

# QUESTA TAILINGS PIPELINE REMOVAL MMD/NMED WORK PLAN CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY QUESTA MINE

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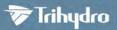
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# **1.0 INTRODUCTION**

The Questa Mine is a former underground and open pit molybdenum mine and milling operation owned by Chevron Mining Inc. (CMI). The mine and mill facilities are located approximately 7 miles east of the Village of Questa, New Mexico (Questa), in Taos County along New Mexico Highway 38 and the adjacent Red River. The Questa Mine's Tailing Facility is located approximately 9 miles west of the mine, near Questa, NM. The tailings pipeline was constructed to transport mill tailings, as a slurry, to the tailings facility. Conventional underground mining operations began in 1918 and continued until 1958. Underground mining resumed in 1982 and continued through approximately 2012. Open pit mining was conducted between 1965 and 1983. CMI announced the cessation of operations at the mine on June 2, 2014 and initiated closeout activities. To date, closeout activities have been addressed under three plans. *Phase 1, Building Demolition and Cleanup Plan* covered the removal of selected facilities within the Mill area. *Building Demolition and Cleanup Plan* covered the removal of selected facilities within the Mill area. *Building Demolition of surface facilities in the Tailing Facility Area*, exclusive of the tailings pipeline. Phase 3 activities are detailed in the report *Building Demolition and Cleanup Plan, Phase 3 Activities – Mill and Mine Areas; Balance of Facilities.* These activities include the decommissioning and demolition of surface facilities at the Mill and Mine areas that were not previously include

This Tailings Pipeline Removal Plan (Plan) has been prepared to provide a description of the tailings pipeline decommissioning and demolition process at the Questa Mine. The Plan is written to meet the requirements of CMI's Mine Permit (TA001RE) issued by the New Mexico Energy, Minerals and Natural Resources Department (EMNRD), Mining and Minerals Division (MMD) under the New Mexico Mining Act (EMNRD 1998) and Discharge Permit (DP) 933 issued by the New Mexico Environmental Department's (NMED) Groundwater Bureau. Historic tailing spills in the pipeline corridor are to be removed pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Administrative Order on Consent for Removal Actions (Removal AOC), Docket No. 06-09-12. The plan is not intended to replace or supersede the Closeout Plan(s) required under the Mine permit, nor is it intended to address final site reclamation.

On October 1, 2016, CMI stopped using the tailings pipeline. Per the EMNRDMMD Closure Plan, CMI must initiate removal of the pipeline within 180 days of cessation of operations. NMED DP-933 requires that a work plan be submitted for approval 180 days prior to removal of the tailing pipeline. On November 18, 2016 the use of the pipeline was reinitiated to allow for responsible management of mine collected waters. Final cessation of the pipeline occurred on May 16, 2017. CMI plans to initiate the removal of the tailings pipeline following approval of the work plan. It is anticipated that the high density polyethylene HDPE segment of the pipeline located on the tailing facility will be

removed first. This initial pipe removal activity will be covered solely under this work plan. A segment specific work plan will be submitted at least 60 days prior to removal activities for all other segments of the pipeline.

CMI is requesting MMD and NMED authorization for decommissioning and demolition of the tailings pipeline to begin in mid-2017. Additional federal, state or local approvals may be required prior to initiating work activities for specific segments of the pipeline. No work will begin until all approvals are in place.

## 1.1 PROJECT SCOPE

In the 1960's, the Questa Mine constructed a pipeline from the Mill Area of the mine approximately 9 miles west to the Tailings Facility. From east to west, the pipeline typically consists of two 14-inch outside diameter, rubber lined steel pipes that parallel Highway 38 down the Red River Canyon, through the Village of Questa, to the Tailings Facility on the west side of town (Figures 1-1 and 1-2). In some areas, additional sections of pipeline were constructed to provide a backup line where access was limited. The pipe transitions to HDPE at the Tailings Facility Flow Monitoring Building. The HDPE pipe removal is planned to be initiated first.

The Questa Mine stopped using the pipeline to transfer tailing in April of 2012, but continued to pump mine collected waters from the Mine Site groundwater collection systems and the underground mine to the Tailings Facility. The collected water likely flushed any remaining tailings from the pipeline, but some of the collected water may remain in low areas of the pipeline upon cessation of its use. The currently active pipeline was flushed with fresh water prior to cessation.

The pipeline crosses CMI property, United States Forest Service (USFS) property, New Mexico Department of Transportation (NMDOT) right of way (ROW), along with four private landowners' property. The pipeline crosses over the Red River at four locations and under Highway 38 at four locations. Most of the pipeline is above ground, running along Highway 38 or on CMI or USFS property. Some sections of the pipeline are buried and may either be abandoned in place or excavated and removed, depending on depth of burial and/or ease of access. There are structures along the route including three small pressure vessels, the Upper Dump Sump, the Lower Dump Sump and support buildings, three old bridges, two elevated trestles, and the Tailings Facility Flow Monitoring Building. For this report, bridges are defined as structures crossing streams, and are capable of carrying foot or vehicular traffic as well as pipe and other utilities. A trestle is an above ground structure designed for carrying pipe or other utilities only.

The purpose of the Tailings Pipeline Removal Project is to remove the entire tailing pipelines from the Mill Area to the Tailings Facility Catchment Pond, or abandon the buried tailing pipeline in place where necessary. The work scope



also includes demolition and removal of the three small pressure vessels, the Lower Dump Sump and support buildings, non-utility bearing bridges, the trestle, and the flow monitoring building. In addition to the removal of the pipeline and associated structures, removal of tailing or where approved, containment of tailing in place with appropriate cover will be conducted in accordance with this Plan.



# 2.0 REGULATORY REQUIREMENTS

Existing regulatory authorizations for the Questa Mine include the Mining Act permit issued by EMNRD, MMD (TA001RE, Revision 96-1) and resource-specific permits for air and water discharges issued by the NMED, within which these permits have conditions for closeout and closure of the Mine Site and Tailing Facility upon cessation of mining. In addition, the US Environmental Protection Agency (EPA) issued a Record of Decision (ROD) for cleanup of historic contamination at the mine, under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), on December 20, 2010 (EPA 2010). The applicable existing mine compliance documents and other federal, state, and local requirements are briefly discussed below within the context of the planned removal of the tailings pipeline and associated tailing deposits.

# 2.1 EXISTING MINE COMPLIANCE DOCUMENTS

### 2.1.1 MINING ACT PERMIT

The Questa Mine is regulated under Mining Act Permit TA001RE administered by MMD. A provision of the mine permit is the removal of the tailings pipeline. The tailings pipeline removal is addressed specifically in Permit Revision 96-1, Section 4, paragraphs 6, 7, 21, and 34. Section 4, paragraph 6 states "All tailings delivery piping and any concrete or timber cribs that were used to support the tailings lines will be removed. Concrete and timber will be transported to and disposed of in a landfill at the Questa Mine site. Tailings piping will be sold off as second hand piping and scrap".

Section 4, paragraph 7 states "The concrete sump structure at the lower dump sump will be removed and/or broken up and covered with at least 3 feet of clean fill. The upper sump will be reclaimed in its current configuration. Monitor wells will be plugged if they are no longer needed for monitoring, otherwise they will be maintained as necessary. Roadways no longer needed for continued access will be reclaimed".

Section 4, paragraph 21 details post pipeline removal reclamation. "Once the pipeline has been removed, reclamation of the pipeline right-of-way will take place. Seedbed preparation will take place where necessary. Seeding will be accomplished by broadcast seeding followed by hydromulching".

Post mining land use (PLMU) is addressed in Section 4, paragraph 34 with the statement "*The post closure land use for the pipeline will be wildlife habitat, except on areas where the pipeline crosses private property. The private property owner will determine whether the PMLU is to be for wildlife habitat or agricultural use.*"

Permit Revision 96-1 also addresses topics such as:

- Surface shaping and regrading
- Building demolition and cleanup
- Cover placement on disturbed areas
- Revegetation of disturbed area
- Post closure monitoring and maintenance
- Development of a post closure land-use of wildlife habitat/self-sustaining ecosystem

These topics have a broad bearing on the removal/demolition of the tailings pipeline and are incorporated in this Plan.

#### 2.1.2 DP-933

The Questa Mine is regulated under Discharge Permit 933 administered by NMED. Condition 45 of the discharge permit states "*CMI shall remove the tailing pipelines and close the associated sumps as soon as they are no longer needed for site operations. Any residual tailings shall be removed from the sumps and will be placed in the Tailing Impoundments prior to closure. CMI shall submit a plan for NMED approval outlining specific closure procedures for the upper and lower sumps, tailings pipelines, and any other structures designed to contain tailings at least 180 days, or other time period approved by NMED, prior to scheduled removal activities. Ground water monitoring wells LS-1, LS-2, LS-3, US-1, US-2, and US-3 for the upper and lower emergency sump areas shall be abandoned in accordance with NMED Guidelines for Monitor Well Construction and Abandonment and according to regulations issued by the Office of the State Engineer in Section 19.27.7 NMAC, unless an alternative completion is approved by NMED. Prior to pipeline removal, CMI shall triple rinse the pipelines or use equivalent methodology approved by NMED to ensure removal of all potential contaminants contained in the pipeline. During pipeline removal, CMI shall inspect the entire pipeline area for any evidence of past spills. CMI shall document all areas where there is evidence of spills and shall propose corrective actions to the NMED pursuant to the provisions of section 20.6.2.1203 NMAC. Corrective actions shall include evaluation of cleanup alternatives [20.6.2.3107.A.11 NMAC]".* 

#### 2.2 FEDERAL REQUIREMENTS

## 2.2.1 RECORD OF DECISION AND REMOVAL ACTION AOC

The ROD for the Questa Mine (CERCLIS ID NO. NMD002899094) was issued by EPA on December 20, 2010 and presents EPA's selected remedy for the site. For site characterization and remedy selection purposes, the ROD divides the site into the following areas: Mill Area, Mine Site Area, Tailing Facility, Red River and Riparian and South of

Tailing Facility Area, and Eagle Rock Lake. Relevant portions of the ROD, specific to historic tailing spills have been considered as guidance or reference information in the development of this plan. The Administrative Order on Consent for Removal Actions (March 8, 2012) specifically addresses work related to the historic tailing spills along the pipeline. The Final Historic Tailing Spills Remedial Action Completion Report (September 26, 2014) documents the removal of tailing along the pipeline completed under CERCLA. Under this work portions of tailing were left in place to be addressed under the Removal AOC. Locations where tailing was left in place under the Removal AOC will be addressed as they are encountered during the pipeline removal. All tailing will be removed except in areas approved by EPA to remain in place (i.e. Lower Dump Sump, within 3 feet of active utilities and within4-8 feet of a tree root mass for trees measuring greater than 6 in in diameter on USFS property).

