorado State Patrol and the 24-hour Colorado Environmental Release and Incident Reporting Line. In addition, the driver of a motor vehicle transporting nuclear materials as cargo must immediately notify the Colorado State Patrol if the vehicle is involved in a crash, whether or not there is damage to the vehicle.

If the incident involves the release of hazardous waste, the transporter must notify the Colorado Department of Public Health and Environment and report the ultimate disposition of the waste to the Department in addition to the notifications above. In the event of a spill of hazardous waste at a transfer facility, the transporter must notify the Colorado Department of Public Health and Environment within 24 hours of a spill exceeding 55 gallons or if there is a fire or explosion. A written report must be sent to the Department within 15 days after the incident.

Report releases along a highway to the National Response Center, nearest local law enforcement agency, Colorado State Patrol, and Colorado Environmental Release and Incident Reporting Line.

These notification and reporting requirements are included in 8 CCR 1507-25 Parts I and IV and 6 CCR 1007-3 Part 263.

### **Pipelines**

In Colorado, the US Department of Transportation Office of Pipeline Safety inspects, regulates, and enforces interstate gas pipeline safety requirements. They also inspect, regulate, and enforce both intra- and interstate liquid pipeline safety requirements in this state. Through certification by the Office of Pipeline Safety, the Gas Pipeline Safety Division of the Colorado Public Utilities Commission regulates, inspects, and enforces intrastate gas pipeline safety requirements. Pipeline facilities include transmission, distribution, regulated gathering, master metered, liquefied natural gas, and propane gas systems. Be aware that these regulations are primarily for pipeline safety. Be sure to review other environmental release reporting requirements.

### **Hazardous Liquids and Carbon Dioxide**

Federal hazardous materials transportation regulations cover the transportation of hazardous liquids and carbon dioxide by pipeline. In this case, hazardous liquid is limited to petroleum, petroleum products, and anhydrous ammonia in a non-gaseous state. Petroleum includes crude oil, condensate, natural gasoline, natural gas liquids, and liquefied petroleum gas. Petroleum product includes flammable, toxic or corrosive products obtained from distilling and processing of crude oil, unfinished oils, natural gas liquids, blend stocks, and other miscellaneous hydrocarbon compounds.

As early as practicable following discovery of a release of a hazardous liquid or carbon dioxide from a pipeline system, the operator must notify the National Response Center by telephone if:

- a person is killed or is injured and requires hospitalization,
- there is a fire or explosion not intentionally set by the operator,
- there is estimated property damage (including cost of cleanup and recovery, value of lost product, and damage to property) exceeding \$50,000,
- there is pollution of any stream, river, reservoir, or other body of water that violated applicable water quality standards, caused a discoloration of the surface of the water or adjoining shoreline, or deposited a sludge or emulsion beneath the surface of the water or adjoining shoreline, or
- there is any situation that, in the judgment of the operator, should be reported even though it doesn't meet the above criteria.

A written accident report must be submitted to the US Department of Transportation Office of Pipeline Safety as soon as practicable, but not later than 30 days after discovery of a release. A supplemental report must be submitted within 30 days if the operator receives any updates or additions to the information originally reported.

These notification and reporting requirements are included in 49 CFR Part 195.

### **Natural Gas and Liquefied Natural Gas**

Federal hazardous materials transportation regulations also cover the transportation of natural gas by pipeline and activities occurring at a liquefied natural gas (LNG) facility where natural and synthetic gas are liquefied, transferred or stored.

As early as practicable following discovery of a release of gas from a pipeline or of liquefied natural gas or gas from a liquefied natural gas facility, but generally not to exceed two hours after discovery, the operator must notify the National Response Center and the Colorado Public Utilities Commission Gas Pipeline Safety Section by telephone if:

- a person is killed or is injured and requires hospitalization,
- there is estimated property damage (including value of lost product and damage to property) of \$50,000 or more,
- there is an event that results in an emergency shutdown of a liquefied natural gas facility, or
- there is any situation that, in the judgment of the operator, should be reported even though it doesn't meet the above criteria.

As early as practicable, but not later than 30 days after discovery and verbal report of a release, the operator must submit a written report to the US Department of Transportation Office of Pipeline Safety. A supplemental report must be submitted within 30 days if the operator receives relevant updates or additions to the information originally reported.

