



July 19, 2016

Ms. Miquette Gerber  
CDPHE-HMWMD  
222 South 6<sup>th</sup> Street, Room 232  
Grand Junction, CO 81501-2768

Job Number: 14-9900

Subject: Engineering Design and Operations Plan  
Amendment, Moffat County Regional Landfill

Dear Ms. Miquette:

NWCC, Inc. (NWCC) has been consulting with the Moffat County Road Department (MCRD) and Moffat Board of County Commissioners (BOCC) regarding disposal of a new waste stream at the Moffat County Regional Landfill (MCRL) that is located in Craig, Colorado. The intent is to provide area residents and businesses with friable asbestos containing building materials (ACBM) disposal services at MCRL. Asbestos disposal at the landfill is not noted in the facility Certificate of Designation (CD) or associated resolutions; however, is noted as an unacceptable waste for disposal in the Industrial, Special, and Universal Waste Management Plan (ISWUP) included in the Engineering, Design, and Operations Plan (Golder Associates, Inc., 1994) (EDOP). Therefore, the BOCC notified (BOCC, February 16, 2016) the Colorado Department of Public Health and Environmental Protection (CDPHE) of the intent to obtain approval to accept friable asbestos for disposal at MCRL.

Based upon CDPHE's March 2, 2016 e-mail correspondence, NWCC is pleased to provide the following friable asbestos waste disposal plan modifying the EDOP to include friable asbestos waste disposal at the landfill. The plan has been developed in accordance with the CDPHE, Hazardous Materials and Waste Management Division, 6 CCR 10007-2, Part 1, Regulations Pertaining to Solid Waste Sites and Facilities (Amended 11/17/15, Effective 12/30/15), Section 5 Asbestos Waste Management.

## **Friable Asbestos Waste Management Plan**

### **1.0 Disposal Location**

Three construction and demolition (C&D) monofills have been constructed at MCRL in accordance with the *Modification to Design and Operations, C&D Waste Management, Moffat County Regional Landfill (NWCC, May 2004)*. The monofills are located along the north side of the main access road and south side of the "Closed Landfill". The monofills begin at the southwest corner of the Closed Landfill, are aligned in an east-west direction, and trend to the east. The approximate dimensions are 100 feet wide by 400 feet long and 22 feet deep. Three monofills have been constructed including, C&D Monofill 1 constructed during 2004, C&D Monofill 2 constructed during 2007, and C&D Monofill 3 during 2014. Future monofills will be constructed as needed from west to east. Monofill 1 is full and closed, Monofill 2 is approximately half full, and Monofill 3 filling has not begun.

MCRL proposes to use approximately 100 feet of the east end of Monofill 3 for friable asbestos disposal and approximately 300 feet of the west end for C&D waste disposal purposes. Baled waste tires or other material (e.g. concrete, cement rubble) will be used beneficially to construct a separation wall between the friable asbestos and C&D waste disposal areas within the monofill. A portion of future monofills will be used in a similar manner, as needed. The monofills are located greater than 100 feet from facility property boundaries and within the CD. The overall landfill facility including CD and monofills is shown on Figure 1.

In accordance with Section 5.3.9(B), “Any friable asbestos received in packing other than structurally rigid containers shall be disposed of by placement in an asbestos waste disposal area that is at least one hundred feet (100’) in all directions from any area being used concurrently for the disposal of other waste.” As discussed above, a portion of the monofill adjacent to the asbestos waste disposal area will be used for C&D waste disposal. Because the asbestos and C&D waste disposal areas will be segregated using a barrier between the two, disturbances of disposed asbestos waste during adjacent C&D filling will be prevented. Moreover, during asbestos waste placement, covering, and compaction; non-related landfill activities within 100 feet, including the C&D waste disposal area in the monofill, will cease and all persons shall leave the area. For these reasons and others discussed below in Section 3.0, asbestos disposal operations will be conducted in a manner considered protective of the public and landfill personnel health and safety.

## 2.0 Asbestos Monofill Access and Security

The asbestos monofill areas will be accessed off the main landfill road and entered via an earthen ramp. Overall landfill security is controlled using a locked access gate and scale house. Additional security controls shall include warning signage and fencing located at the asbestos monofill in order to restrict disposal activities, preclude unauthorized entry, and protect personnel and the public. Moreover, landfill personnel will be present during friable asbestos disposal to observe and assist proper disposal. Security measures shall include the following.

