



TO: Solid and Hazardous Waste Commissioners

FROM: The Hazardous Materials and Waste Management Division
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DATE: February 11, 2015

SUBJECT: Solid and Hazardous Waste Program Newsletter
 1st Quarter (January - March), 2015

Commission Schedule Update

Included below are the current Solid and Hazardous Waste Commission (Commission) meeting schedule and work plan. The schedule includes both information briefings and rulemakings as we know them now.

**Solid and Hazardous Waste Commission
 Rulemaking Agenda Docket and Schedule**

	2014	2015
February		<ul style="list-style-type: none"> • Rulemaking, Repeal of Beneficial Use of Water Treatment Sludge • Rulemaking, Repeal of Environmental Records Search • Information Briefing, Architectural Paint Stewardship Programs • Information briefing, Colorado Medication Take Back Program (Division of Environmental Health and Sustainability)
May	ANNUAL MEETING	<p>ANNUAL MEETING</p> <ul style="list-style-type: none"> • Rulemaking, Architectural Paint Stewardship Programs • Rulemaking, Annual Commission Fee • Information briefing, Commission’s Procedural Rules (HW) • Information Briefing, Hazardous Substance Response Fund, CERCLA

August		<ul style="list-style-type: none"> • Rulemaking, Commission’s Procedural Rules (HW) • Information Briefing, Section 14, Composting • Information briefing, Part 99, Notification Requirements
November		<ul style="list-style-type: none"> • Rulemaking, Section 14, Composting • Rulemaking, Part 99, Notification Requirements

Miscellaneous Program Updates - 2015 Legislation

The legislative session for this year began on January 7, 2015. At this time, it is too early in the session to identify legislation that may require Commission action.

Proposed February 2015 Commission Meeting Agenda

The Division will present two rulemakings and two information briefings at the February Commission meeting, which are summarized in the following paragraphs.

Rulemaking 1, Repeal of 5 CCR 1003-7, Beneficial Use of Water Treatment Sludge and Fees Applicable to the Beneficial Use of Water Treatment Sludge. As the result of a Department regulatory review, these regulations have been identified as being outdated and a regulation that could be repealed. The beneficial use of water treatment plant sludge is regulated by the Hazardous Materials and Waste Management Division pursuant to authorities granted under the Solid Waste Disposal Sites and Facilities Act and the Colorado Solid Waste Regulations (6 CCR 1007-2). The Division is requesting a repeal of these regulations.

Rulemaking 2, Repeal of 6 CCR 1007-7, Environmental Records Search. As a result of a Department regulatory review, these regulations have been found to be inconsistent with the Colorado Open Records Act (CORA). These regulations are also out of date and are no longer implemented or enforced. Further, CORA contains a specific procedure for conducting records searches, which makes the regulations redundant. Therefore, the Division is requesting a repeal of these regulations.

Information Briefing 1, Colorado Medication Take-Back Program. Greg Fabisiak of the Division of Environmental Health and Sustainability will provide a presentation on the Colorado Medication Take-Back Program and the status of unused household medication collection and disposal in Colorado. Since December 2009, the Department has managed the pharmacy-based Colorado Medication Take-Back Program as an alternative to disposal of household medications. This program was not designed to collect prescribed controlled substances since that is only allowable by law enforcement agencies. However, new Drug Enforcement Agency (DEA) rules

effective on October 9, 2014, will allow pharmacies to collect controlled substances if proper procedures are implemented.

While the new rules may ultimately expand options for disposal of controlled substances, their publication ended the DEA-funded and law enforcement-based national take-back events. These one-day events were widely used by Colorado law enforcement agencies and were used to dispose of medications collected year-round in collection receptacles housed by some agencies. The Department is working to assist law enforcement agencies with both logistics for the collection of these wastes and a search for funding so law enforcement agencies can continue this valuable public service in compliance with the DEA rules.

House Bill 14-1207, signed by Governor John Hickenlooper on May 21, 2014, states that the Commission may promulgate rules for the Colorado Medication Take-Back Program. Such action may be appropriate, considering the program's expected statewide expansion with inclusion of law enforcement agencies and the need to limit opportunities for diversion in the process of collecting and disposing of widely abused prescribed controlled substances.

Information Briefing 2, Architectural Paint Stewardship Act and Regulations. Charles Johnson of the Solid Waste and Materials Management Program will provide an information briefing on the Architectural Paint Stewardship Act and proposed regulations. On June 6, 2014, Governor John Hickenlooper signed into law Senate Bill 14-029, the Colorado Architectural Paint Stewardship Program. The broad goals of the Colorado Paint Stewardship Law are for paint manufacturers to establish a system of paint stewardship that:

- Provides substantial cost savings to household hazardous waste collection programs;
- Increases the number of post-consumer paint collection sites and recycling opportunities for households, businesses, and other generators of post-consumer architectural paint; and
- Exemplifies the principles of a product-centered approach to environmental protection, also referred to as product stewardship.

