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NEW MEXICO ENVIRONMENT DEPARTMENT

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RYAN FLYNN
Cabinet Secretary
BUTCH TONGATE
Deputy Secretary

Certificated Mail – Return Receipt Requested

August 21, 2014

Mr. David Partridge, Vice President
Chevron Mining Inc. (CMI)
116 Inverness Drive East, Suite 207
Englewood, CO 80112

Re: Minor Individual Permit; SIC 1221; NPDES Compliance Evaluation Inspection; CMI / York Canyon Mine; NM0000205; July 22, 2014

Dear Mr. Partridge:

Enclosed please find a copy of the report and check list for the referenced inspection that the New Mexico Environment Department (NMED) conducted at your facility on behalf of the U.S. Environmental Protection Agency (USEPA). This inspection report will be sent to the USEPA in Dallas for their review. These inspections are used by USEPA to determine compliance with the National Pollutant Discharge Elimination System (NPDES) permitting program in accordance with requirements of the federal Clean Water Act.

Introduction, treatment scheme, and problems noted during this inspection are discussed in the “Further Explanations” section of the inspection report.

You are encouraged to review the inspection report, required to correct any problems noted during the inspection, and advised to modify your operational and/or administrative procedures, as appropriate. If you have comments on or concerns with the basis for the findings in the NMED inspection report, please contact us (see the address below) in writing within 30 days from the date of this letter. Further, you are encouraged to notify in writing both the USEPA and NMED regarding modifications and compliance schedules at the addresses below:

Racquel Douglas, MS, ET
US Environmental Protection Agency, Region VI
Enforcement Branch (6EN-WM)
1445 Ross Avenue
Dallas, Texas 75202-2733

Bruce Yurdin
New Mexico Environment Department
Surface Water Quality Bureau,
Point Source Regulation Section
P.O. Box 5469
Santa Fe, New Mexico 87502

Page 2 of 2
David Partridge, Chevron Mining Inc. / York Canyon Mine
August 21, 2014

If you have any questions about this inspection report, please contact Erin Trujillo at 505-827-0418 or at erin.trujillo@state.nm.us.

Sincerely,

/s/Bruce J. Yurdin

Bruce J. Yurdin
Program Manager
Point Source Regulation Section
Surface Water Quality Bureau

cc: Rashida Bowlin, USEPA (6EN-W) by e-mail
Gladys Gooden-Jackson, USEPA (6EN-WC) by e-mail
Carol Peters-Wagnon, USEPA (6EN-WM) by e-mail
Racquel Douglas, USEPA (6EN-WM) by e-mail
Brent Larsen, USEPA (6WQ-PP) by e-mail
Dave Clark, EMNRD, MMD, Coal Program by e-mail
Robert Italiano NMED District II by e-mail
Ian Robb, Project Manager, Chevron Mining, Inc. by e-mail
Steve Linse, P.E., Project Manager, Trihydro by e-mail
Cameron Twing, P.E., Civil Engineer, Trihydro by e-mail



NPDES Compliance Inspection Report

Section A: National Data System Coding

Transaction Code	NPDES										yr/mo/day					Inspec. Type	Inspector	Fac Type						
1 N 2 5 3	N	M	0	0	0	0	2	0	5	11	12	1	4	0	7	2	2	17	18	C	19	S	20	2
Remarks																								
B I T U M I N O U S C O A L M I N E																								
Inspection Work Days						Facility Evaluation Rating						BI	QA	-----Reserved-----										
67						70						3	71	N	72	N	73	74	75	80				

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NPDES permit number) Chevron Mining, Inc., York Canyon Mine, Trihydro Raton Office, 216 Park Avenue, Raton, NM 87740. From I-25 at Raton to York Canyon Mine Complex at 3310 Hwy 555, Raton, NM, take Exit 450 at Raton, travel approximately 33 miles west to locked gate. Colfax County.	Entry Time /Date 0945 hours / 07/22/2014	Permit Effective Date December 1, 2008 (2008 Permit) March 1, 2014 (2014 Permit)
	Exit Time/Date 1620 hours / 07/22/2014	Permit Expiration Date February 28, 2014 (2014 permit)
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s) Cameron Twing, P.E., Civil Engineer, Trihydro, 1252 Commerce Drive, Laramie, Wyoming 82070 / 307-745-7474	Other Facility Data Mine Entrance Gate Latitude: 36.874354° Longitude: -104.920913° SIC 1221	
Name, Address of Responsible Official/Title/Phone and Fax Number David Partridge, Vice President, Chevron Mining Inc., 116 Inverness Drive East, Suite 207, Englewood, CO 80112 / 303-930-4065, General 303-930-4000	Contacted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