- Fencing will be placed around the entire monofill area used for friable asbestos disposal.
- Warning signage shall be placed at each monofill entrance and at each side of the fenced area at a rate of one for every 300 hundred linear feet of fence. Signage must be placed in a manner where the sign can be easily read. Signage requirements include the following.
  - Upright rectangle a minimum of 20 by 14-inches.
  - Sign legend shall conform to the following specifications or a visibility at least equivalent.

<b>Legend</b>	<b>Notation</b>
ASBESTOS WASTE DISPOSAL AREA	1 INCH
DO NOT CREAT DUST	0.75 INCH
BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH	14 POINT

- Spacing of any two lines in the legend must be at least equal to the height of the upper of the two lines.

## 3.0 Friable Asbestos Handling and Disposal

An inspection for asbestos containing building materials (ACBM) is required before renovation or demolition of residential and commercial buildings that may disturb materials identified as “suspect ACBMs”. The inspection is required only if the disturbed area in a residential building encompasses an

area greater than 32 square feet (ft<sup>2</sup>) and an area greater than 160 ft<sup>2</sup> of a commercial building, in accordance with CDPHE, Air Quality Control Commission (AQCC) Regulation No. 8, Part B. Building materials received below the AQCC thresholds would not be considered ACBM and could be disposed in the C&D monofill or active landfill cell. In addition, AQCC exempt materials (e.g. roofing, sheet vinyl flooring) that remain non-friable may be disposed in the asbestos monofill.

In the event that the volume of suspect ACBM arriving at the landfill is greater than the AQCC threshold and an inspection was not conducted, the material must be considered ACBM and packaged properly as follows below. Packaging of material received under the volume threshold is not required. Landfill personnel shall not be responsible nor assist packaging of ACBM. The disposer may package the material in the asbestos disposal monofill area.

Friable asbestos will not be accepted for disposal unless tightly sealed in at least two (2) 6-mil, leak-tight plastic bags or other wrapping or container deemed equivalent by CDPHE. The outermost asbestos container shall be identified using either of the following legends with at least ½-inch tall font.

(1)	CAUTION CONTAINS ASBESTOS AVOID OPENING OR BREAKING CONTAINER BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH
(2)	DANGER CONTAINS ASBESTOS FIBERS AVOID CREATING DUST CANCER AND LUNG DISEASE HAZARD

If the presence of asbestos fibers in potentially friable material is unknown, the material will be assumed to contain friable asbestos and sealed as discussed above. If the material arrives at the landfill unsecured, the material will not be accepted for disposal until properly sealed in appropriate and labelled containers, as discussed above.

Friable asbestos received in packaging other than a rigid container can be received for disposal only if the following is adhered to.

- The necessary disposal area is prepared before the waste is received and minimum 9-inches of soil or 18-inches of non-asbestos cover material and equipment required to cover the waste after placement is available.
- Unrelated landfill activities within 100 feet in all directions of the asbestos waste disposal area cease during placement, covering, and compaction of the waste.
- Non-essential personnel shall not be allowed within 100 feet in all directions of the asbestos waste disposal area during placement, covering, and compaction of the waste.
- Sustained winds at the asbestos waste disposal area do not exceed 20 miles per hour (mph) and gusts do not exceed 30 mph.
- A water source must be available to wet the asbestos waste in the event that any container is damaged and could allow asbestos fiber emissions into the air during placement in the disposal area.

Care must be taken to minimize rupture or opening friable asbestos waste containers at any time during acceptance and disposal, including placement, covering, and compaction. The potential of release from or exposure to asbestos must be minimized. Asbestos waste management cannot cause or contribute to the

occurrence of any visible air emissions. Within 24-hours of waste receipt, friable asbestos must be covered with either a minimum of nine (9)-inches of soil or 18-inches of non-asbestos cover material (e.g. C&D materials). After waste placement, compaction shall not be conducted before adequate cover is placed over the waste. Compaction equipment must not come into contact with asbestos waste, containers, or packing at any time.

Asbestos waste may be stored only if sealed in rigid containers. The containers must be located in a segregated area used only for asbestos storage where the waste containers can be handled, stored, and maintained without being opened or disturbed. Storage cannot exceed 20 calendar days before burial. A warning sign must be located at each side of the storage area. The sign legends must conform as discussed above, except that the first line shall read "Asbestos Waste Storage".