#### 2.2.2 STORM WATER

The regulatory authority for storm water discharge permitting in New Mexico is EPA Region 6. The NMED, Surface Water Quality Bureau, certifies the federal permits and performs storm water inspections on behalf of EPA and acts as a local point of contact to provide information to operators and other agencies regarding the regulatory program. The removal of the tailings pipeline will disturb more than 1 acre of land, therefore an application for coverage under EPA's 2012 Construction General Permit (CGP) for storm water will be required for areas not managed under the Early Removal AOC. A Notice of Intent (NOI) for coverage under the CGP will be submitted to EPA 14 days prior to earth-disturbing activities and a site specific Storm Water Pollution Prevention Plan will be developed for this project.

#### 2.2.3 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

A portion of the tailings pipeline is located within the Carson National Forest, and the Questa Ranger District has confirmed the need for coordination in advance of pipeline removal for potential National Environmental Policy Act (NEPA) documentation. An *Application for Transportation and Utility Systems and Facilities on Federal Lands* (Standard Form 299) will also be required.

# 2.2.4 AQUATIC RESOURCES (CLEAN WATER ACT)

The United States Army Corps of Engineers (USACE) Albuquerque District Office will oversee permitting of anticipated impacts to wetlands and waters of the U.S. to ensure compliance with Section 404 of the Clean Water Act (EPA 1972). The tailings pipeline will be removed at four stream crossings. Therefore, an initial meeting with the USACE will be held to determine if the stream crossings are jurisdictional, and if so, the type of permit and pre-construction notification that will be required in advance of pipeline removal. Other related activities within streams and/or adjacent to wetlands related to pipeline removal and mine decommissioning will also be discussed.

#### 2.2.5 PROTECTION OF WILDLIFE

Consultation with the United States Fish and Wildlife Service (USFWS) and/or the New Mexico Department of Game and Fish will be performed in advance of pipeline removal to ensure compliance with the Threatened and Endangered Species Act (USFWS 1973), Migratory Bird Treaty Act (USFWS 1918), and the Bald and Golden Eagle Protection Act (U.S.C. 1940). For USFS lands, the Questa Ranger District will provide oversight in this process, given that impacts to wildlife, including federal T&E and other species of conservation concern, will be evaluated within the EA. For areas that are not covered within the EA, independent consultation with these agencies will occur. Mitigation measures to protect wildlife will be discussed and implemented as needed.

Based on previous analysis (2014), the only listed species that is known to occur in the area of the mine is the Peregrine falcon. Restricted bird nesting areas are known to exist along the tailing pipeline. Big horn sheep are also present around the area of the mine and will be considered during demolition activities.

### 2.3 STATE REQUIREMENTS.

## 2.3.1 AIR

An asbestos notification form under the National Emission Standards for Hazardous Air Pollutants (NESHAP) will be submitted to the NMED Air Quality Bureau (AQB), as required. Asbestos surveys will be performed by a certified asbestos inspector, and the NESHAP notification form will be filed if asbestos is identified, 10 working days prior to the start of asbestos removal. A qualified inspector will also perform lead paint surveys. Dust control measures will be implemented to minimize generation of fugitive emissions and the potential for off-site transport of dust. Dust abatement for tailings pipeline removal activities will be coordinated with the existing air quality permit (0201-M-4) for the mine, as necessary.

#### 2.3.2 DEMOLITION PERMIT

A building demolition permit will be obtained from the New Mexico Regulation and Licensing Department. Construction Industries Division (CID). According to 14.5.2.8.A NMAC, no building shall be removed or demolished unless the applicable permit has been obtained from the CID (NMAC 2016). The permit application will contain plans, specifications, engineering information, diagrams, soil investigation reports, and other required data (14.5.2.10 NMAC). The applicability of these items related to the tailings pipeline demolition project activities will be confirmed with the CID.

#### 2.3.3 HAZARDOUS WASTE

The Questa Mine is an episodic large quantity generator of hazardous waste (EPA ID #NM0002899094) regulated by the NMED, Hazardous Waste Bureau. Hazardous wastes identified during tailings pipeline removal activities will be evaluated for compliance with CMI's large quantity generator status and will be managed in accordance with Chevron's Third Party Waste Stewardship process following applicable requirements for each waste stream. Facility characterization and waste management are discussed in Sections 3.0 and 6.0 of this plan, including information specific to individual waste streams, such as asbestos and lead paint.

# 2.4 LOCAL REQUIREMENTS

#### 2.4.1 FLOODPLAIN

A Taos County excavation permit is anticipated to be required for excavation of 50 cubic yards or more of material within a floodplain. The 100-year floodplain boundary for the area indicates that certain tailings pipeline removal activities may be governed by Taos County requirements. Addressing these requirements will be coordinated with the County prior to earth-disturbing activities in those areas.

#### 2.4.2 DEMOLITION

A building demolition permit will be obtained from the local permitting authority, Taos County, in general accordance with Taos County and New Mexico Regulation and Licensing Department, Construction Industries Division (CID) regulations. According to 14.5.2.8.A NMAC, no building shall be removed or demolished unless the applicable permit has been obtained from the CID.



# 3.0 FACILITY CHARACTERIZATION

A facility characterization investigation was performed on the tailings pipeline to estimate the effort for pipeline demolition and removal, as well as evaluating the components for potential asbestos containing materials (ACM) and lead based paint. The following information was collected during the initial facility characterization.

### 3.1 PIPELINE INVENTORY – GENERAL

A basic pipeline inventory was developed based on data collected during a site investigation in January of 2017. The pipeline was inspected from the pressure tanks located at the mining facility (The Mill) to the Tailings Facility located west of Questa. A pipeline inventory was created to estimate the demolition effort for pipeline removal. Due to the unique challenges of removal, depending on property ownership, owner coordination and permitting, Sections 3.2 through 3.5 include specifics of structures for each property ownership type. General descriptions of components that apply to the entire pipeline are described below. The quantities of pipeline components have been summarized in Table 3-1.

#### 3.1.1 PIPING

Tailings pipeline materials are separated into above-grade and buried pipe categories. Above-grade pipe includes pipe that is on the ground surface, as well as pipe with less than 2 feet of cover. This includes minor road crossings and pipeline segments which have been covered due to hillsides sloughing. Buried pipe includes pipe with more than 2 feet of cover, and includes areas where the pipe is encased under road crossings. Two feet was chosen as the demarcation depth between surface and buried pipe based upon the level of disturbance necessary to excavate the pipe. Typical pipe excavation requires a slope of approximately 3:1. A pipe two feet deep would result in surface disturbance twelve feet wide. Excavation of pipe deeper than two feet could result in greater than desired surface disturbance.

Average individual lengths of pipe are between 40 and 45 linear feet, however pipe section lengths decrease at bends in the pipeline alignment. Pipe is joined via flexible couplings. The pipeline coating materials differ substantially before and after the Lower Dump Sump. For the purposes of this work plan, the pipeline is divided into an East Section and West Section, with the dividing point being the Lower Dump Sump (see Figures 1-1 and 1-2). All pipes are assumed to be rubber-lined based on field observations and discussions with CMI personnel.

The East Section has two 14-inch diameter parallel steel pipes with an exterior paint coating (Photo#1 of Appendix A). The West Section of the pipeline (west of the Lower Dump Sump) has up to five pipes. Two of the pipes look visually similar to the eastern sections, 14-inch diameter steel with exterior painted coating (Photo #2 of Appendix A). Two of

the pipes appear to be 14-inch diameter steel pipes with an exterior wrapping. These pipes were part of the tailing pipeline system and were added to provide redundancy. One of the pipes on the elevated trestle appears to be a 10-inch diameter steel pipe with a similar exterior wrapping (Photo #3 of Appendix A). This pipe was used to dewater the lower dump sump. Based on visual inspection, the wrappings will be tested for potential ACM.

Downstream of Corny's Corner (Figure 1-2), the four pipes emerge from underground and appear to be two 14-inch diameter painted steel and two 14-inch diameter steel pipes (Photo #4 of Appendix A). There is evidence that two of the four pipes in this area may have ACM wrapping. This area will be further investigated upon approval of this work plan. HDPE pipe is located downstream of the Tailings Facility Shed. This HDPE pipe is not coated or painted.

#### 3.1.2 STRUCTURES

In the context of this Plan, structures are all objects associated with the pipeline excluding the pipe. These include couplings, pipe bend structures, thrust blocks, elevated trestle structures, spill prevention structures, bridge structures, buildings, etc.

#### 3.1.2.1 COUPLINGS

Flexible couplings join individual pipe lengths along the pipeline. Two types of couplings were observed, grooved (Victaulic<sup>®</sup>) and Dresser<sup>®</sup>. Each coupling uses mechanical fasteners and gaskets to create a semi-flexible joint between pipe segments. Flexible couplings were placed approximately every 40 feet for standard lengths, with more placed in pipeline alignment bends. Typical Victaulic<sup>®</sup> and Dresser<sup>®</sup> fittings are shown in Photo #5 and Photo #6 of Appendix A, respectively.

