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RYAN FLYNN
Cabinet Secretary
BUTCH TONGATE
Deputy Secretary

Certified Mail – Return Receipt Requested

March 18, 2016

Mr. Mark Brearley, Project Manager
Chevron Mining, Inc., McKinley Mine
6101 Bollinger Canyon Road
San Ramon, CA 94583

Re: Chevron Mining, Incorporated; McKinley Mine, Minor, Individual Permit; SIC 1221; NPDES Compliance Evaluation Inspection; NN0029386; February 17, 2016; Revised

Dear Mr. Brearley:

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:

Gladys Gooden-Jackson
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

If you have any questions about this inspection report, please contact Sarah Holcomb at 505-827-2798 or at sarah.holcomb@state.nm.us.

Sincerely,

/s/ Bruce Yurdin

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

cc: Rashida Bowlin, USEPA (6EN-AS) by e-mail
Carol Peters-Wagnon, USEPA (6EN-WM) by e-mail
Gladys Gooden-Jackson, USEPA (6EN-WM) by e-mail
Brent Larsen, USEPA (6WQ-PP) by e-mail
Raquel Douglas, USEPA (6EN-WC) by e-mail
NMED District 1, Bill Chavez by e-mail
David Smith, EPA Region 9 (mail code) by e-mail
Pascal Mues, EPA Region 9 (mail code) by e-mail
Patrick Antonio, NNEPA, by e-mail
Ronnie Ben, NNEPA, by e-mail

SECTION A - PERMIT VERIFICATION

PERMIT SATISFACTORILY ADDRESSES OBSERVATIONS
DETAILS:

S M U NA (FURTHER EXPLANATION ATTACHED Yes)

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

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.
DETAILS:

S M U NA (FURTHER EXPLANATION ATTACHED Yes)

1. ANALYTICAL RESULTS CONSISTENT WITH DATA REPORTED ON DMRs.

Y N NA

2. SAMPLING AND ANALYSES DATA ADEQUATE AND INCLUDE.

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.

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.

S M U NA

4. PLANT RECORDS INCLUDE SCHEDULES, DATES OF EQUIPMENT MAINTENANCE AND REPAIR.

S M U 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.
DETAILS:

S M U NA (FURTHER EXPLANATION ATTACHED no)

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.

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 no).
 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. 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:

1. PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED. Y N NA
 TYPE OF DEVICE

2. FLOW MEASURED AT EACH OUTFALL AS REQUIRED. Y N NA

3. SECONDARY INSTRUMENTS (TOTALIZERS, RECORDERS, ETC.) PROPERLY OPERATED AND MAINTAINED. Y N NA

4. CALIBRATION FREQUENCY ADEQUATE. Y N NA
 RECORDS MAINTAINED OF CALIBRATION PROCEDURES. Y N NA
 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 no)
 DETAILS:

SECTION F - LABORATORY (CONT'D)

1. EPA APPROVED ANALYTICAL PROCEDURES USED (<i>40 CFR 136.3 FOR LIQUIDS, 503.8(b) FOR SLUDGES</i>)	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
2. IF ALTERNATIVE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED	<input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA
3. SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT.	<input checked="" type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> NA
4. QUALITY CONTROL PROCEDURES ADEQUATE.	<input checked="" type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> NA
5. DUPLICATE SAMPLES ARE ANALYZED. <u>0</u> % OF THE TIME.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
6. SPIKED SAMPLES ARE ANALYZED. <u>100</u> % OF THE TIME.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
7. COMMERCIAL LABORATORY USED.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
LAB NAME _____ Lancaster Laboratories	
LAB ADDRESS _____ 2425 New Holland Pike, Lancaster, PA 17601	
PARAMETERS PERFORMED _____ TSS, oil & grease, Total iron, settleable solids, NM 401 Certification Requirements	

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
All	N/A	N/A	N/A	N/A	N/A	N/A	

RECEIVING WATER OBSERVATIONS No discharges were observed during this inspection.**SECTION H - SLUDGE DISPOSAL**SLUDGE DISPOSAL MEETS PERMIT REQUIREMENTS. S M U NA (FURTHER EXPLANATION ATTACHED _____).
DETAILS:

1. SLUDGE MANAGEMENT ADEQUATE TO MAINTAIN EFFLUENT QUALITY.	<input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> NA
2. SLUDGE RECORDS MAINTAINED AS REQUIRED BY 40 CFR 503.	<input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> 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 _____).

