



**COLORADO**

**Hazardous Materials  
& Waste Management Division**

Department of Public Health & Environment

**ANNUAL REPORT  
to the COLORADO WATER QUALITY CONTROL COMMISSION  
from the HAZARDOUS MATERIALS and WASTE MANAGEMENT DIVISION  
COLORADO DEPARTMENT OF PUBLIC HEALTH and ENVIRONMENT**

**SB 181 Implementation  
COMPLIANCE WITH WATER QUALITY STANDARDS AND CLASSIFICATIONS  
for the Fiscal Year Ending June 30, 2016**

September 2016

This is the annual report provided to the Colorado Water Quality Control Commission (Commission, WQCC) by the Hazardous Materials and Waste Management Division (HMWMD). This report documents HMWMD activities that protect water quality in Colorado, support the mission of the Commission, and implement state water quality standards.

The paragraphs that follow present issues and examples of sites where releases have impacted ground water quality and where HMWMD decisions and actions concerning water quality classifications and standards have established clean-up criteria. There are numerous other examples, not chosen, where the state water quality standards have been used to determine the need for further site investigations or remediation to address chemical releases to the soil, ground water or surface water. Any additional information will be provided to the Commission upon request.

### HAZARDOUS WASTE PROGRAM

No major changes have been made in the Hazardous Waste Program over the last year, which is Colorado's equivalent of the federal RCRA, Subtitle C program. However, in the past year the HMWMD used a recent EPA OSWER Directive 9283.1-42, February 2014 "Determining Groundwater Exposure Point Concentrations" to calculate an exposure point concentration for groundwater and close one site (see Former Meke Cleaners as described below in "NFA Determinations Involving Groundwater"). This is a new approach by the HMWMD to evaluate sites with groundwater contamination in wells that are hovering extremely close to the groundwater standard. This statistical analysis is similar to the approach the HMWMD has taken for years when evaluating risk to soil exposure at hazardous waste sites. Due to the type of statistical analysis performed in the core area of the residual groundwater contamination, very few sites will be able to close using this approach.

In 2014, HMWMD adopted the Conditional Closure Policy and Guidance. Although the policy and guidance has been in effect for more than two years, only three conditional closure requests have been received and reviewed by the Hazardous Waste Program (as discussed in last year's annual report.). There have been no requests for Conditional Closure submitted this year.

#### Specific Site Summaries:

##### NFA Determinations Involving Groundwater

###### Former Meke Cleaners, Aurora

In May 2012, implementation of the approved Corrective Action Plan for the site began, which included the injection of BOS-100®, an in-situ groundwater treatment fluid, in eight injection locations within the tenant space and twenty-seven (27) injection locations outside the building in the area south of the tenant space. Results of post-injection groundwater monitoring conducted since 2012 documented substantial decreases in contaminant concentrations, indicating that source area treatment was successful, and that contaminant concentrations were below standards in all but two wells, with the PCE and TCE concentrations in those two wells consistently detected near or below groundwater standards. Based upon the slight exceedances of PCE and TCE in two monitoring wells, representing a relatively small area of impact, the HMWMD determined that an alternate strategy could be employed to close the site by calculating an exposure point concentration (EPC) in accordance with current EPA guidance documents on the subject. EPA's Office of Solid Waste and Emergency Response (OSWER) issued Directive 9283.1-42, *Determining Groundwater Exposure Point Concentrations, Supplemental Guidance*, in February of 2014. Using this guidance, the Department calculated EPCs for

tetrachloroethene (PCE) and trichloroethene (TCE) at the site by using data from monitoring wells MW-1, MW-4, MW-6 and SMW-17. These wells were selected because they were in the source area and they have had the highest post-remedial concentrations of PCE and TCE. Following the EPA guidance, PCE and TCE concentrations were averaged over the four wells during each of the last five sampling events. Using these average data points, a 95% upper confidence limit (UCL) was calculated using ProUCL Software (Version 4.1) created by Lockheed Martin and distributed by the EPA. The UCLs for PCE and TCE were then used as the groundwater EPCs for the site. The calculated groundwater EPC for PCE at the site was 12.73 µg/L and the calculated groundwater EPC for TCE at the site was 2.78 µg/L. These concentrations are well below the groundwater standards for PCE and TCE of 17 ug/l and 5 ug/l, respectively. The EPC for TCE is also below the short-term noncancer drinking water value (3.4 µg/L) established by EPA for women of reproductive age to prevent fetal cardiac malformations. Based on the results of the EPC calculations using an EPA approved methodology, the HMWMD approved the request for no further action at the site.