#### 3.1.2.2 STEEL ANCHOR STRUCTURES

Steel anchor structures were installed to protect the pipe from traffic in areas where the pipeline changes direction. The anchor structures appear to be steel with angle braces (see Photos #7 and #8 of Appendix A).

#### 3.1.2.3 STEEL PIPE BEND STRUCTURES

Steel bend structures are present at abrupt changes in direction of the pipeline. They are located typically before and after road crossings (see Photo #9 of Appendix A).



#### 3.1.2.4 CONCRETE THRUST BLOCKS

Thrust block supports were used at many locations along the pipeline. Thrust blocks are concrete blocks embedded in the ground with steel straps over the pipeline bolted to the thrust blocks. Thrust block size could not be determined from the field observation due to snow cover and burial depth. See Photo #10 (Appendix A) for a typical thrust block.

#### 3.1.2.5 RIVER CROSSINGS

River crossings include structures used to suspend the tailings pipeline above the river. They are generally made of steel and concrete, but some have wooden or other materials as well (Photos 11-14, 27-28). Two of the river crossings are located on CMI property and two are location on USFS property. The river crossings are discussed in further detail below.

### 3.1.2.6 ROAD CROSSINGS

Road crossings include pipes encased in corrugated metal pipe and pipes directly buried beneath the surface. Road crossings include major road crossings, and exclude minor dirt/gravel road crossings (photos 29-34).

#### 3.1.2.7 BUILDINGS

Building structures along the pipeline include the Tailings Facility Flow Monitoring Building and support buildings at the Lower Dump Sump. (Photos 15-16)

#### 3.1.2.8 OTHER STRUCTURES

The pipeline corridor includes additional structures that are not easily categorized. These structures include sumps, concrete structures, elevated trestles, steel troughs, power lines/poles, spill prevention structures, and other miscellaneous items. (Photos 17-26; 35-44)

#### 3.2 CHEVRON MINING INC. PROPERTY

Pipeline located on property owned by CMI that does not require non-CMI property for access or staging will require the least amount of coordination with other entities. This property excludes items within NMDOT right-of-way. The approximate quantities of pipe and structures are summarized in Table 3-1.

## 3.2.1 PIPE INVENTORY

Typical pipes are divided into East and West Sections. See Table 3-1 for a listing of the combined east and west pipeline inventory by property type and coating/wrapping.

Approximate quantities of 14-inch diameter painted steel pipe in the East Section are 35,020 linear feet.

Estimated quantities of above ground pipe materials in the west section include approximately:

- 12-inch diameter HDPE pipe = 8000 linear feet
- 14-inch diameter painted steel pipe = 11,570 linear feet
- 14-inch diameter wrapped steel pipe = 4,085 linear feet
- 14-inch diameter unpainted steel pipe = 7,485 linear feet
- 10-inch diameter wrapped steel pipe = 1,110 linear feet

#### 3.2.2 STRUCTURE INVENTORY

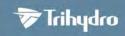
Based on an estimated coupling spacing of 35 feet, there are approximately 1,695 couplings on CMI property (Photos #5 and #6 of Appendix A). Steel anchor structures were observed east of the Lower Dump Sump. A typical steel anchor structure is shown in Photos #7 and #8 of Appendix A.

Five pipe bend structures were observed on CMI property, but more bend structures may be buried and not visible. Two structures are located near Corny's Corner (Figure 1-2) at the west end of the site. Three bend structures are located near the entrance road to the Chevron Administration Building. Typical pipe bend structures are shown in Photo #9 of Appendix A.

The quantity of thrust blocks was not determined due to snow cover, but it they are present along a majority of the pipeline, especially at changes in the pipeline alignment (Photo #10 of Appendix A).

The tailings pipeline crosses Red River at "Thunder Bridge" on CMI property. The bridge that carries the pipeline across the river includes concrete abutments, concrete piers, painted steel girders, deteriorated wood decking, and galvanized metal containment for the pipe (Photos #11 through #14 of Appendix A). This entire structure will be removed. In previous discussions about this bridge, the State Historic Preservation Office (SHPO) has expressed an interest in documenting some of the structures associated with the bridge.

The Tailings Facility Flow Monitoring Building is located near where the pipe undergoes a flanged transition from steel to HDPE. The building is built of plywood, has a concrete pad near the entrance, and a concrete floor. (Photos #15 and #16 of Appendix A).



#### 3.2.3 OTHER STRUCTURES

Specialized structures exist on CMI property that are designated for removal as part of the Plan. These include pressure vessels, an elevated trestle section over a road/river, as well as the Lower Dump Sump facility.

#### 3.2.3.1 PRESSURE VESSELS

Three pressure vessels exist on the east end of the pipeline within fenced and secured CMI property. They are made of steel and include additional valves and couplings (Photo #17 and #18 of Appendix A).

#### 3.2.3.2 ELEVATED TRESTLE

An elevated trestle was constructed for a river crossing west of the Lower Dump Sump (Photos #19 through #23). The trestle suspends 5 pipelines above a public roadway, as well as across Red River. The trestle is constructed with the following materials:

- Round steel piers wrapped with potential ACM
- Steel I-beam piers
- Round steel and angle iron pipe supports wrapped with potential ACM
- Concrete piers
- Concrete pipe support/pier combinations
- Concrete walkway supports on the banks of Red River
- Steel walkway with expanded metal grating across Red River
- Wood support piers, reinforced with steel I-beams and angle iron

#### 3.2.3.3 LOWER DUMP SUMP

The Lower Dump Sump consists of a rectangular basin constructed of concrete and protected by a steel barricade and chain link fence. The basin contains stormwater that will be pumped out and trucked to the Tailing Facility for disposal prior to demolishing the facility. The basin measures approximately 70 feet by 110 feet by 5 to 8 feet deep (Photos #24 through #26).

There is a metal building for the pipes on the south side of the basin. Additionally, a steel building on the west side of the basin has electrical transformers mounted to the side of it. The west end also has a sloped access ramp and concrete

🔊 Trihydro

retaining walls. Some electrical work will be performed prior to the removal of the Lower Dump Sump buildings, which may require coordination with utility companies.

A concrete rubble pile exists on the west side of the basin. A small wooden shed exists on the southwest corner of the basin.

## 3.3 PIPELINE INVENTORY – UNITED STATES FOREST SERVICE

Pipe materials located within United States Forest Service (USFS) property will require USFS coordination for removal. This includes coordination for access and preservation of irrigation ditches.

# 3.3.1 PIPE INVENTORY

The approximate quantity of above-grade 14-inch diameter painted steel pipe in the East Section is 17480 linear feet.

### 3.3.2 STRUCTURE INVENTORY

Based on an estimated coupling spacing of 35 feet, there are likely 250 couplings per pipe string.

Steel anchor structures were observed on USFS property west of the office area. There are two individual sections with these structures, each approximately 250 feet in reach, for a total of 500 feet. These structures are placed approximately every 20 feet, a total of approximately 25 structures.

The quantity of thrust blocks was not determined due to snow cover, but it is assumed they are along a majority of the pipeline, especially at points of intersection (Photo #10 of Appendix A).

The tailings pipeline crosses the Red River near Columbine Park which is on USFS property and within the NMDOT ROW. The bridge that carries the pipeline across the river includes concrete abutments, concrete piers, steel girders, steel decking, and galvanized metal spill prevention boxes for the pipe. Additional utilities including some active CMI piping is located on this bridge therefore this bridge will be left in place. All piping and structures specifically associated with the tailing pipeline will be removed (Photos #27 and #28 of Appendix A).

One bridge is located entirely on USFS property near the east end of the USFS Office property. The bridge that carries the pipeline across the river consists of concrete abutments, steel trusses, steel decking, and galvanized metal containment for the pipe. Additional utilities are suspended by the bridge that will be preserved during pipeline removal. Discussion with both the USFS and affected utilities will take place before the final disposition of the bridge



is determined. If the USFS or utilities have a need for the bridge, it will remain in place. All piping and structures specifically associated with the tailing pipeline will be removed. (Photos #39 through #41 of Appendix A).

### 3.4 NMDOT RIGHT OF WAY

Pipe materials located within an NMDOT right-of-way will require NMDOT coordination for removal. The pipeline corridor that is located within the ROW exists on CMI and USFS property. This includes pipe installed parallel to and at crossings of Highway 38. One road crossing under Highway 522 is buried deep under the surface, and will be abandoned in place to minimize surface disturbance.

#### 3.4.1 PIPE INVENTORY

The approximate quantity of above-grade 14-inch diameter painted steel pipe in the East Section is 25,720 linear feet. The approximate quantity of buried painted steel pipe in the East Section is 3,200 linear feet. Cased road crossings account for approximately 630 linear feet of buried pipe.

The West Section of the pipeline within the NMDOT right-of-way for Highway 522 contains four pipes. Estimated quantities of pipeline materials in the West Section include:

- 14-inch diameter painted steel pipe = 210 linear feet
- 14-inch diameter wrapped steel pipe = 210 linear feet

#### 3.4.2 STRUCTURE INVENTORY

Based on an estimated coupling spacing of 35 feet, there are approximately 840 couplings within NMDOT right-ofways.

Steel bend structures are present at abrupt changes in direction of the pipeline. Fourteen bend structures were observed on NMDOT property at Highway 38 crossings.

The quantity of thrust blocks was not determined due to snow cover, but it is assumed they are along a majority of the pipeline, especially at changes in the pipeline alignment (Photo #10 of Appendix A).

One of the river crossings and associated bridge are located within the ROW and carries Highway 38 over the Red River and will be left in place.

There are four crossings within an NMDOT right-of-way. Three road crossings of Highway 38 are within casing pipes or structures and are approximately 90 feet in length. One road crossing of Highway 522 is buried, but it is uncertain the depth or length of the crossing. (Photos #29 through #34 of Appendix A).