Rigid containers used to seal asbestos must be covered within 72-hours of receipt or at the end of the allowable 20-day storage period. Handling, placement, covering, and compaction must be conducted as discussed above. Potential damage or rupture of the container must be minimized.

#### **4.0 Friable Asbestos Spill or Release Response**

In the event that an asbestos spill or release from an asbestos waste container occurs, the following immediate actions must be taken at a minimum.

- Waste disposers shall immediately leave the asbestos disposal area, even if the all the waste has not been off-loaded.
- All work shall cease, landfill personnel shall leave the disposal area and notify the landfill manager of the event.
- Measures shall be taken to prevent unauthorized person entry to the disposal area.
- The landfill manager shall evaluate the extent of the spill or release.
- Measures shall be taken to stabilize the friable asbestos waste and inhibit emissions into the air. The measures used will depend on the extent of the spill or release and may include, three (3)-inch soil cover placement, wetting with water, chemical stabilization using magnesium chloride, covering with polyethylene sheeting or geo-fabric, or other CDPHE approved method of stabilization.

If wetting is used, verification of the wet conditions shall be monitored at least every two (2)-hours and water added as necessary to stabilize the waste. If magnesium chloride is used, weekly and post-storm inspections are necessary and re-application of magnesium chloride is required.

- The operator shall notify CDPHE within 24-hours of the spill or release event and immediate actions taken. The operator will collaborate with and stabilize the asbestos spill/release to CDPHE's satisfaction.

#### **5.0 Friable Asbestos Disposal Area Closure**

The friable asbestos disposal monofill will be closed in accordance with the monofill closure plan (NWCC, 2004). Intermediate cover consisting of native soils will be placed as warranted, based on weather and waste conditions to prevent asbestos air emissions. The monofill will be filled to just below the original ground surface elevation. Four feet of native soil will be placed as final cover over the monofill and mounded 4 to 5 feet to allow for waste settlement. The final closure system shall be repaired and maintained so that the ultimate final elevations and grades match surrounding areas. The area will be re-vegetated and maintained in accordance with the facility Closure and Post-Closure Plan.

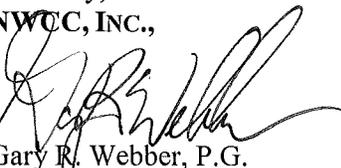
## 6.0 Friable Asbestos Documentation

Documentation of the friable asbestos waste disposal area shall be maintained with the facility operating record. Documents include permanent asbestos waste records of data and tonnage of each waste receipt, location of each asbestos waste disposal area within the solid waste disposal facility boundaries, and the quantity of asbestos waste disposed at each location. The records must identify the location and depth of asbestos waste.

Friable asbestos waste records must be available at all times and made available to the local governing body having jurisdiction and CDPHE, upon request. These records shall be submitted to the local governing body having jurisdiction within 30 days after closure completion of the asbestos waste disposal area.

If you have any questions or concerns regarding this report or any other aspect of the project, please do not hesitate to contact the undersigned.