#### Mountain Cleaners, Lakewood

In June 2015, groundwater and soil was sampled from 3 borings installed at the site to evaluate the potential for release of PCE from dry cleaning operations. None of the soil sampling found any VOCs, but PCE was detected in groundwater in one boring at 45.1 micrograms per liter [µg/l], exceeding the groundwater standard. Because this detection over standards was found in a "grab sample" from a boring and may not be representative of true water quality in the area, the HMWMD required additional soil investigation in other areas of the site and groundwater testing, using actual monitoring wells, to evaluate the potential for releases. Based upon the results of additional soil testing at the site, some VOCs were present in soil below unrestricted land use and groundwater protection levels. Groundwater immediately down gradient of Mountain Cleaners, contained PCE at 15.9 µg/l, cis-1,2-dichloroethene at 2.53 µg/l, and trichloroethene at 3.05 µg/l. All sampling results collected at the site demonstrated that one or more small spills of dry cleaning solvents may have occurred, but dry cleaning operations had not impacted soil or groundwater above applicable standards, so the site was issued a no further action determination in March of 2016.

#### Scandinavia Auto/Boulder Automotive, Boulder

During a Phase II Subsurface Investigation at the site in March of 2015, 10 borings were installed at the facility to evaluate potential releases of used oil and chlorinated solvents. The sample analyses detected elevated oil and grease levels in SB-1 through SB-8 soil samples, PCE/TCE in SB-8 soil samples, and chlorinated solvents PCE and cis-1,2 DCE above detection limits, but below Colorado groundwater standards in SB-6 and SB-8 groundwater "grab samples". These results indicated that releases of wastes may have occurred from the sewer line sand traps installed at the site. Based upon the results of the Phase II Subsurface Investigation, the HMWMD required semi-permanent groundwater wells to be installed at the site to more accurately evaluate groundwater quality and flow direction in the subsurface. In May 2015, four monitoring wells were constructed, surveyed and sampled at the site. Fluid levels from the wells indicated groundwater was flowing north across the property, and water sampling showed low-level detections of 1,1-DCA and 1,2-DCE. The detections of chlorinated solvents were at concentrations well below groundwater standards and the site was issued a no further action determination from the HMWMD in August of 2015. As part of the investigation and evaluation of the site, the former sand traps were abandoned by filling the features with concrete and floor drains within the building were connected to a new sewer line, to prevent the potential for impacts from future operations.

### Summary Observations

The no further action (NFA) examples noted above are typical of the ground water impacted sites that the HMWMD's Hazardous Waste Corrective Action Unit closes each year. These NFA sites consistently exhibit certain characteristics: they are relatively small in size; the source areas, if found, are small in size and are indicative of a limited release to the environment; the ground water contamination is of limited extent; they take between 5 and 10 years to remediate; and contaminant concentrations in ground water are generally under 200 µg/L when they are brought to our attention. These sites have the greatest chance of achieving state ground water standards, assuming that the responsible party has the will and financial resources to perform the necessary work. Those sites with larger source areas with associated higher levels of contamination in soil and ground water take considerably longer to remediate and are, either subject to corrective action for many years, or may be eligible for conditional closure. These longer term cleanups that rely on long-term monitored natural attenuation are required to place an environmental covenant on their property in order to manage the limited risk these sites pose by prohibiting access to the affected ground water until it is demonstrated that standards have been achieved. The majority of our corrective action sites fall into this category.

### RADIATION PROGRAM

The Radiation Program, in part, regulates the operational activities and cleanup of current and former uranium processing, mining, and disposal facilities. It works to isolate the radioactive and heavy-metal wastes and by-products produced in Colorado from the public and environment. This program works in conjunction with Remediation programs in the HMWMD and implements the Water Quality regulations for surface and ground water at those sites. The Program works with the Division of Reclamation, Mining and Safety and with the Oil and Gas Conservation Commission on issues relating to treatment or monitoring of radioactive materials in ground water. The Program issues and oversees licenses for uranium mills and other activities involving radioactive material.