#### 3.4.3 OTHER STRUCTURES

Specialized structures within NMDOT right-of-ways that are designated for removal include an elevated trestle and spill prevention structures.

#### 3.4.3.1 SPILL PREVENTION STRUCTURES

Galvanized sheet metal was installed at two locations along the pipeline between the pipeline and Red River to contain potential spills from the pipeline. One barrier is located just west of Columbine Park; the barrier length was not recorded during the field investigation. The second barrier is in a narrow opening between Red River and a guardrail on Highway 38 and is approximately 250 feet long with metal stakes along the south side (Photo #37 of Appendix A).

A steel trough is located just west of the elevated trestle section and spans what appears to be a stormwater drainage channel (Photo #38 of Appendix A). The steel trough is approximately 60 feet in length.

## 3.5 PRIVATE OWNERS

Pipe materials located on privately owned property will require landowner coordination for removal. This includes pipe installed on the Robinson, Rael, and Montoya properties.

#### 3.5.1 PIPE INVENTORY

The East Section on the Robinson property has two 14-inch diameter parallel painted steel pipes. The approximate quantity of painted steel pipe in the East Section is 1,700 linear feet.

The West Section of the pipeline on the Rael property contains four pipes. Based on visual inspection, the wrapping will be tested for ACM. Estimated quantities of pipe materials include:

- 14-inch diameter painted steel pipe = 1,540 linear feet
- 14-inch diameter wrapped steel pipe = 1,540 linear feet
- 10-inch diameter wrapped steel pipe = 270 linear feet



The West Section on the Montoya property contains approximately:

- 14 inch diameter painted steel pipe = 100 linear feet
- 14 inch diameter coated steel pipe = 200 linear feet
- 10-inch diameter wrapped steel pipe = 100 linear feet

## 3.5.2 STRUCTURE INVENTORY

Based on an estimated coupling spacing of 35 feet, there are approximately 145 couplings on private property: The quantity of thrust blocks was not determined due to snow cover, but it is assumed they exist along a majority of the pipeline, especially at bends in the pipeline alignment (Photo #10 of Appendix A).



# 4.0 DEMOLITION AND REMOVAL

Demolition will proceed following the approval of this work plan. It is anticipated that demolition will begin on CMI-owned property then proceed to the NMDOT right of way including USFS property within the right of way, followed by private property, and lastly USFS owned property outside of NMDOT right of way; however, this may change based on discussions with key stakeholders and the speed of the permit approval process. The demolition approach for the inventory described in Section 3.0 is provided below. Chevron will seek a permit modification for DP-1055 from NMED to allow for disposal of concrete, and wood in the Questa Mine Open Pit. Chevron will also seek a permit modification to TA001RE from MMD to allow for this disposal option.

## 4.1 PIPELINE

HDPE piping will be cut into approximately 40 foot sections using saws or shears. The above ground steel pipe will be broken down into 35 to 45 foot sections by removing the couplings or cutting with a shear. The pipe will be loaded on trucks and transported to staging areas. The staging areas will be near the North Gate of the Tailing Facility and/or the Tailing Maintenance shop and south of Highway 38 by the Columbine well. These locations have been selected to minimize the initial hauling distance and to minimize traffic on Abra Road. Below ground piping will be abandoned in place. Further details on the abandonment process will be included in a construction work plan, to be provided prior to abandonment activities.

Prior to removal, the active pipeline will be flushed with fresh water to remove residual tailings or other contaminants. Water found in the pipe after flushing will be treated as stormwater and will be managed according to Section 7.0. Inactive pipes will be inspected for integrity. If the pipe lacks the integrity for flushing, water management details will be specified in a construction work plan, to be provided prior to removal activities.

## 4.2 STRUCTURES

## 4.2.1 COUPLINGS

Couplings will be removed between individual sections of pipe prior to pipe removal, unless shears are used for sectioning the pipe. Couplings will be gathered and recycled through a Chevron Third Party Waste Stewardship approved recycling facility.

### 4.2.2 STEEL ANCHOR STRUCTURES

Steel anchor structures were installed in areas where the pipe changes direction and the pipe needed protection from traffic. These structures will be demolished and the material hauled to the staging area after the pipe has been removed. The steel will be recycled through a Chevron Third Party Waste Stewardship approved recycling facility.

#### 4.2.3 STEEL PIPE BEND STRUCTURES

Steel bend structures were observed at abrupt changes in direction of the pipeline. They are located typically before and after road crossings (see Photo #9 of Appendix A). These structures will be demolished and the refuse hauled to the staging area after the pipe has been removed. The steel will be recycled through Chevron Third Party Waste Stewardship approved recycling facility.

#### 4.2.4 CONCRETE THRUST BLOCKS

Thrust block supports were observed along the pipeline during the January 2017 field event. Concrete for the thrust block will be demolished to a maximum depth of 3 feet below existing ground surface following removal of the pipe. Upon approval of a modification to DP-1055, the concrete will be placed in the Questa Mine Open Pit as described in the August 18, 2015 Open Pit Disposal Plan (approved by NMED and MMD on September 3, 2015) and iron will be recycled through a Chevron Third Party Waste Stewardship approved recycling facility. Concrete will be removed to one foot below ground surface or broken up and left in place. Concrete left in place will be covered with a minimum of three feet of approved fill material. The surface will then be re-contoured to match the desired final grade, and ensure that at least three feet of clean fill remains in place and then seeded with an approved seed mixture. As-built drawings will document material left in place.

#### 4.2.5 RIVER CROSSINGS

Where applicable, bridge crossings will be removed. The steel will be recycled through a Chevron Third Party Waste Stewardship approved recycling facility. Concrete and wood will be disposed in the Questa Mine Open Pit.

#### 4.2.6 ROAD CROSSINGS

Road crossings include pipes encased in corrugated metal pipes/carrier pipes and pipes directly buried beneath the surface. Road crossings include only major road crossings, and exclude minor dirt/gravel roads. Where practicable, pipe will be removed from underneath roads. If pipe removal is not practicable, they will be abandoned in place. The practicability of underground pipe removal will be addressed in detailed work plans to be provided for the individual pipeline segments.



#### 4.2.7 BUILDINGS

Most buildings associated with the tailings pipeline will be demolished and removed. Foundations, sumps and other concrete structures will be broken up and excavated to a minimum depth of three feet. These excavations will be backfilled with approved fill material. The surface will be re-contoured to the desired final grade and seeded with an approved mixture. A minimum of three feet of clean fill will remain in place following any regrading activities. Steel from building demolition will be recycled through a Chevron Third Party Waste Stewardship approved recycling facility. Concrete and wood will be disposed of in the Questa Mine Open Pit. Other wastes will be managed according to governing regulations.

#### 4.2.8 LOWER DUMP SUMP

The Lower Dump Sump area will be managed under the Early Removal AOC. The Lower Dum Sump will be demolished in its entirety. Buildings and other surface components will be removed. Steel and other recyclables will be managed through the Chevron Third Party Waste Stewardship process. The foundations, basin and other below ground concrete structures will be removed and/or broken up. Any broken concrete left in place will be covered with three feet of approved fill. Concrete that is removed will be placed in the Questa Mine Open Pit.

Following demolition, the Lower Dump Sump site will be regraded using a natural regrade process. This regrading will be designed to blend the disturbed areas into the natural contours of the site. Some berms may be left in place to minimize ground disturbance and provide stormwater control.

Tailing identified during the demolition process will be managed according to the process described in Section 5. All tailing left in place will be capped with three feet of approved fill. The disturbed areas will be reseeded according to Section 4.2.10.

#### 4.2.9 OTHER STRUCTURES

The pipeline includes some additional structures that are not easily categorized. These structures could include sumps, concrete structures, elevated trestles, pressure vessels, power lines/poles, spill prevention structures, and other miscellaneous items. These structures will be removed as part of the overall pipeline removal project. Steel will be recycled through a Chevron Third Party Waste Stewardship approved recycling facility. Concrete and wood will be disposed in the Questa Mine Open Pit and all other wastes will be managed according to governing regulations.



# 4.2.10 GENERAL SITE REGRADING AND SEEDING

Minor site regrading may be necessary along the reach of the pipeline. Attempts will be made to minimize ground disturbance and limit potential erosion. Where regrading is necessary, stormwater control will be conducted in accordance with Section 7. Reseeding will be accomplished using the seed mix described in Appendix B. Seed mixes may be adjusted for USFS and private properties based on consultation with the property owners.



# 5.0 TAILING MANAGEMENT

Tailing identified during the pipeline demolition process will be removed unless it meets criteria established under the *May 16, 2012 Historic Tailing Spills Removal Action Work Plan.* In summary, tailing may remain in place only:

- In the Lower Dump Sump with three feet of approved cover material
- Within three feet of active buried utilities
- Within four to eight feet of a tree root mass for trees greater than six inches in diameter and located on United States Forest Service (USFS) property

CMI will remove tailings within three feet of said utility if requested by the utility owner, or if the utility becomes inactive. CMI will also receive approval from the EPA and State prior to leaving any tailing in place.

CMI will coordinate with the USFS for the removal of any trees which die, have tailing in their root zones and present public safety concerns.

All other tailing will be removed, the area backfilled and graded to achieve positive drainage and stabilization of the ground surface as well as meet the current or anticipated future land use. The disturbed areas will be seeded with an approved seed mixture.



# 6.0 WASTE MANAGEMENT

Waste from the tailings pipeline demolition project is expected to include pipe, steel, crushed concrete, wood, tailings, and potentially ACM and lead based paint. These wastes will be managed according to local, State, and Federal regulations as well as Chevron's Third Party Waste Stewardship Standard. The management of ACM and lead based paint (LBP) will be defined under a separate work plan. As part of this work plan, a process for the identification and characterization of ACM and LBP has been developed and is detailed below. Activities associated with this project will comply with the Quality Assurance Project Plan from Overall Site Plan for Removal Actions (URS, 2012).