1. SAMPLES OBTAINED THIS INSPECTION.	<input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA
2. TYPE OF SAMPLE OBTAINED GRAB _____ COMPOSITE SAMPLE _____ METHOD _____ FREQUENCY _____	
3. SAMPLES PRESERVED.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
4. FLOW PROPORTIONED SAMPLES OBTAINED.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
5. SAMPLE OBTAINED FROM FACILITY'S SAMPLING DEVICE.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
6. SAMPLE REPRESENTATIVE OF VOLUME AND NATURE OF DISCHARGE.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
7. SAMPLE SPLIT WITH PERMITTEE.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
8. CHAIN-OF-CUSTODY PROCEDURES EMPLOYED.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
9. SAMPLES COLLECTED IN ACCORDANCE WITH PERMIT.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA

Chevron Mining, Incorporated (CMI), McKinley Mine
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Further Explanations – Introduction and Background

Introduction

On February 17, 2016, a Compliance Evaluation Inspection (CEI) was conducted by Sarah Holcomb of the New Mexico Environment Department (NMED), Surface Water Quality Bureau (SWQB) at the Chevron Mining, Inc. (CMI), McKinley Mine near Gallup, New Mexico. Ms. Holcomb was accompanied by Mr. Ronnie Ben and Mr. Patrick Antonio of the Navajo Nation EPA during this CEI.

McKinley Mine is classified as a minor facility discharger under the federal Clean Water Act, Section 402 NPDES permit program and is assigned permit number NN0029386. This facility is located on a mix of tribal, state and private lands. The permit is issued by EPA Region 9, and NMED SWQB certifies the permit for the portion of the facility located on State lands. On New Mexico lands, discharges from 34 outfalls (004, 005, 029-050, 064-065, 068-075) are authorized under the current permit (expired 11-30-14 and is administratively continued, and as amended through the EPA Region 9's approval of the modified Sediment Control Plan (SCP)) to discharge stormwater from alkaline mine drainage, coal preparation areas and brushing and grubbing areas, topsoil stockpiling areas, and regraded areas as defined in the Western Alkaline Coal Mining subcategory at 40 CFR 434.80 to receiving waters.

Discharges are to Coal Mine Wash, Bonita Wash, Defiance Draw (identified as a 20.6.4.97 NMAC) and tributaries to the Rio Puerco in 20.6.4.97 NMAC, and thence to the Rio Puerco in 20.6.4.99 NMAC.

Upon arrival and on-site mine specific safety orientation at the McKinley Mine at approximately 0830 hours on the day of this inspection, the inspector made introductions, presented credentials and explained the purpose of the inspection to Mr. Steve Linse, Senior Hydrologist from TriHydro, Mr. Allan Austin, CEMC Site Manager at the McKinley Mine, and Mr. Zac Bitsuie of TriHydro. Mr. Ronnie Ben and Mr. Patrick Antonio from the Navajo Nation EPA were also in attendance. The inspector, the Navajo Nation EPA representatives and the facility representatives first discussed and clarified permit requirements as applicable to the facility, and then toured the portions of the facility that discharge to New Mexico lands. An exit interview to discuss preliminary findings was conducted on site following the tour at approximately 1500 hours that day. The inspector left the mine at approximately 1530 hours on the day of this inspection. Additional information was obtained from TriHydro representatives via email and phone during the week of February 29, 2016.