S	Permit	S	Flow Measurement	S	Operations & Maintenance	N	CSO/SSO
M	Records/Reports	M	Self-Monitoring Program	N	Sludge Handling/Disposal	N	Pollution Prevention
S	Facility Site Review	N	Compliance Schedules	N	Pretreatment	N	Multimedia
M	Effluent/Receiving Waters	M	Laboratory	N	Storm Water	N	Other:

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

- See attached report and further explanations.

Name(s) and Signature(s) of Inspector(s) Erin S. Trujillo /s/Erin S. Trujillo	Agency/Office/Telephone/Fax NMED/SWQB/505-827-0418	Date 08/21/2014
Signature of Management QA Reviewer Sarah Holcomb /s/Sarah Holcomb	Agency/Office/Phone and Fax Numbers NMED/SWQB/505-827-2798	Date 08/21/2014

SECTION A - PERMIT VERIFICATION

PERMIT SATISFACTORILY ADDRESSES OBSERVATIONS S M U NA (FURTHER EXPLANATION ATTACHED Yes).
 DETAILS: **See further explanations Section B for reporting information on location Outfalls 005 and 007.**

1. CORRECT NAME AND MAILING ADDRESS OF PERMITTEE. Y N NA
2. NOTIFICATION GIVEN TO EPA/STATE OF NEW DIFFERENT OR INCREASED DISCHARGES. Y N NA
3. NUMBER AND LOCATION OF DISCHARGE POINTS AS DESCRIBED IN PERMIT. **Location** Y N NA
4. ALL DISCHARGES ARE PERMITTED. Y N NA

SECTION B - RECORDKEEPING AND REPORTING EVALUATION

RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PERMIT. S M U NA (FURTHER EXPLANATION ATTACHED Yes).
 DETAILS: **NetDMR subscriber agreement was approved 01/20/2011. Reviewed DMRs since last CEI on 08/07/2012.**

1. ANALYTICAL RESULTS CONSISTENT WITH DATA REPORTED ON DMRs. **N = Not documented** Y N NA
2. SAMPLING AND ANALYSES DATA ADEQUATE AND INCLUDE. **pH** S M U NA
- a) DATES, TIME(S) AND LOCATION(S) OF SAMPLING. Y N NA
- b) NAME OF INDIVIDUAL PERFORMING SAMPLING. Y N NA
- c) ANALYTICAL METHODS AND TECHNIQUES. Y N NA
- d) RESULTS OF ANALYSES AND CALIBRATIONS. **See further explanations Section F for pH instrument calibration.** Y N NA
- e) DATES AND TIMES OF ANALYSES. Y N NA
- f) NAME OF PERSON(S) PERFORMING ANALYSES. Y N NA
3. LABORATORY EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS ADEQUATE. **pH** Y N NA
4. PLANT RECORDS INCLUDE SCHEDULES, DATES OF EQUIPMENT MAINTENANCE AND REPAIR. **pH** Y N NA
5. EFFLUENT LOADINGS CALCULATED USING DAILY EFFLUENT FLOW AND DAILY ANALYTICAL DATA. Y N NA

SECTION C - OPERATIONS AND MAINTENANCE

TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED. S M U NA (FURTHER EXPLANATION ATTACHED Yes).
 DETAILS: **Sediment Control Plan includes discussion of re-vegetation, sediment ponds, inspection and maintenance. Facility has maintenance task list/map.**

1. TREATMENT UNITS PROPERLY OPERATED. S M U NA
2. TREATMENT UNITS PROPERLY MAINTAINED. S M U NA
3. STANDBY POWER OR OTHER EQUIVALENT PROVIDED. S M U NA
4. ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES AVAILABLE. S M U NA
5. ALL NEEDED TREATMENT UNITS IN SERVICE. S M U NA
6. ADEQUATE NUMBER OF QUALIFIED OPERATORS PROVIDED. S M U NA
7. SPARE PARTS AND SUPPLIES INVENTORY MAINTAINED. S M U NA
8. OPERATION AND MAINTENANCE MANUAL AVAILABLE. Y N NA
 STANDARD OPERATING PROCEDURES AND SCHEDULES ESTABLISHED. **Schedule Not Documented** Y N NA
 PROCEDURES FOR EMERGENCY TREATMENT CONTROL ESTABLISHED. Y N NA