## 6.1 ASBESTOS CONTAINING MATERIAL

During the January 2017 field inspection, suspect ACM was documented. This work plan outlines the process for determining if these materials are ACM. If the materials are positively identified as ACM above action levels, an additional work plan will be developed to outline mitigation and disposal steps.

## 6.1.1 ASBESTOS INSPECTION METHOD

ACM is defined by the EPA as any material that is found to contain greater than 1% asbestos as determined by the method specified in Appendix A, Subpart F of 40 CFR 763 Section 1 – polarized light microscopy (PLM). ACM is subject to the EPA NESHAP Regulations for Asbestos (40 Code of Federal Regulations (CFR) Part 61) and the NMED AQB 20 New Mexico Administrative Code 2.78 (20 NMAC 2.78). The NMED is presently responsible for administering the EPA NESHAP program for New Mexico. ACM is also subject to Occupational Safety and Health Administration (OSHA) General Industry Standards for Asbestos (29 CFR Parts 1910.1001) and Construction Industry Standards for Asbestos (29 CFR Parts 1926.1101).

Bulk samples of suspect materials observed on facility components such as pipe, pipe support structures and connections, and from suspect materials in the buildings to be demolished will be collected. Sampling will be conducted by segregating the facility components and building materials into sampling units called homogeneous areas (HA). An HA is defined as containing suspect material that is uniform in texture and color and appears identical in every other respect.

Once materials to be sampled are identified, they will then be classified as friable or non-friable. Friable materials when dry can be crumbled or reduced to powder by hand pressure, whereas non-friable materials cannot. Friable materials are more likely to release asbestos fibers into the air, especially during types of activities that may result in their disturbance, including demolition. Therefore, the distinction between friable and non-friable material is

meaningful. Non-friable materials generally contain asbestos fiber that are bound within another matrix, such as tarbased coatings (pipe coatings). Non-friable ACMs are therefore less likely to release fibers into the air. The EPA has identified two categories of non-friable materials. Category I non-friable materials (asbestos-containing packing, gaskets, resilient floor covering, or asphalt roofing product) that are in good condition may remain during facility component demolition provided these materials are not rendered friable during demolition. Category II non-friable materials (any material, excluding Category I non-friable AM) must be removed prior to demolition if there is not a low probability that these materials will remain non-friable during demolition.

Bulk samples of the suspect ACM found in buildings will be collected in a random and representative manner, as determined by the inspector. Samples of pipe coatings will be collected along the length of the pipe at approximately 2,000-foot intervals, unless the coating material changes thereby becoming a new HA. At that point, the new coating will be sampled at the same interval. At least three samples of each pipe coating HA will be collected. When sample collection is complete, samples will be placed in sealed, labeled containers, with the sample descriptions and locations recorded on Asbestos Inspection Forms. Photographs of each sample location will be taken to document the material and condition at the time of sampling. An example Asbestos Inspection Form is included in Appendix B. A general description of the sample identifier (ID) nomenclature is as follows:

00+000	-	PC01	-	XX
Station		Suspect		Material
Number		Material		Sample
		ID		Number

In some cases, samples collected from an apparently homogeneous material and yielding mixed results may, in fact, have been taken from different homogeneous materials displaying similar visual characteristics, but composed of different constituents. Although materials may appear to be homogeneous, different manufacturers may have produced them in different batches. Materials, which appear to be homogeneous but yield mixed results are assumed, in accordance with EPA Asbestos Hazard and Emergency Response Act (AHERA-40 CFR 763), Subpart E procedures, to be asbestos containing in all areas where the materials are located.

#### 6.1.2 CHAIN-OF-CUSTODY RECORD

A chain-of-custody (COC) record for all samples will be used to track the possession and transfer of each sample from the time of field collection through laboratory analysis. The record will contain the following: sample number, signature of collector, date of collection, identification of sampled material, requested laboratory analysis, and



signatures of individuals in custody of the samples, and record of possession. An example COC form is provided in Appendix C.

#### 6.1.3 ASBESTOS LABORATORY ANALYSIS

Collected samples will be analyzed by Reservoirs Environmental, Inc., of Denver, Colorado using PLM, a bulk sample analysis method established by the National Voluntary Laboratory Accreditation Program (NVLAP). Bulk asbestos samples will be analyzed using EPA Method 600/R-93/116. Reservoirs Environmental, Inc. is accredited by the National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) No. 101896-0 to perform asbestos fiber analysis using the PLM method and will use EPA recommended protocols to analyze the samples. Sample materials that contain >1% asbestos are considered ACM by the EPA and NMED. Samples that contain any amount of asbestos greater than non-detect are recognized and covered by OSHA 29 CFR 1926.1101.

### 6.2 LEAD BASED PAINT

During the January 2017 field inspection, suspect lead based paint materials were documented. This work plan outlines the process for determining if these materials are in fact lead based paint. If the materials are positively identified as containing lead above action levels, an additional work plan will be developed to outline mitigation and disposal steps.

#### 6.2.1 LEAD PAINT SAMPLING METHODOLOGY

The United States Department of Housing and Urban Development (HUD) defines LBP as paint having a lead content of greater than or equal to 1.0 mg/cm<sup>2</sup> using X-Ray Fluorescence technology analysis or greater than or equal to 0.5% using atomic absorption analysis (AAS). LBP is paint with greater than 0.06% but less than 0.5% lead. OSHA considers any detectable concentration of lead in paint as a potential hazard. Presently there are no regulations requiring the removal of LBP and/or lead containing material (metals, components, etc.) prior to demolition. Worker protection from LBP is required under the OSHA Construction Industry Standard for Lead (29 CFR 1926.62), and LBP is subject to disposal requirements under the EPA Resource Conservation and Recovery Act (RCRA) (40 CFR 262.11 and 40 CFR 261.24).

Paint sampling will be performed by collecting "paint chip" samples from facility components. These will generally be collected at the same frequency as suspect ACM, depending on the number of different paint coatings encountered. Photographs of each sample location will be taken to document the paint and condition at the time of sampling. An example LBP inspection form is included as Appendix D.

## 6.2.2 CHAIN-OF-CUSTODY RECORD

A COC record for all samples will be used to track the possession and transfer of each sample from the time of field collection through laboratory analysis. The record will contain the following: sample number, signature of collector, date of collection, identification of sampled material, requested laboratory analysis, signatures of individuals in custody of the samples, and record of possession. An example COC form for collected lead paint samples is presented in Appendix C.

## 6.2.3 LEAD PAINT LABORATORY ANALYSIS

Reservoirs Environmental, Inc. will perform the analysis of lead samples using EPA Method SW846 3050B/AA (7420). Reservoirs Environmental, Inc. is accredited through the Environmental Lead Laboratory Accreditation Program (ELLAP) for the analysis of lead in environmental samples including paint, soil, and dust wipes. Paint chip samples that contain equal to or greater than 0.5% lead are considered LBP by HUD/EPA. Samples that contain from 0.06 to 0.5% are defined as LCP.

# 6.3 REPORTING

Upon receipt of sample analysis, a comprehensive inspection report will be prepared which details identified asbestos and lead materials. The report will include the location and quantity of materials that may be impacted by future activities, and regulatory requirements for removal. Included with the report will be copies of all field-generated documentation, photographs and GPS locations of suspected asbestos and lead materials, and laboratory data results. The report will include recommendations for the security and potential disposition of confirmed ACM and LBP.

### 6.4 GENERAL DEMOLITION DEBRIS

General demolition debris such as concrete and wood will be disposed in the Questa Mine Open Pit as described in the August 18, 2105 Open Pit Disposal Plan (approved by NMED and MMD on September 3, 2015). Steel from structures will be recycled through a Chevron approved recycling facility. Other waste such as fiberglass insulation, and interior furnishings will be disposed of in the Taos Municipal Landfill.

#### 6.5 OTHER ENVIRONMENTAL CONDITIONS

Because the riparian corridor has been generally characterized during the RI, sampling associated with the removal of structures will be performed as required under the building and cleanup closure requirements of Discharge Permit DP-933 and focused on areas not previously investigated, such as areas beneath the buildings and potentially



contaminated soils discovered during subsequent earth-moving/site grading work. Standard operating procedures for soil sampling are discussed further in the Phase 1 Soil Sampling and Analysis Plan.

## 6.5.1 SAMPLING BENEATH FOUNDATIONS

Soil sampling will be performed beneath building foundations and slabs, if removed as part of the demolition activities. Following demolition the former building area will be subdivided into an even number of rectangular sampling grids, and sampled in accordance with the Phase 1 Soil Sampling and Analysis Plan, Section 3.2.2. This grid-based approach, with screening performed using a photoionization detector (PID), will be used to determine the location of samples submitted for laboratory analysis.

#### 6.5.2 OTHER SOIL CONTAMINATION

Potentially contaminated soil discovered during the demolition or subsequent earth-moving/site grading process will also be subjected to screening and sampling. If soil is encountered during excavation or site grading activities with observed visual or olfactory evidence of contamination, work will stop temporarily to allow a visual inspection of the area and a sample of the material will be collected and subjected to head space readings using a PID to determine reference PID readings.

Following an initial assessment of the area to determine the potential extent of potentially contaminated soil, the excavation will continue in conjunction with ongoing monitoring and additional sampling and PID screening. Impacted soil will be segregated and temporarily stockpiled in a lined area for sampling. Following the completion of the excavation to the planned lines and grades, the area where potentially contaminated soil was encountered will be subject to additional grid-based sampling, where applicable.

Sampling of the stockpiled soil will be performed per Section 3.2.3 of the Phase 1, Soil Sampling and Analysis Plan to collect representative samples suitable for waste profiling at a frequency of approximately one sample per every 100 cubic yards of material, or as otherwise determined acceptable to the facility accepting the soil for disposal.

# 7.0 STORMWATER MANAGEMENT

Surface and subsurface disturbances during pipe removal could necessitate stormwater and erosion control. In order to manage stormwater pollution, a Stormwater Pollution Prevention Plan (SWPPP) will be submitted for approval prior to construction activities.