The NMED performs a certain number of CEIs each year for the U.S. Environmental Protection Agency (USEPA), Region 6. The purpose of this inspection is to provide the USEPA Region 9 with information to evaluate the Permittee's compliance with the NPDES permit, and to inform NMED's decision-making in accordance with the responsibility to certify the new permit as required under Section 401 of the Clean Water Act. This inspection report is based on information provided by the Permittee's representatives, observations made by the NMED inspector, and records and reports kept by the Permittee and/or NMED or EPA.

The CMI McKinley Mine does not have coverage under the industrial stormwater Multi Sector General Permit (MSGP) for the New Mexico portion of the facility, although coverage was obtained under the federal MSGP for the Navajo Nation lands under the tracking number AZR15I309. An industrial stormwater compliance evaluation inspection was conducted on the day of this inspection and is reported separately.

Facility Description/Treatment Scheme

Pittsburgh & Midway (P&M) began strip mining operations in July 1961 on the public and private lands (15,769 acres) and in June 1972 on Navajo tribal land (11,570 acres). The McKinley Mine was the first large scale surface coal mine in New Mexico. The mining facilities were multi-seam, multi-pit coal mines producing bituminous coal. The Gibson Coal Member and the Cleary Coal Member of the Menefee Formation (undivided) contained the coal that was mined. The thickness of the coal seam ranged from 18 inches to 15 feet. The coal was sized and stored at preparation facilities prior to railroad transport to APS electricity generating facilities in Arizona. The McKinley Mine is classified as an alkaline

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drainage mine.

In 2007, P&M changed its name to Chevron Mining, Inc. (CMI). In September 2009, the decision was made to suspend production at the McKinley Mine. In December 2009, with the conclusion of mining in Areas 12, 14 and 15, active mining stopped at the McKinley Mine. In January 2010, the last shipment of coal left the McKinley Mine. Over its lifetime, the McKinley Mine produced over 175,000,000 tons of coal. Reclamation activities at the McKinley Mine commenced in 2010. In June 2013, the responsibility for reclamation management transitioned from CMI to Chevron's Environmental Management Company (EMC).

The Office of Surface Mining Reclamation and Enforcement (OSMRE) required P&M to control all surface runoff water with the potential of being contaminated from contact with mining activities. P&M utilized sedimentation ponds to comply with this requirement. The sediment ponds were designed and maintained to treat storm water runoff from a 10-year, 24-hour precipitation event. 5 weather stations (one each in the watersheds of the Defiance Draw tributary, Defiance Draw, Tse Bonita Wash, Coal Mine Wash and Coal Mine Wash tributary) operated by the mine in the vicinity of the facilities areas document precipitation events and will be used to determine when design storm event criteria are exceeded. The original NPDES permit, issued to CMI in October 2009, contained 56 discharge outfalls which are primarily sediment impoundments. Since then, several permit modifications have been made to include and remove certain outfalls as authorized discharge points due to ongoing mine reclamation. Receiving waters are tributaries of the Puerco River which include Coal Mine Wash, Defiance Draw, and Tse Bonito Wash, and tributaries to these waterbodies.

Effluent Limitations Guidelines and Standards for Coal Mining

The discharge of wastewater from coal mines is subject to 40 C.F.R. Part 434: Coal Mining Point Source Category Best Practicable Control Technology (BPT), Best Available Technology (BAT), Best Conventional Pollutant Control Technology (BCT) Limitations and New Source Performance Standards. The McKinley Mine has the potential to discharge wastewater from separate sources that are subject to separate categories of Part 434. These include:

As per 40 C.F.R. Part 434.11(c), an alkaline drainage mine is one with mine drainage, before treatment, either has a pH equal to or greater than 6.0 or a total iron concentration of less than 10mg/l. The permit sets limits in accordance with Subpart D – Alkaline Mine Drainage for BPT, BCT, and BAT regulations. The permit sets discharge limits for total iron, Total Suspended Solids (TSS), and pH. Flow volumes, total iron, TSS and pH monitoring is required during any discharge event.