SECTION C - OPERATIONS AND MAINTENANCE (CONT'D)

9. HAVE BYPASSES/OVERFLOWS OCCURRED AT THE PLANT OR IN THE COLLECTION SYSTEM IN THE LAST YEAR? Y N NA
 IF SO, HAS THE REGULATORY AGENCY BEEN NOTIFIED? Y N NA
 HAS CORRECTIVE ACTION BEEN TAKEN TO PREVENT ADDITIONAL BYPASSES/OVERFLOWS? Y N NA
10. HAVE ANY HYDRAULIC OVERLOADS OCCURRED AT THE TREATMENT PLANT? Y N NA
 IF SO, DID PERMIT VIOLATIONS OCCUR AS A RESULT? Y N NA

SECTION D - SELF-MONITORING

PERMITTEE SELF-MONITORING MEETS PERMIT REQUIREMENTS. S M U NA (FURTHER EXPLANATION ATTACHED Yes).
 DETAILS:

1. SAMPLES TAKEN AT SITE(S) SPECIFIED IN PERMIT. Y N NA
2. LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES. Y N NA
3. FLOW PROPORTIONED SAMPLES OBTAINED WHEN REQUIRED BY PERMIT. Y N NA
4. SAMPLING AND ANALYSES COMPLETED ON PARAMETERS SPECIFIED IN PERMIT. **N = Not Documented** Y N NA
5. SAMPLING AND ANALYSES PERFORMED AT FREQUENCY SPECIFIED IN PERMIT. Y N NA
6. SAMPLE COLLECTION PROCEDURES ADEQUATE Y N NA
- a) SAMPLES REFRIGERATED DURING COMPOSITING. Y N NA
- b) PROPER PRESERVATION TECHNIQUES USED. Y N NA
- c) CONTAINERS AND SAMPLE HOLDING TIMES CONFORM TO 40 CFR 136.3. Y N NA
7. IF MONITORING AND ANALYSES ARE PERFORMED MORE OFTEN THAN REQUIRED BY PERMIT, ARE THE RESULTS REPORTED IN PERMITTEE'S SELF-MONITORING REPORT? Y N NA

SECTION E - FLOW MEASUREMENT

PERMITTEE FLOW MEASUREMENT MEETS PERMIT REQUIREMENTS. S M U NA (FURTHER EXPLANATION ATTACHED No).
 DETAILS: **Part I.A flow measurement type is "Estimate."**

1. PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED. TYPE OF DEVICE Y N NA
2. FLOW MEASURED AT EACH OUTFALL AS REQUIRED. **Flow measurement is estimate** Y N NA
3. SECONDARY INSTRUMENTS (TOTALIZERS, RECORDERS, ETC.) PROPERLY OPERATED AND MAINTAINED. Y N NA
4. CALIBRATION FREQUENCY ADEQUATE. RECORDS MAINTAINED OF CALIBRATION PROCEDURES. CALIBRATION CHECKS DONE TO ASSURE CONTINUED COMPLIANCE. Y N NA
5. FLOW ENTERING DEVICE WELL DISTRIBUTED ACROSS THE CHANNEL AND FREE OF TURBULENCE. Y N NA
6. HEAD MEASURED AT PROPER LOCATION. Y N NA
7. FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGE OF FLOW RATES. Y N NA

SECTION F - LABORATORY

PERMITTEE LABORATORY PROCEDURES MEET PERMIT REQUIREMENTS. S M U NA (FURTHER EXPLANATION ATTACHED Yes).
 DETAILS: **Reviewed pH bench sheet for sample collected 09/23/13 and analytical report dated 10/04/2013.**

1. EPA APPROVED ANALYTICAL PROCEDURES USED (40 CFR 136.3 FOR LIQUIDS, 503.8(b) FOR SLUDGES). **pH / Adj. Gross Alpha** Y N NA

SECTION F - LABORATORY (CONT'D)