The SWPPP will incorporate both preferred and alternate stormwater management controls and best management practices (BMPs). Common examples of BMPs include:

- Minimizing Areas of Disturbance
- Erosion and Sediment Control Measures
  - Straw Wattles
  - Silt Fence
  - Revegetation and/or Rip-rap
  - Erosion Control Mats
- Constructed Detention Basins
- Inspections of BMPs after Large Runoff Events

Stormwater BMPs will be based on their applicability and efficacy in areas of concern. The SWPPP will be submitted and approved by the controlling Local, State, or Federal agencies prior to obtaining a general construction permit.

Fluids that are released from the pipeline during demolition will be managed as stormwater. These fluids will be allowed to spill onto the ground as long as they do not directly enter a stream or body of surface water. Pipe in the vicinity of a stream or body of surface water will be inspected prior to removal. Liquids found in the pipe will be evacuated using a vacuum truck or similar technology. This recovered water will be processed through the mine water treatment system.

# 8.0 SCHEDULE

The anticipated schedule for key demolition activities addressed in this plan is presented below as Table 8-1.

Activity	Anticipated Schedule
Submission of Demolition Work Plan	1-Mar-17
Approval of Demolition Work Plan	1-Apr-17
Begin EA Process with USFS	15-Mar-17
Coordination meeting to discuss permitting with regulatory/oversight stakeholder	TBD
Commence Demolition with removal of HDPE pipe	TBD
Submit Final EA	TBD, Planned for 1-Sep-17
Begin demolition on CMI property	TBD

# **TABLE 8-1. ANTICIPATED SCHEDULE**

The removal will start upon the cessation of pipeline operations. In general, it will start at the Tailing Facility then proceed to other CMI owned properties. Work will occur within NMDOT ROW, on USFS and private properties as permits are completed.



## 9.0 STAKEHOLDER ENGAGEMENT

Chevron has identified numerous stakeholders with an interest in the Tailings Pipeline Removal Project. These stakeholders include regulatory/oversight agencies, local governing bodies, non-governmental organizations (NGOs) and private property owners.

Regulatory/Oversight stakeholders include:

- MMD/EPA/NMED
- USFS
- Army Corps of Engineers
- NMDOT

Local governing bodies and NGOs include:

- Village of Questa
- Taos County
- City of Red River
- Trout Unlimited
- Amigos Bravos
- QEDF

Additional stakeholders include

- SHPO
- NMDGF
- USFWS
- Acequia Association
- OSE
- Private property owners
- Kit Carson Electric and Telecom



These stakeholders will be engaged at appropriate points in the permitting and demolition process. Other stakeholders may be identified and engaged as the process moves forward.



## **10.0 WORK PLANS AND PROGRESS REPORTS**

#### 10.1 WORKPLANS

Chevron will provide detailed work plans to NMED and MMD and any other agency where approval may be required for a specific segment of pipeline 60 days prior commencement of demolition activities. These work plans will include:

- Area covered under the plan
- Regulatory requirements
- Approximate quantities of demolition material (pipe, concrete, steel etc.) to be removed
- Demolition methods
- Criteria for leaving pipe in place
- Locations and length of pipe to be left in place
- Waste Management
- Schedule

#### **10.2 PROGRESS REPORTS**

Chevron will provide NMED and MMD with monthly progress reports on pipeline removal activities.

These reports will commence upon acceptance of this work plan and be due by the 15th of the following month. The following will be included in these reports:

- A list of Agency submittals
- A schedule of activities
- Update of demolition activities
- Quantities and disposition of demolition materials



## **11.0 REFERENCES**

EPA. 2010. Record of Decision, Molycorp, Inc., Questa, New Mexico. December 20, 2010.

New Mexico Energy, Minerals, and Natural Resources Department (EMNRD). 1998. Permit No. TA001RE, Questa Mine and Mill, Existing Mine Operation.

New Mexico Environmental Department, Chevron Mining Inc. Tailing Disposal Facility, DP-933. February 29, 2008.

New Mexico Regulation and Licensing Department. 2016. New Mexico Administrative Code (NMAC) 14.5.2 [Internet]. Available from: http://164.64.110.239/nmac/parts/title14/14.005.0002.htm.

United States Code (U.S.C.). 1940. 16 U.S.C. 668-668c ("Bald and Golden Eagle Protection Act").

United States Environmental Protection Agency (EPA). 1972. Federal Water Pollution Control Act as amended in 1972 ("Clean Water Act").

United States Fish and Wildlife Service (USFWS). 1918. Migratory Bird Treaty Act of 1918.

USFWS. 1973. Endangered Species Act of 1973.

United States Environmental Protection Agency, CERCLA Docket No. 06-09-12, Administrative Settlement Agreement and Order on Consent for Removal Actions.

Historic Tailing Spills Removal Action Work Plan, May 16, 2012.





TABLE

#### TABLE 3-1. TAILINGS PIPELINE INVENTORY CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY QUESTA MINE, QUESTA, NEW MEXICO

	PIPING													
	Steel	14" Ø Wrapped Steel	GROUND 14" Ø Unpainted Steel	Steel	14" Ø Painted Steel	RIED 14" Ø Wrapped Steel	Couplings	Steel Anchor Structures	Steel Pipe Bend Structures	Thrust Blocks	River Crossings	-	-	
PROPERTY OWNER CEMC	<b>(LF)</b> 46,590	(LF) 4,085	<b>(LF)</b> 7,485	<b>(LF)</b> 1,110	(LF) 0	(LF) 0	<b>(EA)</b> 1,695	(EA) 0	(EA) 5	<b>(EA)</b> Unknown	(EA) 2	(EA) 0	(EA) 1	(EA) 3
NMDOT	25,720	0	0	0	3,410	210	840	0	14	Unknown	1	4	0	4
Private	2,710	1,010	0	270	530	530	145	0	0	Unknown	0	0	0	1
US Forest Service	8,740	0	0	0	0	0	250	25	0	Unknown	1	0	0	0

Notes:

Ø = Diameter

- CEMC = Chevron Environmental Management Company
- NMDOT = New Mexico Department of Transportation

LF = Lineal feet

EA = Each

- All quantities above are estimates.

- Pipe material can be generally divided into "East" and "West" Sections, with the dividing point at the Lower Dump Sump (Figure 3-1).

- Pipes are generally connected with grooved (Victaulic®) or dresser couplings.

- Pipe in the East Section can be characterized as two parallel 14" Ø painted steel pipes.

- Pipe in the West Section can be divided into two sections, the Trestle Section and the Non-trestle Section.

- Pipe in the West Trestle Section contains five pipes. Two pipes are 14" Ø painted steel pipes, two pipes are 14" Ø wrapped steel pipes, and one pipe is 8" Ø wrapped steel pipe.

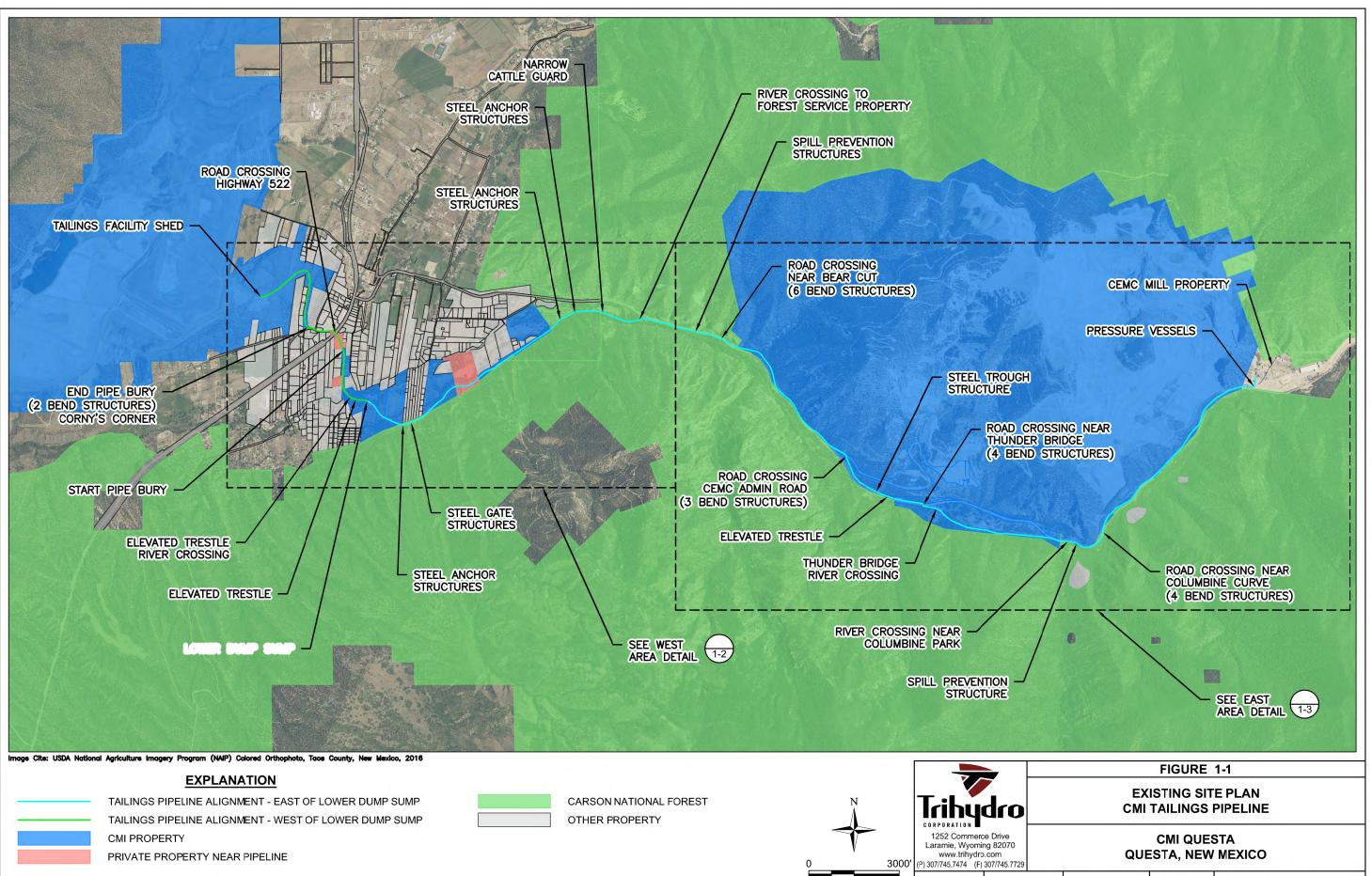
- Pipe in the West Non-Trestle Section has four pipes. Two pipes are 14" Ø painted steel pipes. The last two pipes are 14" Ø steel pipes that are assumed to have been wrapped. Sections near the Trestle were clearly wrapped, however sections west of Corny's Corner may or may not have been wrapped.