As per 40 C.F.R. 434.11(f) and (g), preparation and associated areas include the coal preparation in plant yards, immediate access roads, coal refuse piles and coal storage piles and facilities. The permit sets limits in accordance with Subpart B – Coal Preparation Plants and Coal Preparation Plant Associated Areas for BPT, BCT, and BAT regulations. The permit sets discharge limits for oil and grease, total iron, Total Suspended Solids (TSS), and pH. Flow volumes, oil and grease, total iron, TSS and pH monitoring is required during any discharge event.

As per 40 C.F.R. 434.81, Subpart H-Western Alkaline Reclamation Areas include alkaline mine drainage from reclamation areas, brushing and grubbing areas, topsoil stockpiling areas, and regarded areas. In order for the technology standards in Subpart H to apply, the permittee must meet the basic requirements listed in Subpart H and OSMRE must conduct a technical review of and approve the permittee's Sediment Control Plan. The permit incorporates the Sediment Control Plan as an effluent limit and requires that the permittee design, implement, and maintain best management practices (BMPs).

As observed at the time of the inspection, two outfalls (004 and 005) are subject to the requirements of Subpart B – Coal Preparation Plants and Associated Areas, and the rest of the existing outfalls are subject to Subpart H – Western Alkaline Reclamation Area requirements. No outfalls are subject to the requirements in Subpart D – Alkaline Mine Drainage.

Permit History and Requirements

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Jurisdictionally, the Navajo tribal land (north of NM 264) would be regulated by U.S. EPA Region 9 and the public and private lands in New Mexico (south of NM 264) would be regulated by U.S. EPA Region 6.

In 1985, the previous owner, Pittsburgh & Midway Mining Company (P&M), submitted a NPDES permit application form for the McKinley Mine to U.S. EPA Region 6. P&M subsequently submitted a request for a Fundamentally Difference Factor (FDF) variance in accordance with 40 CFR Part 125. In the FDF variance, P&M requested that U.S. EPA approve alternate sediment control limits to control runoff and sediment from disturbed areas of the mine site. P&M asserted that the FDF was applicable to the McKinley Mine due to unique conditions at the mine site which included low rainfall and naturally high sediment load conditions. U.S. EPA concluded that the promulgation of the Subpart H – Western Alkaline Coal Mining subcategory effectively addressed all of the factors that were initially part of the FDF request submitted by P&M. Therefore, U.S. EPA denied the variance request in a February 13, 2008 letter that also required CMI to submit a new NPDES permit application.

U.S. EPA Region 9 has jurisdiction for all NPDES related activities on the Navajo Nation, including areas of Navajo land within New Mexico. While the McKinley Mine additionally encompasses private lands within the State of New Mexico, U.S. EPA Region 9 has assumed responsibility for the NPDES permit from U.S. EPA Region 6. On April 30, 2009, CMI submitted an NPDES permit application which U.S. EPA deemed incomplete. CMI submitted a revised application on July 2, 2009. Both regions cooperatively processed the NPDES permit application. CMI was issued NPDES permit No. NN0029386 by U.S. EPA Region 9 on October 26, 2009. It became effective on December 1, 2009 and expired at midnight on November 30, 2014. CEMC submitted a permit reapplication package to EPA Region 9 on May 29, 2014, 180 days prior to the expiration of the permit, thus the permit is currently administratively continued.

The originally issued NPDES permit covered 56 outfalls regulated by 40 C.F.R. Part 434 which includes the coal preparation plant and associated areas, coal preparation plant water circuit, coal storage, refuse storage, and ancillary areas related to the cleaning or beneficiation of coal. The individual permit also covers storm water that contacts the above areas of the mine or storm water that mixes with discharges from the above facilities. The NPDES permit establishes discharge limits for several parameters including iron, TSS, oil & grease and pH according to the three separate source categories. The first allows for discharges from pond or lagoon dewatering (not immediately resulting from precipitation events) in active and reclaimed areas, roads, explosive storage areas, well rehabilitation activities, as well as preparation areas, shops, material storage facilities, coal transportation facilities and sanitary wastewaters with TSS, oil and grease, and pH limits and monitoring for arsenic, cadmium, chromium, lead, mercury, and selenium. The second category covers storm water discharges in the above areas resulting from a storm of up to 10 year/24 hour intensity with TSS, oil and grease, and pH limits and monitoring for arsenic, cadmium, chromium, lead, mercury, and selenium. The third is for storms over 10 year/24 hour and has only a pH limit with monitoring for flow. At all times and places, the narrative water quality standards apply.