### Specific Site Summaries:

#### Lincoln Park/Cotter, Fremont County

Uranium and molybdenum continue to be monitored in ground water in the Lincoln Park Water Use Area (Operable Unit 2) near the Cotter/Cañon City uranium mill tailings site. Ground water concentrations of uranium and molybdenum have declined down gradient of the Old Ponds Area and in Lincoln Park. The investigation into the source, extent, and nature of uranium in ground water found moving north-northwest from the Cotter facility is being conducted pursuant to the Comprehensive Environmental Response Compensation Liability Act (CERCLA or Superfund). The Superfund remedial investigation/feasibility study process has just begun. In addition, the Cotter facility is undergoing full decommissioning of its' radioactive materials license and will meet Superfund and Colorado requirements.

All wells tested in Lincoln Park show molybdenum contamination is below ground water standards. The Colorado molybdenum ground water standard is 210 ug/L. However, the Nuclear Regulatory Commission (NRC) cleanup goal of 100 ug/L molybdenum for ground water is applicable. Some wells in Lincoln Park show uranium contamination above the Colorado standard of 30 ug/L.

UMETCO/Uravan site, Uravan, Montrose County

Complete remediation of the Uravan site was accomplished in 2008. ACLs (alternate concentration limits) are in place for several contaminants in ground water. A long-term program of ground water and surface water monitoring is in place to demonstrate that the ACLs continue to be protective of the river and that contaminant concentrations are stable or decreasing now that the source has been removed. At license termination and deletion from the Superfund National Priorities List (NPL), the facility will be transferred to the U.S. Department of Energy for long-term surveillance. EPA is developing a Record of Decision for the site.

Department of Energy atomic blast sites, Garfield and Rio Blanco Counties The Radiation Control Program advises the Oil and Gas Conservation Commission on the monitoring and testing of ground water for radioactive materials from gas wells being drilled near the Rulison and Rio Blanco atomic blast sites.

**REMEDIATION PROGRAM**

**Superfund Activities** The Comprehensive Environmental Response Compensation and Liability Act (CERCLA or Superfund) requires that remedies chosen to address hazardous substance releases must either meet existing standards or, in limited cases, waive those standards. During each remedy selection process, the HMWMD submits a list of state regulations that are either directly applicable to a particular cleanup situation or which are relevant and appropriate requirements (ARARs) to the EPA. Water quality standards are identified after consultation with the WQCD.

Site Specific or Contaminant Specific Summaries:

Asarco Globe Site, Denver and Adams Counties

The Asarco Globe site was originally proposed to be listed on the NPL in 1989. The property was a metals smelting site which started in 1872, and closed down as part of the Asarco bankruptcy in 2008. Since 1993, the state had been working under a consent decree and completed all work with the exception of the groundwater remedy. In 2015, the groundwater remedy was completed and the site is now meeting groundwater standards at the site boundary. Accordingly, the EPA removed the "Proposed NPL" status in March of 2015. In July 2015 the state determined that no additional active remediation is required at the site and on-going groundwater monitoring has demonstrated that the remedy continues achieve relevant water quality standards at the property boundary.

Bonita Peak Mining District, San Juan County

On Friday September 9, 2016, the EPA added the Bonita Peak Mining District site added to the Superfund National Priorities List. The Bonita Peak Mining District site consists of historic and ongoing releases from mining operations in three drainages: Mineral Creek, Cement Creek and Upper Animas; which converge into the Animas River near Silverton, Colorado. Mining began in the area in the 1860s and both large- and small-scale mining operations continued into the 1990s, with the last mine ceasing production in 1991. The site includes 35 mines, seven tunnels, four tailings impoundments, and two study areas where additional information is needed to evaluate environmental concerns.

Water quality in the BPMD has been impaired by acid mine drainage for decades. Since 1998, Colorado has designated portions of the Animas River downstream from Cement Creek as impaired for heavy metals, including lead, iron and aluminum. EPA has waste quantity data on 32 of Bonita Peak's 48 sources. These 32 sources have waste rock and water discharging out of mining adits at a combined rate of 5.4 million gallons per day. Cadmium, copper, manganese and zinc are the known contaminants associated with these discharges. EPA and CDPHE have begun work on the Remedial Investigation/Feasibility Study for the site.

#### Broderick Site, Adams County

Broderick Wood Products was a wood-treating facility for power poles and railroad ties from 1947 to 1982, located on West 58th Avenue and Galapago Street in unincorporated Adams County. Contaminants of concern are PAHs, pentachlorophenol and dioxin. The remedy involved the removal and treatment of contaminated soil, the construction of a slurry wall around the down-gradient portion of the property and the treatment of contaminated groundwater through a Packaged Water Treatment System (PWTS).