These notification and reporting requirements are included in 49 CFR Part 191 and 4 CCR 723-4 Sections 4900 - 4914.

### State Requirements

If there is a leak on a gas pipeline, a liquefied natural gas system, a master meter system, or a propane system that results in the evacuation of 50 or more people from a normally occupied building or results in the closure of a roadway, the operator must contact the Colorado Public Utilities Commission Gas Pipeline Safety Section by telephone within two hours of discovery.

This notification requirement is contained in 4 CCR 723-4 Section 4911.

## J. Oil and Gas Exploration and Production

Federal oil and gas lease surface operations are managed by the US Department of the Interior Bureau of Land Management (BLM) in cooperation with the appropriate Federal surface management agency or non-Federal surface owner. On National Forest System lands, the Forest Service has approval authority for the surface use portion of Federal oil and gas operations and for appeals related to Forest Service decisions and approvals. The BLM considers the Bureau of Indian Affairs to be the surface management agency for all Indian lands unless a Tribe has contracted the Bureau of Indian Affairs realty function for its lands.

“... All spills or leakages of oil, gas, salt water, toxic liquids or waste materials, blowouts, fires, personal injuries, and fatalities shall be reported by the operator to the BLM and the surface management agency in accordance with the requirements of *Notice to Lessees NTL-3A; Reporting of Undesirable Events*, and in accordance with any applicable local requirements.

The BLM requires immediate reporting of all Class I major events, such as spills of more than 100 barrels of fluid/500 MCF of gas released; fires that consume 100 bbl or more oil or 500 MCF gas; life threatening or fatal injury/loss of well control; release of reportable quantities of hazardous substances; spill, venting, or fire in sensitive areas, such as parks, recreation sites, wildlife refuges, lakes, reservoirs, streams, and urban or suburban areas” ... “Volumes discharged during any of the above incidents will be estimated as necessary. Operators must take immediate action to prevent and control spills and the BLM, the surface management agency, and other applicable regulatory authorities must be consulted prior to treating or disposing of wastes and spills. Operators should become familiar with local surface management agency requirements for reporting and managing spills and leaks. ...” (BLM “The Gold Book,” Fourth Edition, Revised 2007)

### State Requirements

Spills and releases of Exploration and Production (E&P) waste and produced fluids should be controlled and contained immediately upon discovery. Impacts resulting from spills and releases should be investigated and cleaned up as soon as practicable.

The rules and regulations for oil and gas exploration and production have recently been revised. Most of these changes become effective May 1, 2009 on federal land and April 1, 2009 on all other land.

If there is a spill or release of more than 20 barrels of E&P waste, it must be verbally reported to the Colorado Oil and Gas Conservation Commission (COGCC) as soon as practicable, but not more than 24 hours after discovery. If there is a spill or release of any size that impacts or

could impact waters of the state, a residence or an occupied structure, livestock or a public byway, it must be verbally reported to the Colorado Oil and Gas Conservation Commission as soon as practicable, but not more than 24 hours after discovery. Spills or releases of any size that impact or threaten to impact any surface water supply area must be reported to the Colorado Oil and Gas Conservation Commission and to the Colorado Environmental Release and Incident Reporting Line. If the release impacts or threatens to impact a surface water intake, it must be verbally reported to the emergency contact for that facility immediately after discovery. The operator must notify the affected surface owner or their appointed tenant of all reportable spills as soon as practicable, but not more than 24 hours after discovery.

Chemical spills and releases must be reported in accordance with all applicable state and federal laws, including the Emergency Planning and community Right-to-Know Act (EPCRA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Oil Pollution Act, and the Clean Water Act.

Releases of more than 5 barrels of E&P waste, and all other reportable releases, must also be reported on COGCC Form 19 and submitted to the Colorado Oil and Gas Conservation Commission within 10 days after discovery of the release.

These notification requirements are contained in the Colorado Oil and Gas Conservation Commission 900-Series Rules.