2. IF ALTERNATIVE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED. **pH / Adj. Gross Alpha** Y N NA3. SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT. **pH not documented** S M U NA4. QUALITY CONTROL PROCEDURES ADEQUATE. S M U NA5. DUPLICATE SAMPLES ARE ANALYZED. **5** % OF THE TIME. **See Further Explanations** Y N NA6. SPIKED SAMPLES ARE ANALYZED. **5** % OF THE TIME. **See Further Explanations** Y N NA7. COMMERCIAL LABORATORY USED. Y N NALAB NAME **TestAmerica Laboratories, Inc. (303-736-0100)**LAB ADDRESS **4955 Yarrow Street, Arvada, CO 80002**PARAMETERS PERFORMED **Total/Dissolved Metals includes Aluminum (2008 Permit), Gross Alpha (2008/2014 Permit), Hardness**SECTION G - EFFLUENT/RECEIVING WATERS OBSERVATIONS. S M U NA (FURTHER EXPLANATION ATTACHED **Yes**).

OUTFALL NO.	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	FLOAT SOL.	COLOR	OTHER
001	No Discharge						
005	"	"	"	"	"	"	"
007	"	"	"	"	"	"	"

RECEIVING WATER OBSERVATIONS **Water in tributary below 001 was clear. No sheen, grease, foam, floatable solids, or color observed.**

SECTION H - SLUDGE DISPOSAL

SLUDGE DISPOSAL MEETS PERMIT REQUIREMENTS. S M U NA (FURTHER EXPLANATION ATTACHED **No**).

DETAILS:

1. SLUDGE MANAGEMENT ADEQUATE TO MAINTAIN EFFLUENT QUALITY. S M U NA2. SLUDGE RECORDS MAINTAINED AS REQUIRED BY 40 CFR 503. S M U NA

3. FOR LAND APPLIED SLUDGE, TYPE OF LAND APPLIED TO: _____ (e.g., FOREST, AGRICULTURAL, PUBLIC CONTACT SITE)

SECTION I - SAMPLING INSPECTION PROCEDURES (FURTHER EXPLANATION ATTACHED **No**).1. SAMPLES OBTAINED THIS INSPECTION. Y N NA

2. TYPE OF SAMPLE OBTAINED

GRAB _____ COMPOSITE SAMPLE _____ METHOD _____ FREQUENCY _____

3. SAMPLES PRESERVED. Y N NA4. FLOW PROPORTIONED SAMPLES OBTAINED. Y N NA5. SAMPLE OBTAINED FROM FACILITY'S SAMPLING DEVICE. Y N NA6. SAMPLE REPRESENTATIVE OF VOLUME AND MATURE OF DISCHARGE. Y N NA7. SAMPLE SPLIT WITH PERMITTEE. Y N NA8. CHAIN-OF-CUSTODY PROCEDURES EMPLOYED. Y N NA9. SAMPLES COLLECTED IN ACCORDANCE WITH PERMIT. Y N NA

**Compliance Evaluation Inspection
Chevron Mining, Inc. / York Canyon Mine
NPDES Permit No. NM0000205
July 22, 2014**

Further Explanations

Introduction

On July 22, 2014, Erin S. Trujillo of the State of New Mexico Environment Department (NMED) Surface Water Quality Bureau (SWQB) conducted a Compliance Evaluation Inspection (CEI) at the York Canyon Mine owned by Chevron Mining, Inc. or CMI (formerly owned by Pittsburg & Midway Coal Mining Company) located approximately 33 miles west of Raton, New Mexico in Colfax County.

York Canyon Mine is classified as a minor discharger under the federal Clean Water Act, Section 402 National Pollutant Discharge Elimination System (NPDES) permit program and is assigned permit number NM0000205. This permit authorizes mine drainage discharge due to precipitation events from reclamation areas at three remaining outfalls (001, 005 and 007) to York Canyon subject to Segment 20.6.4.98 New Mexico Administrative Code (NMAC), thence to the Vermejo River; thence to the Canadian River in Segment 20.6.4.309 NMAC of the Canadian River Basin.

An entrance interview was conducted with Mr. Cameron Twing, P.E., Civil Engineer, Trihydro Corporation at Trihydro Corporation Office, 216 Park Avenue, Raton, New Mexico upon arrival at approximately 0945 hours on the day of this inspection. Trihydro Corporation is the reclamation and operational contractor for CMI at the York Canyon Complex. The inspector made introductions, presented credentials and discussed the purpose of the inspection. Ms. Trujillo and Mr. Twing traveled to the York Canyon Complex and conducted a tour of both the CMI York Canyon Mine and the Ancho-Gachupin-Bracket (Ancho) Mine. Following the tour, an exit interview was conducted with Mr. Twing at the Trihydro Corporation Raton Office. The inspector left Trihydro Corporation, Inc. Raton Office at approximately 1620 hours on the day of the inspection.