The Colorado PaintCare program will serve the state's residents, businesses, schools, government agencies and other entities that have unwanted post-consumer paint. To cover the cost of recycling, the PaintCare Fee is applied to the purchase price of architectural paint sold in the state as required by state law.

The Colorado Paint Stewardship Law requires a stewardship organization (or individual producers) to submit a Paint Stewardship Program Plan to the Department by January 1, 2015. The Department will host a series of public stakeholder meetings before approving the plan in order to solicit input about the plan and to review the regulatory revisions associated with the approval of the fee structure. These meetings will be held on January 28, February 23, and March 16 in Denver and will be

open to all stakeholders. The Colorado Paint Stewardship Program is anticipated to start on July 1, 2015.

Project Updates

In this newsletter we cover the work efforts of the Hazardous Waste Permitting Corrective Action Unit that is managed by Walter Avramenko. Walter has managed the unit since the mid-1990's. There are currently six technical staff responsible for overseeing the cleanup of hundreds of sites throughout Colorado.

The Division was authorized by EPA to implement the corrective action program in 1984. Back in the 1980's and 1990's, cleanup efforts were focused primarily at traditional treatment, storage, and disposal facilities characterized by large owners/operators with the resources and technical expertise to deal with known contamination problems. Examples include Lockheed Martin, the Conoco and Colorado Refining Company refineries (now Suncor), Eagle Picher Industries, and the Beazer/Koppers wood treating plant. Since the corrective action program was still in its infancy, the cleanup approach was very prescriptive: investigate an area through extensive sampling, defining the extent of contamination, evaluate a range of options to address the contamination, pick the best option, and implement that decision. This process could take many years and cost a lot of money, but progress was made at many big sites in Colorado.

However, in the mid-1990's it became clear that there were many smaller sites for which the formal prescriptive approach would not work. This was primarily true because the traditional methods in use at the time were costly and these smaller facilities did not have the resources to efficiently complete a cleanup using that process. As a result, the unit began working with facilities and environmental consultants on ways to expedite site cleanups with the focus being on outcomes, not process.

New tools were developed that helped in this regard. In 1999, Colorado adopted rules creating a special permit known as Corrective Action Plans (CAPs). The advantage a CAP is that the facility can design the approach to investigate and cleanup their site. A CAP is an enforceable agreement that is arrived at without lengthy negotiations involving legal counsel and the stigma of being "ordered" to perform corrective action. In 2001, the Colorado Legislature created a legal instrument, the environmental covenant, to ensure continued protectiveness of environmental remedies by providing us with statutory authority to enforce in perpetuity all land and water use restrictions imposed as part of cleanups and making use restrictions binding against current and all subsequent property owners. This new tool allowed Division staff to employ risk management in their remedial decisions, allowing us to close sites with contaminated soil that may not allow for unrestricted use. In 2002 we published the "Corrective Action Guidance Document", a road map of expectations, activities and desired outcomes that facility representatives could consult or use to establish their path forward. And most recently, the Division finalized the "Policy for Conditional Closure of Low-Threat Sites with Residual Ground Water Contamination"

at the beginning of 2014 and has already applied it at three sites. This policy and guidance establish a process whereby sites with ground water plumes of limited size and relatively low concentration, but above standards, may be closed by relying on enforceable institutional controls to prohibit exposure to residual contamination. This approach correctly assumes natural attenuation (naturally occurring physical, chemical, and biological processes) will gradually restore ground water quality, eventually achieving state standards at some future date. The criteria used when considering a site for conditional closure include:

1. The source of the ground water contamination has been remediated;
2. The site has been well-characterized and a site conceptual model has been developed;
3. Exposures to potential receptors have been evaluated;
4. Demonstration that natural attenuation processes are continuing to reduce the contamination levels in the ground water has been made;
5. A reasonable timeframe for achieving standards is clear; and
6. The site has enacted institutional controls for the interim period until the ground water standards are achieved.

Shortly after the publication of the policy and guidance, applications were received for the conditional closure of three sites, all of which were approved after review by Division staff.

The first approval involved a former dry cleaner, Gigantic Cleaners #25, on property owned by the City of Thornton that was planned for redevelopment. As a result of remedial activities conducted following notice of the release, monitoring showed that contaminant concentrations in ground water declined significantly over the course of the next few years such that the standard was exceeded by a factor of only 6 closest to the former source area. On December 17, 2013 the Thornton City Council approved an intergovernmental agreement allowing the Division to enforce the City's ordinance that bans drilling wells within city limits at the former Gigantic Cleaners site. With this decision by the City Council, the Division was able to grant a conditional closure determination for the site on April 11, 2014.