## **K. Polychlorinated Biphenyls**

Polychlorinated biphenyls (PCBs) are managed under the Toxic Substances Control Act. Substances with concentrations greater than or equal to 50 parts per million PCBs are regulated under 40 CFR Part 761, which is implemented by the US Environmental Protection Agency. If a spill of the substance directly contaminates surface water, sewers, drinking water supplies, grazing lands, or vegetable gardens and/or the spill exceeds 10 pounds of PCBs by weight, the responsible party must notify the EPA within 24 hours. In Colorado, contact the Region 8 Emergency Response Spill Report Line. If the spill involves 10 pounds or less of PCBs and does not involve any of these resources, the spill must still be cleaned up, but notification to EPA isn't required. Unless commingled with a hazardous waste, releases of substances containing less than 50 parts per million PCBs are regulated under Colorado's solid waste regulations 6 CCR 1007-2. The solid waste regulations do not have specific release reporting requirements at this time.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) has set the reportable quantity for PCBs at one (1) pound. Any release of oil or other substance containing greater than or equal to one pound of PCBs must be reported to the National Response Center as soon as the release is discovered. In addition, if the release impacts waters of the state of Colorado, the release must be reported as per the Water Quality Control Division's reporting policy (see "Guidance for Reporting Spills under the Colorado Water Quality Control Act and Colorado Discharge Permits", <http://www.cdph.state.co.us/op/wqcc/Resources/Guidance/spillguidance.pdf>).

## Abbreviations & Definitions

**CAA** – Clean Air Act  
**CCR** – Code of Colorado Regulations  
**CDPHE** – Colorado Department of Public Health and Environment  
**CEPC** – Colorado Emergency Planning Commission  
**CERCLA** – Comprehensive Environmental Response, Compensation and Liability Act  
**CFR** – Code of Federal Regulations  
**CRS** – Colorado Revised Statutes  
**CWA** – Clean Water Act  
**EPA** – United States Environmental Protection Agency  
**EPCRA** – Emergency Planning and Community Right-to-Know Act  
**LEPC** – Local Emergency Planning Committee  
**NRC** – National Response Center  
**RCRA** – Resource Conservation and Recovery Act  
**SERC** – State Emergency Response Commission  
**SDWA** – Safe Drinking Water Act

**EPA's List of Lists** is a compendium of the lists of chemicals subject to reporting requirements under the Emergency Planning and Community Right-to-Know Act (EPCRA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and chemicals listed under section 112(r) of the Clean Air Act (CAA). Lists are also provided of Resource Conservation and Recovery Act (RCRA) hazardous wastes and radionuclides reportable under the Comprehensive Environmental Response, Compensation and Liability Act. These lists should be used as reference tools, not as a definitive source of compliance information. Reporting requirements for the Emergency Planning and Community Right-to-Know Act and the Comprehensive Environmental Response, Compensation and Liability Act are published in the Code of Federal Regulations (CFR), 40 CFR Parts 302 and 355 respectively. Compliance information for the Clean Air Act section 112(r) is published in 40 CFR Part 68. The List of Lists is available on the Internet at <http://yosemite.epa.gov/oswer/lol.nsf/homepage>.

**Exploration and production (E&P) wastes** are associated with operations to locate or remove oil or gas from the ground or to remove the impurities from oil or gas.

**Extremely Hazardous Substances (EHS)** are chemicals that present the most serious hazards during release (in terms of toxicity, reactivity, volatility, combustibility, and flammability) and are regulated under the Emergency Planning and Community Right-To-Know Act (EPCRA). The extremely hazardous substances list consists of approximately 360 substances and is included in EPA's List of Lists.

**Facility** means any building, equipment, structure, installation, containment structure, pipe, other stationary feature, motor vehicle, rolling stock, or aircraft. Facility also includes any site where a hazardous substance is or has been located.

**Hazardous Materials** are chemicals posing a hazard to human health or the environment when transported (49 USC 5103). They include hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, all materials in the Hazardous Materials Table (49 CFR 172.101), and materials meeting the criteria for hazard classes in part 173 of subchapter C of 49 CFR 172.101.

**Hazardous Substances** are chemicals posing a hazard to human health or the environment and are regulated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The hazardous substance list is included in EPA's List of Lists.