NMED certified the administratively continued permit to require monitoring for toxic and persistent pollutants in the discharges occurring on State of New Mexico lands, in addition to the requirements mentioned above.

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Further Explanations

Note: the sections are arranged according to the format of the enclosed EPA Inspection Checklist (Form 3560-3), rather than being ranked in order of importance.

Section A – Permit Verification – Overall Rating of “Marginal”

The permit states:

20.6.4.54 NMAC states:

Colorado River Basin – For the tributaries of the Colorado river system, the state of New Mexico will cooperate with the Colorado river basin states and the federal government to support and implement the salinity policy and program outlined in the most current “review, water quality standards for salinity, Colorado river system” or equivalent report by the Colorado river salinity control forum.

- A. *Numeric criteria expressed as the flow-weighted annual average concentration for salinity are established at three points in the Colorado river basin as follows: below Hoover dam, 723 mg/L; below Parker dam, 747 mg/L; and at Imperial dam, 879 mg/L.*

2014 Review, Colorado River Salinity Control Forum, states in Appendix B:

I.B.4: The no-salt discharge requirement may be waived in those cases where:

- a. The discharge of salt is less than one ton per day or 366 tons per year; or*
- b. The permitting authority determines that a discharge qualifies for a "fresh water waiver" irrespective of the total daily or annual salt load. The maximum TDS concentration considered to be fresh water is 500 mg/L for discharges into the Colorado River and its tributaries upstream of Lees Ferry, Arizona. For discharges into the Colorado River downstream of Lees Ferry the maximum TDS concentration considered to be fresh water shall be 90% of the applicable in-stream standard at the appropriate benchmark monitoring station shown in Table 1, above.*

20.6.4.97 NMAC states:

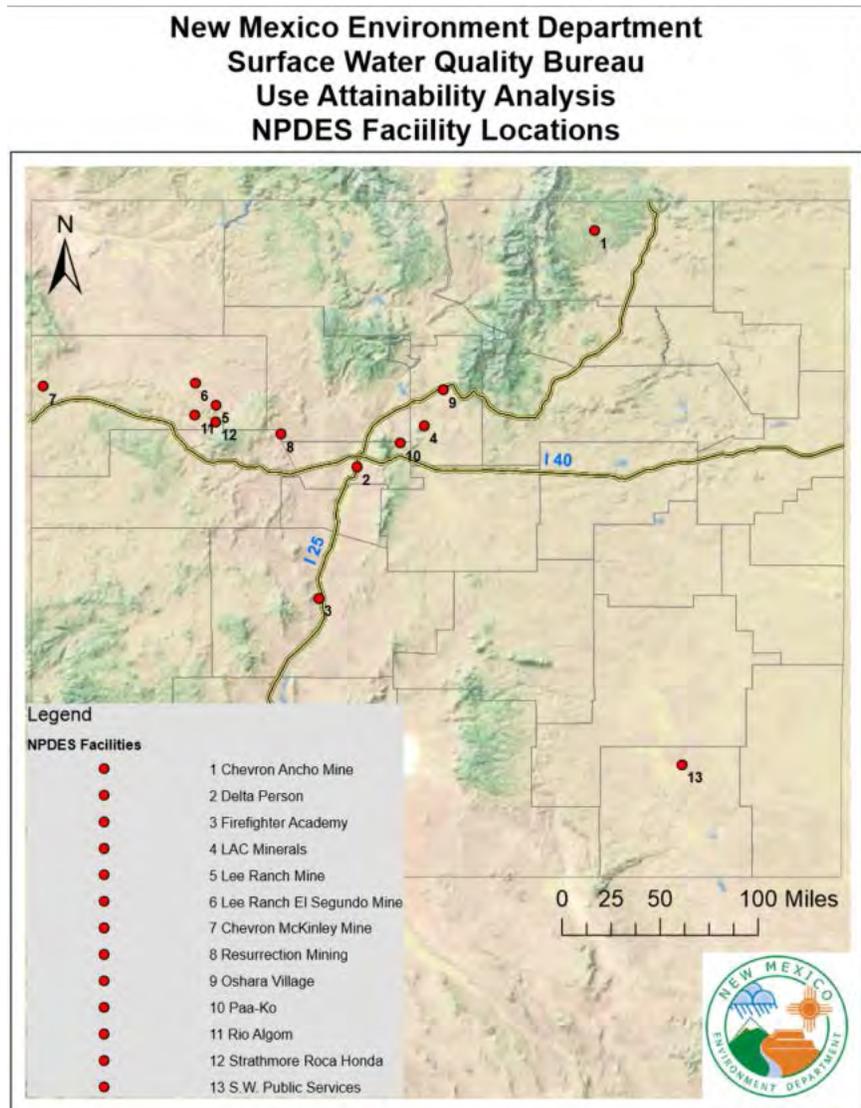
Ephemeral waters – Ephemeral unclassified waters of the state as identified below and additional ephemeral waters as identified on the department’s water quality standards website pursuant to Subsection C of 20.6.4.15 NMAC.