NMED performs a certain number of CEIs for the U.S. Environmental Protection Agency (USEPA) each year. The purpose of this inspection is to provide USEPA with information to evaluate the permittee's compliance with their NPDES permit. This report is based on review of files maintained by the permittee and NMED, on-site observation by NMED personnel, and information provided by the permittee's representative. Findings of the Ancho Mine CEI, USEPA Permit No. NM0030180, are provided under a separate USEPA 3560 form.

CMI submitted a Notice of Intent (NOI) with USEPA on January 27, 2009 (NPDES Tracking No. NMR05GE82) to obtain permit coverage under the expired 2008 Multi-Sector General Permit (MSGP) for industrial stormwater discharges for the York Canyon Complex. An industrial stormwater MSGP CEI was not conducted on the day of this inspection.

Western Alkaline Coal Mining Operations Requirements / Treatment Scheme

York Canyon Mine is currently in reclamation. There is no active mining in regards to disturbance and removal of overburden or coal. The facility has received a Phase II Bond Release with some areas having received a Phase III Bond Release. Areas which have received a Phase III Bond Release are no longer subject to the NPDES permitting program.

Requirements, found in 40 Code of Federal Register (CFR) 434, Subpart H, applies to drainage at western alkaline coal mining operations from reclamation areas, brushing and grubbing areas, topsoil piling areas, and regraded areas. Part II of the permit requires a site specific Sediment Control Plan (SCP). The original CMI SCP dated February 29, 2009 was submitted to USEPA under the 2008 Permit effective

December 1, 2008. The 2014 Permit became effective in March 1, 2014 and expires in February 28, 2014. A SCP dated May 20, 2014 was submitted to USEPA within 3 months of the effective date of 2014 Permit and includes a map dated May 19, 2014 that shows the location of the disturbance boundary, diversions, and permanent impoundments. Per conditions in Part II of the permit, operator must submit an annual Sediment Control Report.

Section A - Permit Verification - Overall rating of “Satisfactory”

Section B - Reporting Evaluation - Overall rating of “Marginal”

Permit Requirements

Part III.D.9 (Standard Conditions, Reporting Requirements, Other Information) of the Permit states “Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.”

Part III.D.4 of the Permit states “The permittee shall submit...all other reports required by Part III.D to the EPA....”

Mailing addresses for USEPA and NMED SWQB to submit reports and duplicate copies under Part III.D are provided on Page 5 of Part III of the 2014 Permit.

Findings (Outfall Locations in 2014 Permit)

CMI’s renewal application signed in August 28, 2013 provided the same latitude and longitude information for Outfall 005 and 007. Outfall locations in Part I.A of the 2014 Permit includes the same latitude and longitude provided in CMI’s renewal application for Outfalls 005 and 007 as follows:

Excerpt from Part I of 2014 Permit

PERMIT NO. NM0000205	PAGE 1 OF PART I	
PART I – REQUIREMENTS FOR NPDES PERMITS		
SECTION A. LIMITATIONS AND MONITORING REQUIREMENTS		
<u>OUTFALL(s) 001, 005 and 007</u>		
Outfall No.	Latitude	Longitude
001	36°51’00”	104°54’45”
005	36°51’15”	104°55’00”
007	36°51’15”	104°55’00”

Outfalls 005 and 007 are not in the same location.

Trihydro Corporation provided the following location information for Outfalls 005 and 007 in an e-mail on July 25, 2014 :

	<u>Latitude</u>	<u>Longitude</u>
Outfall 005	36° 52’ 50.1” N	104° 55’ 47.55” W
Outfall 007	36° 51’ 29.47” N	104° 54’ 52.81” W

Findings (Reporting Total Aluminum Concentrations under 2008 Permit)

Reported total aluminum daily max on Outfall 001 annual Discharge Monitoring Report (DMR) does not appear consistent with submitted non-compliance report for same time period. The reported total aluminum concentration on the Outfall 001 annual DMR (period ending 11/30/2013) was 2.03275 milligrams per Liter (mg/L). The Permittee's non-compliance report dated 8/19/2013 indicates a total aluminum daily max numeric value of 7.6 mg/L on 8/5/2013.