**Reportable Quantity (RQ)** is a term that applies to the amount of hazardous substances or extremely hazardous substances released within a 24-hour period. *Note that the 24-hour period is the time frame for measuring the quantity released, not the time frame for reporting a release.*

**Threshold Planning Quantity (TPQ)** is a term that applies to the amount of an extremely hazardous substance that must be present onsite in concentrations greater than 1% by weight of a compound or mixture at which the facility must meet all emergency planning requirements. If not also listed as a CERCLA hazardous substance, extremely hazardous substances have a reportable quantity equal to the threshold planning quantity for that substance.

**"Waters of the State of Colorado"** are any and all surface waters and subsurface waters (groundwater) that are contained in or flow in or through the state of Colorado. This includes lakes, rivers, streams, creeks, wetlands, irrigation ditches, storm drains, livestock ponds, borrow ditches, and dry gullies. This does not include waters in sewage systems, waters in treatment works of disposal systems, waters in potable water distribution systems, or water withdrawn for use until use and treatment have been completed.

## **Appendix B**

### **Eagle Mine Environmental Incident Contact List**

## ***Eagle Mine Environmental Incident Contact List***

January 2014

Spills of hazardous materials are required to be reported to the Colorado Department of Public Health and Environment (CDPHE) by the person who spilled the material within 24-hours. The CDPHE 24-hour spill reporting hotline is 877-518-5608. They generate a spill report and send it to individuals on their e-mail list. Vail dispatch at 479-2145 will be provided this list and can call in other resources if necessary, depending on the type of emergency. Minturn Police Chief, Lorenzo Martinez, should be called at 390-5873 and he will notify other town officials.

**The most critical notifications to make immediately when the Eagle River appears to be turning red or orange:**

<b>Company</b>	<b>Name</b>	<b>Phone Number</b>	<b>Address</b>	<b>E-Mail Address</b>
<b>Eagle River Water &amp; Sanitation District</b>	Todd Fessenden Director of Operations	970-401-2145 (cell) 970-328-4412 (home) 970-477-5471 (office)	846 Forest Rd. Vail, CO 81657	<a href="mailto:tfessenden@erwsd.org">tfessenden@erwsd.org</a>
<b>Avon Drinking Water Facility</b>	Travis Young Plant Supervisor	970-949-5887 (plant) 970-390-3096 (after hours) 970-949-7305 (pager)	870 W. Beaver Crk. Blvd. Avon, CO 81620	<a href="mailto:tyoung@erwsd.org">tyoung@erwsd.org</a>
<b>Avon Drinking Water Facility</b>	Brian Tracy Water Quality Coordinator	970-471-0827 (office)	500 Swift Gulch Rd. Avon, CO 81620	<a href="mailto:btracy@erwsd.org">btracy@erwsd.org</a>
<b>Eagle River Water &amp; Sanitation District</b>	Glen Phelps Water Manager	970-477-5401 (office) 970-390-7146 (cell) 970-845-3685 (pager)	500 Swift Gulch Rd. Avon, CO 81620	<a href="mailto:gphelps@erwsd.org">gphelps@erwsd.org</a>
<b>Eagle River Water &amp; Sanitation District</b>	Leah Cribari Lab Supervisor	970-477-5439 (office) 970-445-0433 (w.cell) 303-249-4751 (p. cell)	950 W. Beaver Crk. Blvd. Avon, CO 81620	<a href="mailto:lcribari@erwsd.org">lcribari@erwsd.org</a>
<b>Vail Resorts snow-making operations</b>	Paul Fillion "Mtn Ops, Vail"	970-331-8260 (cell) 970-754-4048 (office)	P.O. Box 7 Vail, CO 81658	<a href="mailto:pfillion@vailresorts.com">pfillion@vailresorts.com</a>