- A. *Designated uses: livestock watering, wildlife habitat, limited aquatic life and secondary contact.*
- B. *Criteria: the use-specific criteria in 20.6.4.900 NMAC are applicable to the designated uses.*
- C. *Waters:*

From: <https://www.env.nm.gov/swqb/UAA/> (the full UAA document, 181 pages in total can be accessed here.)

18 Unclassified Non-Perennial Stream Segments: / Various Watersheds	Primary Contact Warmwater, Marginal Warmwater Aquatic Life Uses.	Secondary Contact, Limited Aquatic Life Uses.	Final UAA EPA Technical Approval Jan. 30, 2013
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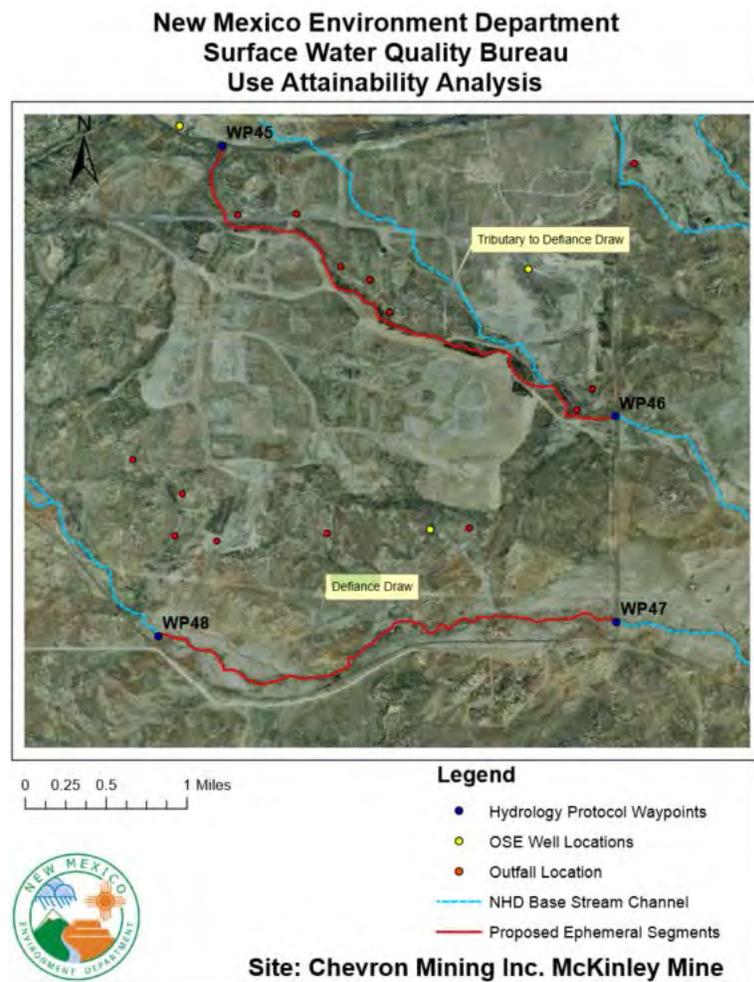
Findings for Permit Verification:

With the completed Use Attainability Analysis (UAA) in 2013 for Defiance Draw and Defiance Draw tributary, certain toxic and persistent pollutant requirements could change for the renewal permit. Instead of the current list of monitoring constituents, NMED will certify the renewal permit to state that only the constituents noted in the table below will be required for monitoring:

Persistent Pollutants Which Will Not Enter Into A Perennial Stream

<i>Pollutant</i>	<i>Pollutant</i>	<i>Pollutant</i>
Antimony, Dissolved (D)	Zinc (D)	Dieldrin
Arsenic (D)	Aldrin	2,3,7,8-TCDD dioxin
Nickel (D)	Benzo(a)pyrene	Hexachlorobenzene
Selenium (D)	Chlordane	PCBs
Thallium (D)	4, 4'-DDT and all derivatives	Tetrachloroethylene

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However, discharges to Tse Bonita Wash on State of New Mexico lands will still be subject to the requirements of 20.6.4.98 NMAC (intermittent waters), which will require the same comprehensive monitoring list for toxic and persistent pollutants as detailed in the 2009 permit. This would only apply to Outfalls 031, and 064-065.

CEMC commissioned a background report which was completed by CDM Smith, primarily for the purposes of ensuring that onsite impoundments being considered for permanent retention would meet Navajo Nation post-mine water quality and usage requirements. This background report did not address any of the impoundments that would ultimately discharge onto NM lands, but did come to the conclusion that many of the potential exceedances could be attributed to background. If CEMC intends to pursue a background determination, there should be discussion with EPA Region 9 for instruction on how to proceed.

CEMC commissioned a series of sediment delivery reports on the sedimentation ponds across the mine. These reports were completed by more than one contractor, and over a long period of time. The inspector did not review these reports, but they are available for consideration in estimating sediment delivery from the ponds discharging to New Mexico lands.

The administratively continued permit did not incorporate requirements for the Colorado River Salinity Control Forum, applicable to industrial facilities discharging to the Colorado River Basin. Requirements of the forum can be accessed on their website: <http://coloradoriversalinity.org/>. The purpose of the forum is to keep the salt levels of the Colorado River basin below the 1972 numeric criteria levels. Appendix B of the forum review gives information on implementation requirements, which for a facility such as McKinley results in a “no salt return” requirement. However, the no salt

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discharge requirement may be waived where a facility can show that the discharge is essentially “freshwater” (maximum total dissolved solids concentration of 500 mg/L), or the discharge of salt is less than one ton per day or 366 tons per year.

Permit Requirements for Section B – Recordkeeping and Reporting Evaluation – Overall rating of “Marginal”

The permit requires in Part I.A.3.a:

Within 90 days submit a site-specific Sediment Control Plan for EPA approval demonstrating that implementation of the Sediment Control Plan will result in average annual sediment yields that will not be greater than the sediment yields from pre-mined, undisturbed conditions. The Sediment Control Plan shall, at a minimum, identify Best Management Practices (BMPs), including design specifications, construction specifications, maintenance schedules, criteria for inspection, and expected performance and longevity of the BMPs.

Findings for Recordkeeping and Reporting:

Upon review of the facility’s Sediment Control Plan, NMED notes that there is no sediment delivery evaluation for the New Mexico lands/sedimentation ponds. The SCP gives a pre-mining evaluation, but does not discuss post-mining sediment delivery estimates.