Following the identification and characterization of a release of dry cleaning solvent to soil and ground water, the property owner of the second site on which the former Broomfield Plaza Cleaners was located submitted a cleanup proposal in April 2007. Chemical oxidants were repeatedly injected in the source area and ground water. Performance monitoring conducted in the years that followed demonstrated that contaminant concentrations had declined in ground water by an order of magnitude in the source area, with declines also evident in the surrounding wells. On March 27, 2014 the Division and facility owner placed an environmental covenant on the property prohibiting future use of ground water. With this final act, the Division issued a conditional closure determination for the site on May 27, 2014.

In the third example, the former Charter Cleaners dry cleaner site began remediating soil and ground water shortly after the site investigation was completed in 2007. Corrective measures implemented over the years included repeated injections for the

purpose of performing in-situ chemical oxidation and in-situ chemical reduction in the form of anaerobic enhanced reductive dechlorination. Post-treatment contaminant concentrations were reduced significantly in the source area monitoring wells. The post-remediation compliance monitoring testing showed that the contaminant plume had spatially decreased at the source area and at down gradient monitoring points, but that they had not been able to achieve total remediation of the chlorinated compounds in ground water (i.e., meet standards). The expectation was that this contamination would also fall below the state standards in the next few years. After demonstrating all criteria had been satisfied, including placement of an environmental covenant on the property prohibiting ground water use, conditional closure was granted on September 4, 2014.

These three sites are characteristic of many other sites the Corrective Action Unit receives notice of and must regulate where resources and environmental regulatory experience is very limited, necessitating a collaborative approach to site cleanup that may not fully remediate contamination but allows a safe and beneficial reuse of the property.

Other notable developments within the recent past that involve facilities with greater resources and capabilities include the following two examples.

Suncor Refinery: In late November 2011 the Corrective Action Unit was notified of a discharge of oily product into Sand Creek and the South Platte River. Shortly thereafter we also received first notice of a possible situation involving vapors intruding into a laboratory building on the Denver Metro Wastewater property, which adjoins the Suncor facility, followed by a report that fuel vapors had permeated plastic piping that supplied tap water to some of the buildings on the refinery, drinking water reportedly containing contamination above standards. These events triggered an emergency remedial effort to halt the discharge into surface water and address the indoor air and drinking water pathways. Subsequent activities focused on reducing the free phase contamination (pools of hydrocarbon) on the Denver Metro property and trying to stop it from exiting the Suncor facility. Three years later, hydrocarbons are no longer present in surface water, free phase contamination on the Denver Metro property has largely been remediated, contaminant concentrations in off-site ground water are greatly reduced and the focus of remedial efforts has now turned towards remediating on-site areas with the goal of halting the off-site migration of contaminated ground. Because of the size of the release, the Department will be actively involved at the refinery for many more years to come.

Parachute Creek Natural Gas Liquids Release: On March 8, 2013 Bargath, owners of a natural gas collection and processing facility, was conducting hydro-excavation activities to locate existing piping as part of a project to install a new pipeline. Hydrocarbon-impacted soils and unknown hydrocarbon liquid were discovered in the excavation. Subsequent investigations led us to conclude that a failed pressure gauge located on a 4-inch natural gas liquid (NGL) pipeline had released 1,150 barrels of natural gas liquids, some of which soaked into the ground and was now present on the local water table. Environmental sampling revealed that the fuel contamination was

being detected in surface water along a nearby creek and a benzene ground water plume extended approximately 2000 feet along that same drainage. Bargath's response to the spill incident was swift, consisting of free phase recovery from multiple wells, air sparging of both surface water and ground water and soil vapor extraction. In the two years since the release, Bargath has succeeded in remediating surface water, reduced the size of the ground water plume to less than half its original size and cleaned up the free phase contamination to the degree that it is limited to the immediate area of the former sources of the spill. At the present rate, the site may be effectively cleaned up in the next two years.

Organizational/Staffing Highlights

The Solid Waste and Materials Management Program recently added two new employees.

Lisa Jeffrey is now part of the Materials Management Unit and is responsible for administration and analysis of the waste tire fee program. Lisa's past experience includes working with the Jefferson County Assessor's Office and the Colorado Department of Revenue. She brings a wealth of experience in auditing and fee assessment to her unit.

Miquette Gerber has joined the Solid Waste Permitting Unit and will be working from the Grand Junction Office. Miquette will be reviewing solid waste facility plans, permits and construction data. Miquette is a registered Professional Geologist and was previously employed with Walter Environmental and Engineering Group prior to joining the unit.

We are very pleased to have these two people on board.