Section B - Recordkeeping and Reporting Evaluation - Overall rating of "Marginal"

Section D - Self-Monitoring - Overall rating of "Marginal" and

Section F - Laboratory - Overall rating of "Marginal"

Permit Requirements

Part I.A (Effluent Limitations and Monitoring Requirements) of the 2008 Permit effective December 1, 2008 required and 2014 Permit effective March 1, 2014 requires monitoring for pH at a frequency of 1/week.

Part I.A of the 2008 Permit required and 2014 Permit requires monitoring for Adjusted Gross Alpha at a frequency of 1/year with a daily maximum effluent limitation of 15 picocuries per Liter (pCi/L).

Part I.A of the 2008 Permit required annual monitoring for total aluminum with daily maximum effluent limitation of 0.75 mg/L.

Parts III.C 4 (Standard Conditions) of the permit states:

4. Record Contents

Records of monitoring information shall include:

- a. The date, exact place, and time of sampling or measurements;*
- b. The individual(s) who performed the sampling or measurements;*
- c. The date(s) and time(s) analyses were performed;*
- d. The individual(s) who performed the analyses;*
- e. The analytical techniques or methods used; and*
- f. The results of such analyses.*

Part III.C.5a (Standard Conditions, Monitoring Procedures) of the permit states:

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.

Part III.C.5c (Standard Conditions, Monitoring Procedures) of the permit states:

An adequate analytical quality control program, including the analyses of sufficient standards, spikes, and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory.

Findings (pH)

It is not documented that approved analytical procedures were used for pH. Reviewed records of monitoring and calibration information (Trihydro Corporation Surface Water Sampling Form for Site No. labeled YC-001 (Outfall 001) for a sample collected on August 23, 2013 under the 2008 Permit requirements, and on-site pH instrument calibration logs) did not include the analytical techniques or methods used. Reviewed written facility operating procedures (Trihydro Corporation Water Monitoring

Procedures for York Canyon Complex dated June 2, 2012) also did not document (e.g., cite specific method used, include copy of method, etc.) that analytical methods used for pH monitoring were approved in 40 CFR 136.3. Table IB (List of Approved Inorganic Test Procedures) in 40 CFR 136.3, effective June 18, 2012, lists the following approved methods for hydrogen ion (pH) monitoring:

- Standard Methods (SM) 4500–H+ B–2000;
- ASTM D1293–99 (A or B);
- 973.41¹; and
- I–1586–85²

Notes:

1 *Official Methods of Analysis of the Association of Official Analytical Chemists, Methods Manual, Sixteenth Edition, 4th Revision, 1998. AOAC International.*

2 *Methods for Analysis of Inorganic Substances in Water and Fluvial Sediments, Techniques of Water-Resource Investigations of the U.S. Geological Survey, Book 5, Chapter A1., unless otherwise stated. 1989. USGS.*

Updated and/or additional information on pH instrument calibration and analytical method procedures appears needed in written operating procedures. For example, reviewed on-site pH instrument calibration logs documented the use of two buffers. SM 4500–H+ B–2000 specifies instrument calibration or standardization procedures using three buffers.

Findings (Adjusted Gross Alpha)

Adjusted gross alpha is not defined in the 2008 or 2014 Permits. In 20.6.4.12 NMAC, “Adjusted gross alpha” means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample, including radium-226, but excluding radon-222 and uranium....”

It is not documented that USEPA approved analytical procedures were used for adjusted gross alpha monitoring. The reviewed commercial laboratory analytical report dated October 4, 2013 states “Samples...YC-001(280-470250-5) were analyzed for Gross Alpha...in accordance with SW 846 9310.” EPA Solid Waste (SW) 846 Method 9310 is not listed as an approved radiological test procedure in Table IE of 40 CFR 136.3. The following approved methods for alpha radioactivity from Table IE (List of Approved Radiologic Test Procedures) in 40 CFR 136.3 includes EPA Method 900.0 and SM 7110 B for Gross Alpha Radioactivity:

Parameter and units	Method	Reference (method number or page)				
		EPA ¹	Standard Methods 18th, 19th, 20th Ed.	Standard Methods On-line	ASTM	USGS ²
1. Alpha-Total, pCi per liter	Proportional or scintillation counter.	900.0	7110 B	7110 B–00	D1943–90, 96	pp. 75 and 78 ³
2. Alpha-Counting error, pCi per liter.	Proportional or scintillation counter.	Appendix B	7110 B	7110 B–00	D1943–90, 96	p. 79
3. Beta-Total, pCi per liter	Proportional counter	900.0	7110 B	7110 B–00	D1890–90, 96	pp. 75 and 78 ³
4. Beta-Counting error, pCi	Proportional counter	Appendix B	7110 B	7110 B–00	D1890–90, 96	p. 79
5. (a) Radium Total pCi per liter.	Proportional counter	903.0	7500-Ra B	7500-Ra B–01	D2460–90, 97	
(b) Ra, pCi per liter	Scintillation counter	903.1	7500-Ra C	7500-Ra C–01	D3454–91, 97	p. 81

¹ Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA–600/4–80–032 (1980), U.S. Environmental Protection Agency, August 1980.
² Fishman, M. J. and Brown, Eugene, “Selected Methods of the U.S. Geological Survey of Analysis of Wastewaters,” U.S. Geological Survey, Open-File Report 76–177 (1976).
³ The method found on p. 75 measures only the dissolved portion while the method on p. 78 measures only the suspended portion. Therefore, the two results must be added to obtain the “total.”

It was not documented on the reviewed commercial laboratory report that calculations were conducted to obtain Adjusted Gross Alpha. The Permittee can contact the USEPA Permit Writer if there are questions about the reporting requirements of adjusted gross alpha on DMRs or other reports. See comments below on NetDMR system.

Findings (Quality Assurance/Quality Control Procedures)

Trihydro Corporation Water Monitoring Procedures for York Canyon Complex dated June 2, 2012 primarily described procedures for obtaining groundwater samples. Update, clarification, or additional written procedures to document that surface water compliance monitoring meets conditions of the NPDES Permit, including requirements in 40 CFR 136.3, appears needed.

Reviewed written procedures described plans to obtain duplicate and spike samples (e.g., one for each sampling batch of 20 samples or less) or 5 percent of the time. According to USEPA's NPDES Inspection Manual, "*10 percent of the samples should be duplicated.*" Written procedures did not document reasons why the control sample frequency was adequate.

Section G – Effluent / Receiving Water - Overall rating of “Marginal”

Since the date of the last CEI on August 7, 2012, the Permittee has reported exceedances at Outfall 001 of the daily max concentration for total aluminum and adjusted gross alpha. As discussed above, an exceedance for Outfall 001 for total aluminum was reported on the annual discharge monitoring report (period ending November 30, 2013) and in a non-compliance report dated August 19, 2013. An exceedance for Outfall 001 on September 23, 2013 of 17.1 pCi/L was reported for adjusted gross alpha in a non-compliance report dated October 8, 2013.

Section C – Operations and Maintenance – Overall rating of “Satisfactory” – Further Explanation on Schedule

Part II.A(B) of the Permit states "*The Sediment Control Plan must identify best management practices (BMPs) and also must describe design specifications, construction specifications, maintenance schedules, criteria for inspection, as well as expected performance and longevity of the best management practices.*" Part II.A (C) of the Permit states "*The operator must submit an annual Sediment Control Report...This report shall demonstrate that the facility has met requirements set forth in the above sub-sections (B)....*"

The Permittee's 2013 Sediment Control Report discusses the reported total aluminum and adjusted gross alpha exceedance for Outfall 001. The report states, "*CMI is implementing corrective action to mitigate the high total aluminum and adjusted gross alpha levels by repairing and seeding erosion features.*" A maintenance schedule (or expected completion dates) was not included in the SCP annual report.

Trihydro Corporation maintenance list and map of proposed task items for York Canyon Mine (e.g., repair head cut, repair large rill, revegetation) dated January 9, 2014 also did not include a maintenance schedule or completion dates.

Additional Comments

USEPA internet Discharge Monitoring Reports (NetDMR) reports generated on July 16, 2014 contain reporting requirements for discharges at Outfall 006 under the 2014 Permit. Outfall 006 was in an reclamation area where the Phase III Bond was released and no longer considered a point source as described in USEPA December 21, 2013 Fact Sheet for the permit renewal. Outfall 006 was not included in the 2014 Final Permit. The Permittee can contact NetDMR staff to have this Outfall 006 removed from the reporting system.

USEPA NetDMR reports generated on July 16, 2014 contain reporting requirements for gross alpha. In addition to the USEPA Permit Writer, the Permittee can contact NetDMR staff if there are questions about the electronic reporting requirements for adjusted gross alpha.