The PWTS was constructed in 1995 to treat groundwater contaminated with non-aqueous phase liquids (NAPL) and organics from several on-site groundwater sources. The treated water is discharged to an on-site storm water sewer system owned and managed by Adams County or re-injected into the former impoundment area to improve recovery of NAPL. Though a discharge permit is not required under Superfund, Adams County required that the PWTS secure a CDPS permit to discharge treated water to its storm water sewer system. Water discharged into the storm sewer system flows into Clear Creek north of the Site.

The site had operated under an individual permit until 2004, when it was changed over to a General Permit by the WQCD. The 2011 permit renewal and subsequent modifications in 2013 included the addition of more stringent effluent limits for multiple parameters, including anti-degradation based (AD) limits for manganese and iron.

In addition, the more stringent AD-based limits of the CDPS permit for pentachlorophenol (PCP) impact the operating costs of the PWTS, requiring more frequent change out of the carbon/activated clay media. Before the addition of the AD-based limits, the PWTS was typically operated eight hours/day five days/week in order to maintain the requisite water levels and inward gradient across the slurry wall (while providing a combined flow rate that is compatible with the PWTS and other water pumping operations).

After several meetings and appeals to WQCD to modify the permit because the metals are not contaminants of concern for the Superfund cleanup and occur in the influent at background concentrations, the responsible party was forced to proceed with extensive modification to the PWTS to incorporate a chlorine dioxide treatment system to reduce the concentration of metals in the effluent. However, after several months of testing and operation, the modified PWTS could not meet the two-year rolling average AD-based limits for iron and manganese. As a result, the groundwater remediation systems and the PWTS have not been operated, in order to avoid permit violations.

EPA, CDPHE and the responsible party are continuing to explore ways to resume remediation within the constraints of the responsible party's limited financial resources and the issues associated with the CDPS permit limits.

### Captain Jack Mill, Boulder County

Located approximately one mile south of Ward in Boulder County, the Captain Jack Mill Superfund Site was added to the National Priorities List to address soil contamination and acid mine drainage from the Big Five tunnel. Surface remediation was completed in 2012 and removed mine waste from floodplains, consolidated and capped it, and installed run-on and run-off controls. A flow-through bulkhead will be installed in the Big Five tunnel in 2016, along with an in-situ treatment system and monitoring arrays. Water quality exiting the tunnel will be monitored for two years, and if necessary, an ex-situ passive treatment system will be required.

### Central City/Clear Creek, Clear Creek and Gilpin Counties

Over the years, work along the main stem has been completed, including the capping of more than 15 mine waste piles and the construction of a water treatment plant in Idaho Springs to treat the Argo and Big Five tunnel discharges and Virginia Canyon ground water. Work has been completed on the North Fork, with 25 waste piles addressed through removal or erosion control measures, and construction of an on-site repository and sediment control dams. A flow-control bulkhead was constructed in the Argo Tunnel in 2015. The bulkhead will prevent future uncontrolled surge events from the Argo Tunnel from impacting Clear Creek. A surge event would likely overwhelm the Argo Tunnel Water Treatment Facility, resulting in a fish kill on the main stem and compromising downstream water supplies.

HMWMD is proceeding with construction of the North Clear Creek mine water treatment plant. This plant is being constructed south of Black Hawk and will treat the Gregory Incline and National Tunnel discharges, along with surface water flowing through Gregory Gulch. Construction began in November 2015, and is expected to be completed in January 2017. HMWMD was unable to reach an agreement with the City of Black Hawk, Central City and Gilpin County to leave enough water in the stream to allow brown trout to survive while still meeting future municipal needs. However, HMWMD successfully negotiated with the City of Black Hawk to obtain any augmentation water that may be required due to the operations of the water treatment plant.

In 2014, HMWMD conducted the Five-Year Review on behalf of EPA for the Clear Creek Site. A contractor was hired to review the significant amount of surface water data available for the site, and to conduct a water quality assessment using the WQCD's 303(d) listing methodologies. The assessment was conducted using the water quality standards memorialized in the Records of Decision for the site and the current water quality standards. HMWMD staff then coordinated with the WQCD staff and it was jointly decided to move forward with reclassification of multiple segments of Clear Creek to establish ambient-based standards for those segments where remediation under Superfund has been completed and no further improvements in water quality are expected. However, EPA's water quality staff indicated that they were not prepared to support the proposal, so HMWMD withdrew the proposal prior to the June 2015 hearing.