<b>Vail Mountain Operations</b>	Dave Tucholke Snowmaking Manager	970-331-4789 (cell) 970-754-4027 (office)	P.O. Box 7 Vail, CO 81658	<a href="mailto:dtucholke@vailresorts.com">dtucholke@vailresorts.com</a>
	Steve Fellman, "Mtn Ops Beaver Crk"	970-331-9591 (cell) 970-754-5175 (office)	P.O. Box 7 Vail, CO 81658	<a href="mailto:sfellman@vailresorts.com">sfellman@vailresorts.com</a>
<b>Director of Mountain Operations Beaver Crk</b>	Greg Johnson "Mtn Ops Beaver Crk"	970-331-4145 (cell) 970-754-5152 (office)	P.O. Box 7 Vail, CO 81658	<a href="mailto:gjohnson@vailresorts.com">gjohnson@vailresorts.com</a>
	Trappers Control room for Beaver Creek Snowmaking	970-754-5150		
	Snow Central Vail Snowmaking	970-754-4043		
	Vail Security call if all fails	970-754-3049		
<b>Vail Resorts</b>	Tom Allender Resort Planning Director	970-754-3139 (office) 970-390-7809 (cell) 970-754-2555 (fax)		<a href="mailto:tallender@vailresorts.com">tallender@vailresorts.com</a>
<b>Town of Minturn</b>	Jim White, Town Manager	970-827-5645 (office) 970- 390-5102 (cell)	P.O. Box 309 302 Pine St. Minturn, CO 81645	<a href="mailto:manager@minturn.org">manager@minturn.org</a>
<b>Minturn Police Chief</b>	Brad Lamb	970-827-4272 (office) 970-390-4433 (cell)	Minturn Police Depart. P.O. Box 191 Minturn, CO 81645	<a href="mailto:blamb@minturn.org">blamb@minturn.org</a>
<b>Colorado Parks &amp; Wildlife</b>	Bill Andree	970-390-2240 (cell) 970-328-6563 (office)	P.O. Box 633 Minturn, CO 81645	<a href="mailto:Bill.Andree@state.co.us">Bill.Andree@state.co.us</a>
	Perry Will (supervisor call second)	970-947-2927 (office) 970-948-8409 (cell)	CPW 0088 Wildlife Way Glenwood Springs, CO 81601	<a href="mailto:perry.will@state.co.us">perry.will@state.co.us</a>

	Kendall Bakich (aquatic biologist)	970-947-2924 (office) 970-355-4771 (cell)	CPW 0088 Wildlife Way Glenwood Springs, CO 81601	<a href="mailto:kendall.bakich@state.co.us">kendall.bakich@state.co.us</a>
<b>Who can facilitate shutting off the wastewater treatment plant at the mine?</b>				
<b>Eagle Mine WTP</b>		970-827-5523		
This plant is not manned 24 hrs. a day.	WWTP plant operator Michelle White, Lead Operator	970-412-4430 970-596-3199	EMWTP P.O. Box 758 Minturn, CO 81645	<a href="mailto:dheinze@environcorp.com">dheinze@environcorp.com</a> <a href="mailto:mwhite@environcorp.com">mwhite@environcorp.com</a>
<b>Principal</b>	Mark Travers	312-228-3890 (office) 312-375-8080 (cell)	333 West Wacker Dr. Suite 2700 Chicago, IL 60606	<a href="mailto:mtravers@environcorp.com">mtravers@environcorp.com</a>
<b>ENVIRON International Corporation</b> they operate the Eagle Mine water treatment plant	David Heinze Manager	303-382-5474 (office) 303-990-4100 (cell)	303 E. 17th Ave, Suite 400 Denver, CO 80203	<a href="mailto:dheinze@environcorp.com">dheinze@environcorp.com</a>
	Don Houston, Site Operations Manager	231-788-4934	5307 Evanston Ave. Muskegon, MI 49442	<a href="mailto:dhouston@environcorp.com">dhouston@environcorp.com</a>
<b>Newfields</b> river sampling, and maintenance of the pipeline	Dave Hinrichs	303-378-1388 (cell)	730 17th, Suite 925 Denver, CO 80202	<a href="mailto:dhinrichs@newfields.com">dhinrichs@newfields.com</a>
<b>Newfields</b>	Kerri Sitler	303-308-0942 direct 303-294-0950 main line	730 17th, Suite 925 Denver, CO 80202	<a href="mailto:ksitler@newfields.com">ksitler@newfields.com</a>
Newfield Environmental are contracted by CBS to evaluate and implement cleanup alternatives				
<b>Other Important Numbers:</b>				
<b>Colorado Department of Public Health and Environment (CDPHE)</b>	Wendy Naugle Engineer/Hydrogeologist also Project Manager for the Eagle Mine Cleanup for CDPHE	303-692-3394 (office) 303-691-7878 (fax) 303-718-4466 (cell)	CDPHE 4300 Cherry Creek Dr. South HMWMD-RP-B2 Denver, CO 80246	<a href="mailto:wendy.naugle@state.co.us">wendy.naugle@state.co.us</a>