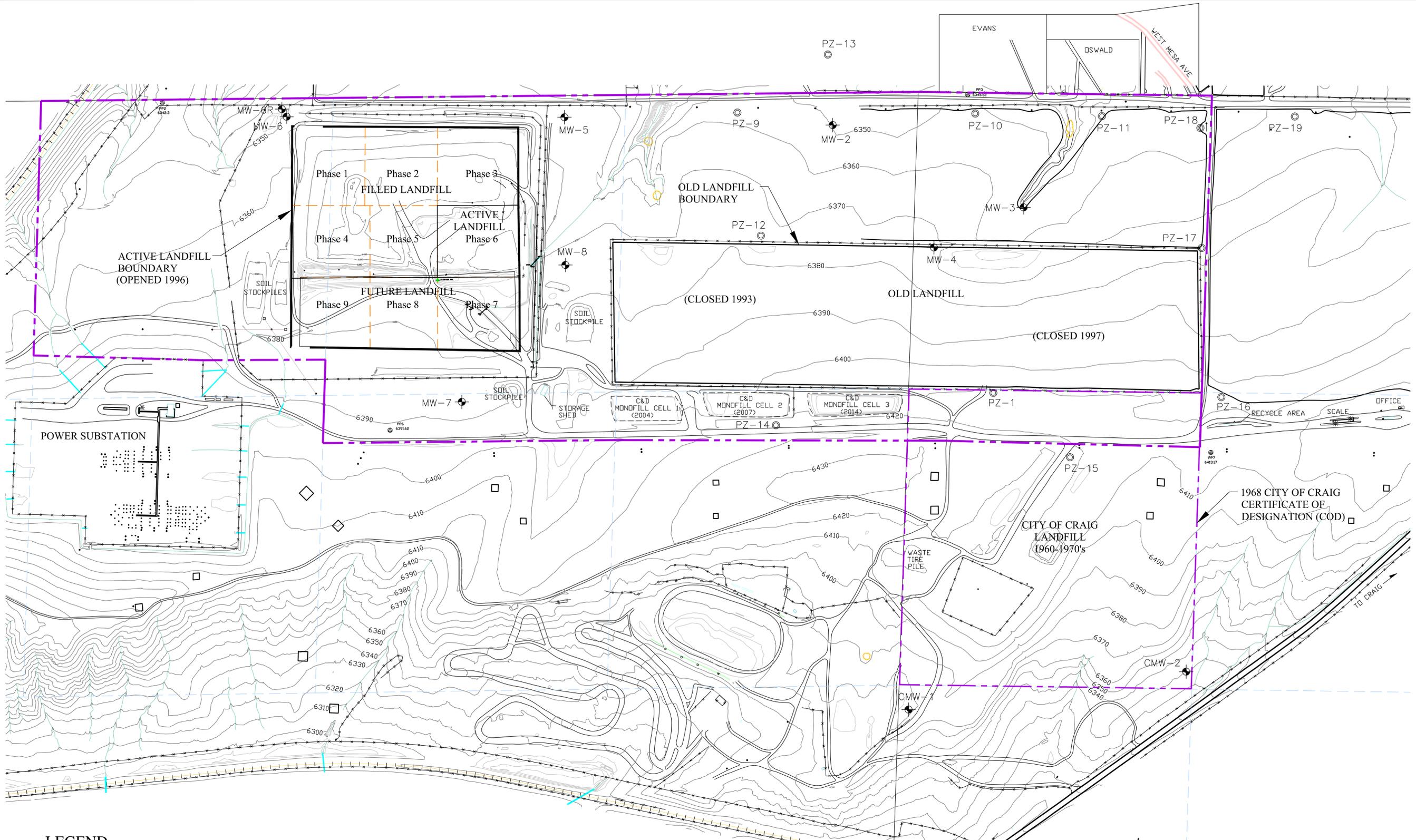
Sincerely,  
NWCC, INC.,



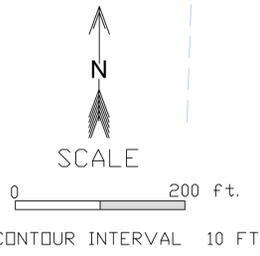
Gary R. Webber, P.G.  
Vice President

Attachments

cc. Bill Mack – Moffat County Road Department Director



LEGEND	
	MOFFAT COUNTY CERTIFICATE OF DESIGNATION (COD)
	APPROXIMATE LIMITS OF EXISTING PHASES 1 THRU 9
	ACTIVE LANDFILL BOUNDARY
	CONSTRUCTION & DEMOLITION DEBRIS MONOFILL
	FENCE
	WASH/DRAINAGE
	MONITORING WELL
	PIEZOMETER
	CONTROL POINT



SURVEY DATA AND TOPOGRAPHY PROVIDED BY EPP & ASSOCIATES, INC. BY COOPER AERIAL SURVEYS CO. DATED NOVEMBER 13TH 2015  
 ELEVATIONS GIVEN IN FEET ABOVE MEAN SEA LEVEL, NAD83-COLORADO STATE PLANE - NORTH ZONE USING GEOID 09, MONITORING WELLS  
 & PIEZOMETERS SURVEYED BY EPP & ASSOCIATES, INC. MAY 2, 2016.

NO.	DATE	BY	REVISIONS

Job No.	9900
Date:	02-2016
Drawn:	TMC
Chkd:	GRW
Scale:	AS SHOWN