### Chemical Sales Company, Adams County

Several water supply wells operated by the South Adams County Water and Sanitation District (SACWSD) are impacted by 1,4-dioxane. Data evaluations performed by SACWSD consultants have concluded that the Chemical Sales Company (CSC) Superfund Site is likely the primary source of this contamination. HMWMD has been working with EPA to further evaluate 1,4-contamination emanating from the CSC site. In May 2016, the EPA and HMWMD installed several new monitor wells to better characterize the nature and extent of 1,4-dioxane contamination at the Chemical Sales site. The new wells will be sampled during the fall of 2016. In addition, the EPA Site Assessment Program conducted a South Adams County 1,4-

Dioxane Site Investigation to determine if there are other sources of 1,4-dioxane impacting the SACWSD wells. The EPA investigation did not locate any other significant sources of 1,4-Dioxane.

#### Eagle Mine Superfund Site, Eagle County

During the process of developing a Focused Feasibility Study for additional remediation to meet water quality standards for cadmium, copper and zinc at the Eagle Mine Superfund Site, stakeholders requested a re-evaluation of arsenic in the Eagle River. Arsenic was not selected as a contaminant of concern in the original Record of Decision because it was not detected in the river. However, now that the 0.02 ug/l water + fish standard has been applied to Eagle River segments, an assessment was needed to determine if arsenic may be present at lower concentrations than earlier analytical methods could attain. Data collected during 2012 and 2013 indicate that the 0.02 ug/l water + fish standard for arsenic is not attained in the Eagle River in segments affected by the Eagle Mine. This discovery resulted in postponing the release of the Proposed Plan and correspondingly delayed implementation of additional remediation. Additional studies were conducted to determine the sources of the arsenic at the mine; which appears to be groundwater in the Belden-area, the same source that causes the early spring concentration peak of the other metals as well.

HMWMD, on behalf of EPA Region 8, prepared a Technical Impracticability (TI) Waiver Evaluation Report that was approved by EPA Headquarters. The TI Evaluation Report is available on the CDPHE Eagle Mine website. The TI Evaluation Report proposed an alternate remedial goal for arsenic in surface water of 3 µg/l for the site, based on the WQCC's Temporary Modification for arsenic and a risk assessment conducted by EPA toxicologist Dr. Susan Griffin.

#### Marshall Landfill, Boulder County

The 160 acre Marshall Landfill Superfund site consists of two adjacent landfills, each about 80 acres in size. Collectively, the landfills operated between 1965 and 1992, and landfill operations resulted in contaminated soil, groundwater, surface water, and sediment. The site remedy included: construction of a groundwater collection and treatment system; re-grading and re-vegetation of the landfill soil cover; draining and treatment of leachate from lagoons; installation of a pipeline to convey water from the Community Ditch through the landfill to prevent further contamination of the groundwater; and institutional controls.

Remedy construction was completed in 1993, and post-construction monitoring has shown that except for 1,4- dioxane, the groundwater quality goals are consistently being achieved at the off-site, down gradient point of compliance. Although 1,4-dioxane was not originally a contaminant of concern, recent monitoring has shown the presence of 1,4-dioxane both within and beyond the landfill boundaries. As of result, additional monitoring of surface and groundwater, as well as land and water usage in the vicinity will be necessary to ensure that the remedy remains protective of human health and the environment.

#### Peterson Air Force Base, Colorado Springs

In January 2016, it came to the attention of HMWMD that perfluorinated compounds (PFCs) were detected in groundwater south of Colorado Springs, in the Widefield, Security, Fountain area, during sampling under EPA's third Unregulated Contaminant Monitoring Rule (UCMR 3). HMWMD immediately began communicating with the U.S. Air Force (USAF) and Peterson Air Force Base (AFB) regarding this issue. The USAF had initiated a national program to identify potential PFC sources at installations across the country. As part of that program, and due to discussions with HMWMD, the preliminary assessment to identify potential PFC sources at Peterson AFB was accelerated from January 2017 to March 2016.



In May 2016, the EPA released lower Health Advisory Levels (HALs) for perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA). At this time, HMWMD met with USAF and Peterson AFB to inform them of the significant effects the new HALs were having on public water systems in the area and to provide results from the groundwater samples taken on Colorado Springs Airport property. The Airport monitoring well had the highest PFC levels seen to date in the area. Of particular note, the PFOS and perfluorohexane sulfonate (PFHxS) were particularly high, which suggests aqueous film forming foam (AFFF) as a potential source. AFFF is firefighting foam used in suppressing hydrocarbon fuel fires.