#### TABLE 5-1. LOWER DUMP SUMP STRUCTURE AND EQUIPMENT INVENTORY CMI QUESTA TAILINGS PIPELINE REMOVAL PROJECT

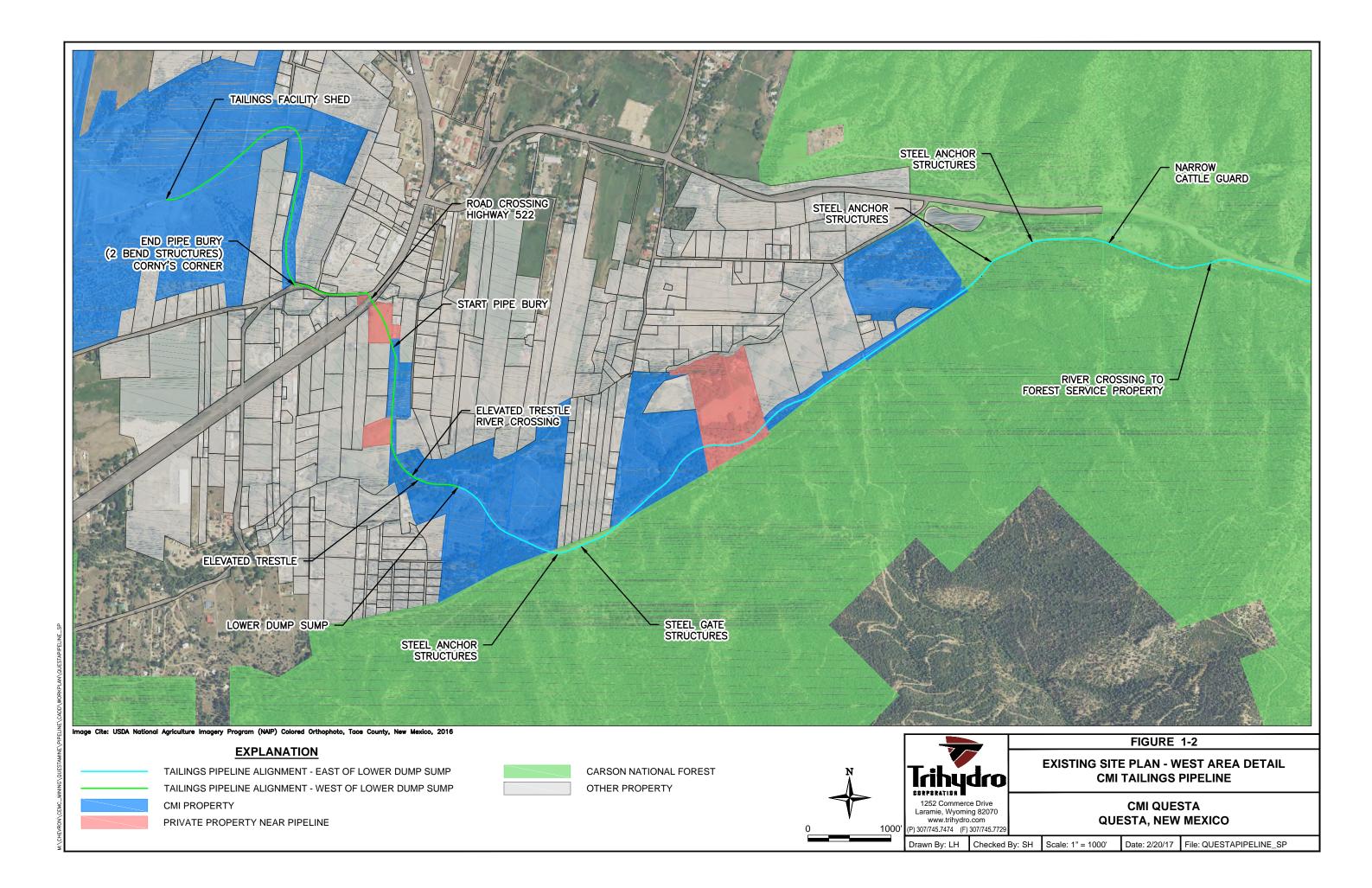
#### Structures and Equipment

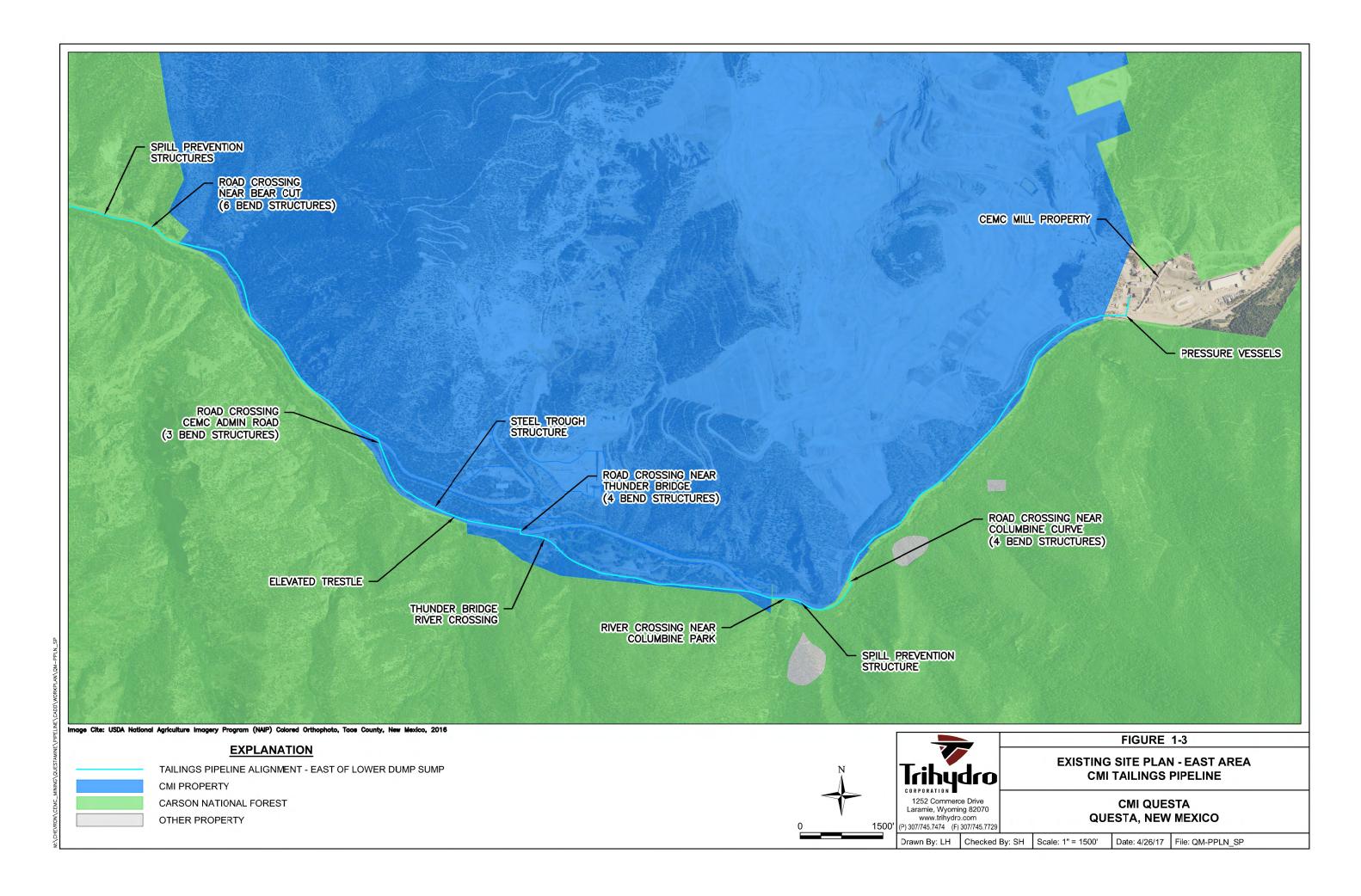
All Buildings within the delineated area and their contents Concrete sump impoundment Sump fencing Transformers Power poles Tailing pipeline within delineated area Foundations Pumps Ancillary Piping and Valves Piping supports All monitoring and dewatering wells Catwalks, ladders, and structural supports All Electrical Equipment including all overhead or buried powerlines owned by Chevron All buried utilities including septic systems, sewer lines, leach fields, etc Tailing material designated for removal FIGURES