	Heather Drissel Manager Field Unit 2 Field Services Section Water Quality Control	719-225-9674 (cell) 719-543-8441 (fax) 877-518-5608 (hotline)	4718 North Elizabeth St. Suite B Pueblo, CO 81008	<a href="mailto:heather.drissel@state.co.us">heather.drissel@state.co.us</a>
<b>Colorado Parks &amp; Wildlife</b>	Craig Wescoatt Manager for the Eagle South area	970-948-0354	CPW P.O. Box 4956 Eagle, CO 81631	<a href="mailto:craig.wescoatt@state.co.us">craig.wescoatt@state.co.us</a>
<b>Water Quality Program Coordinator Colorado Division of Wildlife</b>	Jamie Anthony	303-291-7128 (office) 303-386-2281 (cell)	6060 Broadway Denver, CO 80216	<a href="mailto:Jamie.Anthony@state.co.us">Jamie.Anthony@state.co.us</a>
<b>Colorado Attorney General's Office</b>	Jason King	720-508-6000 (office) 720-508-6283 (direct) 303- 819-8207 (cell)	1300 Broadway 10th Floor Denver, CO 80203	<a href="mailto:Jason.King@state.co.us">Jason.King@state.co.us</a>
<b>U.S. Environmental Protection Agency (EPA)</b>	Les Sims Federal Project Manager for Eagle Superfund Site	303-312-6224 303-589-1874 (cell)	US EPA, EPR-SR 1595 Wynkoop St. Denver, CO 80202	<a href="mailto:sims.leslie@epa.gov">sims.leslie@epa.gov</a>
<b>Eagle County Environmental Health</b>	Ray Merry can coordinate notications	970-328-8757 (daytime) 970-471-3265 (evening) 970-328-6833 or	P.O. Box 179 Eagle, CO 81631	<a href="mailto:Ray.Merry@eaglecounty.us">Ray.Merry@eaglecounty.us</a>
<b>Eagle County Emergency Management</b>	Barry Smith	970-471-4048 (cell) 970-328-3545 (office)	P.O. Box 850 Eagle, CO 81631	<a href="mailto:Barry.Smith@eaglecounty.us">Barry.Smith@eaglecounty.us</a>
<b>Leonard Rice Engineers</b>	Bob Weaver	303-445-9589x145 (office) 720-347-8793 (cell)	2000 Clay St., Suite 300 Denver, CO 80211- 5110	<a href="mailto:bob.weaver@lrewater.com">bob.weaver@lrewater.com</a>
<b>CBS Corporation CBS Law Department</b>	Jeffrey B. Groy Vice President, Senior Counsel/	262-705-0579 (cell & work) 312-288-3801 (fax)	2 East Mifflin St., Suite 200 Madison, WI 53703	<a href="mailto:jeff.groy@cbs.com">jeff.groy@cbs.com</a>

<b>Battle Mountain Resort</b>	Mike Jackson Project Manager	970-331-2405	P.O. Box 56 440 Eagle St. Minturn, CO 81645	<a href="mailto:mjackson@battlemountainresort.com">mjackson@battlemountainresort.com</a>
<b>Battle Mountain Resort</b>	Dave Kleinkopf	303-726-0887 (cell)	P.O. Box 56 440 Eagle St. Minturn, CO 81645	<a href="mailto:dkleinkopf@JCFKK.com">dkleinkopf@JCFKK.com</a>
<b>Eagle/Holy Cross Ranger District White River National Forest</b>	Dave Neely, USFS District Ranger	970-827-5150 (Holy Cross) 970-328-5860 (Eagle) 970-274-2027 (Cell)		<a href="mailto:dneely@fs.fed.us">dneely@fs.fed.us</a>