Permit Requirements for Section G – Effluent/Receiving Waters Observations – Overall rating of “Marginal”

The permit states in Part I.B.1:

All discharges shall be free from pollutants in amounts of combinations that, for any duration:

1. *Cause injury to, are toxic to, or otherwise adversely affect human health, public safety, or public welfare.*

Findings for Effluent/Receiving Waters Observations:

NMED requires monitoring of toxic and persistent pollutants in permits as they are issued to assess whether discharges will contribute to exceedances of water quality standards, and/or create a human health, public safety or public welfare issue. Prior to the inspection, the information on monitored discharges over the previous permit term was compiled for review from ICIS.

NMED conditionally certified the existing permit with requirements to monitor these toxic and persistent pollutants as shown in Part D.1.b.

The following WQS exceedances were observed from the data reported under the 401 certification monitoring requirements. (Hardness data was not reported at the time of sampling; in order to evaluate the data for hardness-based metals against NMWQS, NMED assumed a hardness of 40 mg/L based on NMED Monitoring and Assessment Section data collected from the last sampling cycle in 2011.) Highlighted constituents are estimated to be in exceedance of NMWQS. Other constituents are listed for information purposes as they were close to but not exceeding the standard. Other required pollutants were monitored, and/or those outfalls have not discharged yet, but are not listed here because the outfalls were not monitored (due to no discharge), constituents were not detected, or constituents were found at low levels.

Outfall	Year	Constituent	Value (ug/L)	Standard (ug/L)
004D	2014	gross alpha	24.8	15
		cyanide (WAD)	7.9	5.2
032D	2013	gross alpha	28.3	15
		aluminum	36400	975
		arsenic	18.4	9

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		cadmium	0.9	0.76
		copper	52.4	6
		lead	53.8	24
		zinc	205	70
033D	2013	gross alpha	99.6	15
	2013	aluminum	28600	975
	2014	aluminum	2690	975
	2013	arsenic	13.7	9
	2013-2015	boron not exceeding but increases across these years	27.5 increase to 47.9	5000
	2013	cadmium	1.3	0.76
	2013	copper	39.4	6
	2014	copper	7.5	6
	2015	copper	5.4	6
	2015	radium 226+228	37.3	30
	2013	zinc	144	70
	2015	Ra 226+228	38.7	30
034D	2013	gross alpha	260	15
	2013	aluminum	54700	975
	2013	arsenic	20.3	9
	2013	cadmium	2.2	0.76
	2013	copper	80.3	6
	2013	mercury	0.57	0.77
035D	2013	gross alpha	281	15
	2014	gross alpha	52.9	15
	2013	aluminum	5660	975
	2013	arsenic	7.9	9
	2013	lead	11.1	24
	2013	mercury	1.3	0.77
	2015	2378-tcdd	0.000425	0.000000051
036D				
	2013	gross alpha	163	15
	2014	gross alpha	16	15
	2013	aluminum	11000	975
	2014	aluminum	15400	975
	2014	arsenic	10.2	9
	2014	lead	14.5	24
	2015	lead	21.8	24
	2014	mercury	0.46	0.77
	2015	radium 226+228	28.5	30
039D	2014	gross alpha	62.4	15
	2014	copper	5.7	6

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	2014	y-BHC	4.1	0.95
045D				
	2014	gross alpha	205	15
	2014	copper	7.2	6
049D	2015	Gross alpha	34.0	15
	2015	2378-TCDD	0.000341	0.000000051

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Official Photograph Log

Photo # 1

Photographer: Sarah Holcomb	Date: 2-17-2016	Time: 0806 hours
City/County: McKinley County		
Location: McKinley Mine entrance near Hwy 264 and P&M Road.		
Subject: Entrance to the mine (lighting adjusted in photo to better show signage).		



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Official Photograph Log

Photo # 2

Photographer: Sarah Holcomb	Date: 2-17-2016	Time: 1017 hours
City/County: McKinley County		
Location: Outfall 075 (impoundment 930), McKinley Mine		
Subject: Sedimentation pond and velocity dissipation at the outfall.		