Currently, the USAF is working to install granular activated carbon (GAC) treatment systems on drinking water wells in the Security, Widefield, Fountain area to ensure that drinking water is below the EPA HALs. Additionally, the preliminary assessment report, identifying potential PFC sources related to past Peterson AFB operations, has been completed. HMWMD is working with the USAF and Peterson AFB to plan the follow-on site inspection, during which samples will be taken to identify releases from each of the potential source areas identified during the preliminary assessment. The site inspection sampling is scheduled to commence in October 2016.

#### **Uranium Mill Tailings Remedial Action (UMTRA) Project**

Cleanup of the nine abandoned uranium mill sites in Colorado authorized and required by the Uranium Mill Tailings Radiation Control Act has been completed. The nine Colorado uranium mill tailings sites are: Durango, Grand Junction, Gunnison, Maybell, Naturita, Rifle (2 mill sites) and Slick Rock (also 2 mill sites). Although the mill tailings have been removed, groundwater containing uranium and other metals such as arsenic, molybdenum and vanadium remains at the former mill sites. Groundwater contamination resulted predominantly from the disposal of liquid waste (called raffinate) from the uranium milling process.

The EPA recognized the difficulty in restoring groundwater at the abandoned mill sites when it established the cleanup regulations for the UMTRA Title I program in 40 CFR 192. These provisions state that if the Department of Energy (DOE) determines that sole reliance on active remedial procedures is not appropriate and the groundwater can be more reasonably cleaned up through natural flushing, then the period for remedial procedures may be extended to a term not to exceed 100 years if:

- The concentration limits are projected to be satisfied at the end of this extended period.
- Institutional control (IC) is instituted and maintained as part of the remedial action at the processing site and wherever groundwater contamination from the site is found, or is projected to be found. Institutional controls, such as land-use restrictions and environmental covenants, must have a high degree of permanence, must effectively protect public health and the environment, must satisfy beneficial uses of groundwater during the extended period, and must be enforceable by the administrative or judicial branches of government.
- The groundwater is not currently and is not projected to become a source for a public water system subject to provisions of the Safe Drinking Water Act during the extended period.

EPA regulations also allow for the application of ACLs if the constituent will not pose a substantial present or potential hazard to human health and the environment as long as the alternate concentration limit is not exceeded. The regulations include a number of factors that must be evaluated, including hydrogeologic characteristics and current and future uses of the

groundwater, when seeking an ACL. An application for an ACL at an UMTRA mill site must receive the concurrence of the NRC.

Over the past 15 years, HMWMD has concentrated efforts on ensuring that enforceable and effective institutional controls prevent exposure to groundwater at each of the sites. HMWMD also reviews groundwater monitoring data in reports provided by the DOE. In recent years, DOE has requested HMWMD approval of ACLs for some of the sites. HMWMD does not have the independent authority to approve an ACL for an UMTRA mill site, so the HMWMD informed DOE that the ACLs must be approved through site-specific classifications and standards as set forth in the Basic Standards for Groundwater, Regulation 41. DOE is preparing documentation to support ACLs for the Gunnison and West Rifle Sites in anticipation of potential site-specific standards classifications for these two sites at some point in the future.

**Voluntary Cleanup and Redevelopment Activities** The Voluntary Cleanup and Redevelopment Act (VCRA) staff continues to encounter issues related to surface and ground water contamination. The staff works closely with the WQCD on each site-specific decision to assure compliance with the appropriate regulations. Meeting ground water standards is an ongoing issue at VCRA sites. Since these sites are most often the subject of real estate transactions, the buyers and sellers try to ensure that the cost of cleanup does not make the economics of the deal unfeasible. Therefore, most cleanup plans focus on source control or removal, rather than treatment of contaminated ground water plumes. The VCRA staff strives to assure that ground water standards are met at the property boundary. HMWMD requires any applicant that exceeds ground water standards at the property boundary to apply to the WQCC for a variance, a site-specific standard, or a change in point of compliance (unless this will only be temporary during cleanup activities and the applicant can show that no surface water body is impacted and no exposure is occurring during this period). This ensures that the program complies with water quality regulations.

#### **SOLID WASTE AND MATERIALS MANAGEMENT PROGRAM**

No major changes have been made in the Solid Waste Program that alters the way in which HMWMD applies Colorado's water quality standards and classifications. The Solid Waste and Materials Management Program continues to implement water quality standards and classifications in remedial cleanup actions, enforcement actions, and design and operations reviews for new or existing facilities.