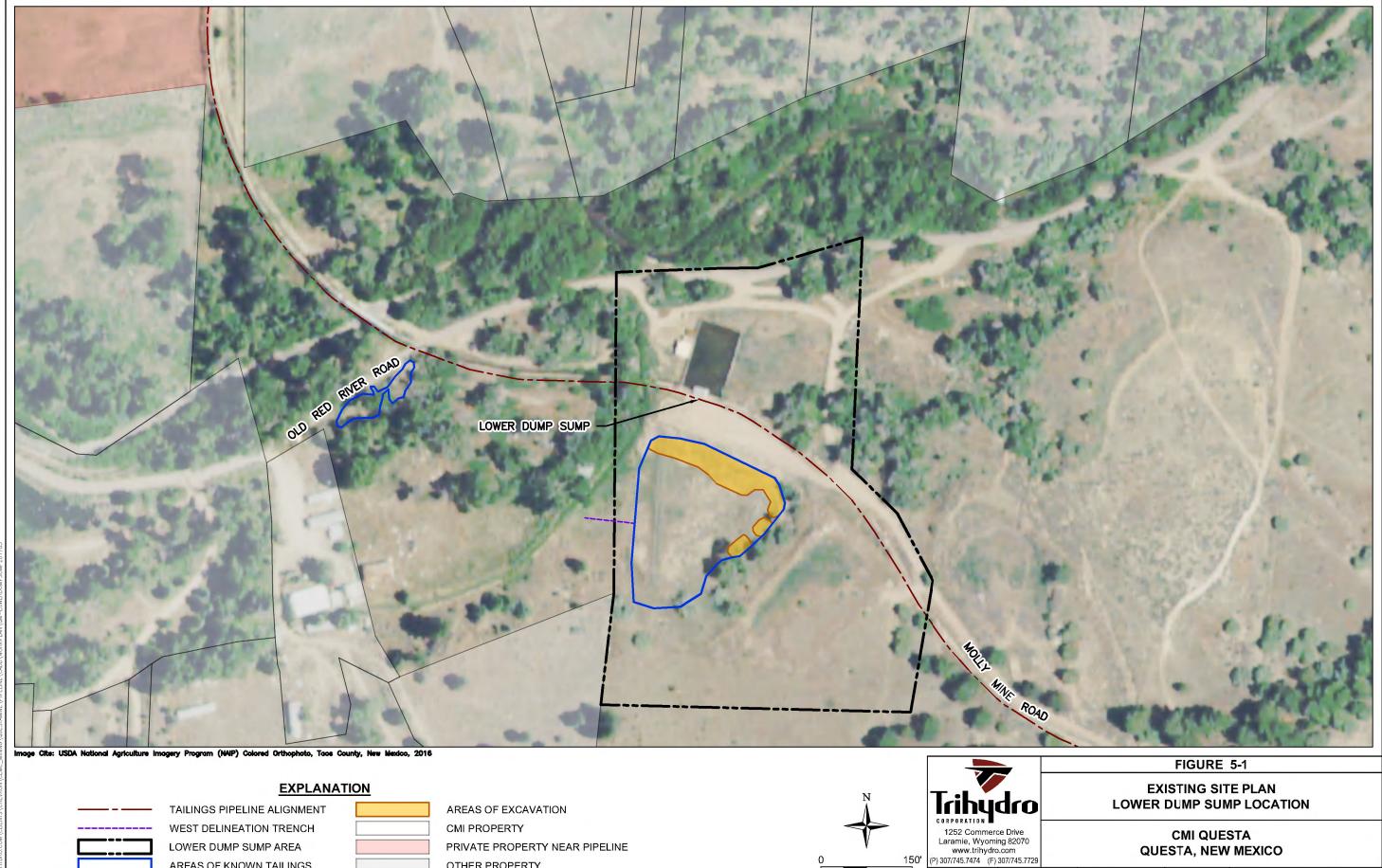




Drawn By: LH Checked By: SH Scale: 1" = 3000' Date: 4/26/17 File: QM-PPLN\_SP







AREAS OF KNOWN TAILINGS

OTHER PROPERTY

150'

# QUESTA, NEW MEXICO Date: 5/18/17 File: QM-LOWERDUMPSUMP201705 Drawn By: PC Checked By: SH Scale: 1" = 150'

APPENDIX A





Photo #1 14" Ø Rubber-lined Painted Steel Pipe – Typical



Photo #2 14" Ø Wrapped Steel Pipe – Typical



Photo #3 8" Ø Wrapped Steel Pipe (middle pipe) – Typical



Photo #4 14" Ø Unpainted Steel Pipe – Typical



Photo #5 Victaulic<sup>®</sup> Compression Fittings – Typical



Photo #6 Dresser<sup>®</sup> Fitting – Typical



Photo #7 Steel Anchor Structures - Typical



Photo #8 Steel Anchor and Protection Structures – Ground Detail - Typical



Photo #9 Steel Pipe Bend Structures - Typical



Photo #10 Concrete Thrust Block –Typical



Photo #11 Thunder Bridge – Top View Looking West



Photo #12 Thunder Bridge and Electrical Cable – Top View Looking South



Photo #13 Thunder Bridge – Stream View Looking Northeast



Photo #14 Thunder Bridge – Underneath



Photo #15 Tailings Facility Flow Monitoring Building Looking West



Photo #16 Tailings Facility Flow Monitoring Building Looking Northeast



Photo #17 Pressure Vessels Looking East

Photo #18 Pressure Vessels Looking Northeast

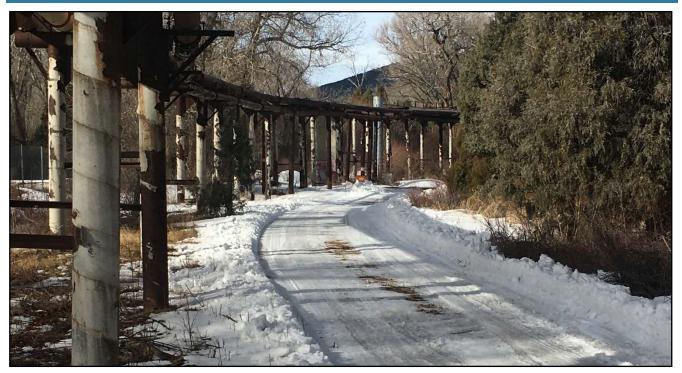


Photo #19 Elevated Trestle – West of Lower Dump Sump Looking West



Photo #20 Elevated Trestle – River Crossing Looking West



Photo #21 Elevated Trestle – Concrete Abutments and Walkway Looking West



Photo #22 Elevated Trestle – Pipe Wrapping (possible ACM)



Photo #23 Elevated Trestle – Pipes Elevated By Supports



Photo #24 Lower Dump Sump Looking West



Photo #25 Lower Dump Sump Basin Looking North



Photo #26 Lower Dump Sump Looking Northeast



Photo #27 River Crossing Near Columbine Curve Looking East



Photo #28 River Crossing Near Columbine Curve Looking West



Photo #29 Road Crossing Near Bear Cut South Side of Road



Photo #30 Road Crossing Near Bear Cut North Side of Road



Photo #31 CEMC Admin Road Crossing North Side



Photo #32 CEMC Admin Road Crossing South Side



Photo #33 Road Crossing Near Thunder Bridge North Side of the Road



Photo #34 Road Crossing Near Columbine Curve North Side of the Road Looking South



Photo #35 Elevated Trestle Near Thunder Bridge Looking East



Photo #36 Elevated Trestle Near Thunder Bridge Looking West



Photo #37 Spill Prevention Near River – Galvanized Steel Looking East

Photo #38 Steel Trough Structure Looking North



Photo #39 Forest Service Bridge Looking Southwest



Photo #40 Forest Service Bridge Showing Other Utilities Looking West



Photo #41 Forest Service Bridge Looking East



Photo #42 Forrest Service – Narrow Access Looking East



Photo #43 Gate Structure East of the Lower Dump Sump Looking South



Photo #44 Gate Structure East of the Lower Dump Sump Looking North

APPENDIX B

APPROVED SEED MIX



#### State of New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez Governor

David Martin Cabinet Secretary

Tony Delfin Deputy Cabinet Secretary Fernando Martinez, Director Mining and Minerals Division



April 20, 2016

Mr. Armando Martinez, Environmental Manager Chevron Environmental Management Company P.O. Box 469 Questa, NM 87556

#### RE: Proposed Questa Mine Seed Mixture for Non-Waste Rock Pile Disturbances of 10 acres or less, Questa Mine, Permit No. TA001RE

Dear Mr. Martinez,

The Mining and Minerals Division ("MMD") has reviewed the Proposed Questa Mine Seed Mixture for Non-Waste Rock Pile Disturbances  $\leq$ 10 acres for the Questa Mine area dated August 31, 2015 (attached). The proposed seed mix includes two alternate forb species and two alternate shrub species that are intended to provide flexibility in the composition of the seed mix due to uncertainty in the availability of seed species from year to year.

MMD hereby approves the proposed seed mix with the understanding that if modifications of seeding rates or substitution of species, other than the alternate species specified, are necessary that Chevron Mining Inc. will propose these changes to MMD for approval prior to seeding efforts. Additionally, the seeding rates must be doubled for broadcast seeding in areas that cannot be accessed by drill seeding equipment.

If you have any questions, please contact me at (505) 476-3425 or by email at <u>davena.crosley@state.nm.us</u>.

Sincerely,

autra E. (10

Davena E. Crosley Mining Act Reclamation Program, Reclamation Biologist

cc: Holland Shepherd, Program Manager (<u>Holland.shepherd@state.nm.us</u>) Joe Vinson, MARP (<u>joe.vinson@state.nm.us</u>) Mike Coleman, MARP (<u>Michael.coleman@state.nm.us</u>) Mine File (TA001RE)

# August 31, 2015--Proposed Questa Mine Seed Mixture for Non-Waste Rock Pile Disturbances (<10 acres).

Species	Common Name	Drill Seed Rate (lbs PLS/ acre)†	No. Seeds/ Square Foot	No. Seeds/lb
Warm Season Grasses	for the second			
Bouteloua curtipendula	Sideoats grama, var. Butte	1.0	3.6	159,200
Schizachyrium scoparium	Little bluestem, var. Camper	0.4	2.2	240,670
Sporobolus cryptandrus	Sand dropseed, VNS*	0.03	3.8	5,600,080
	Subtotal	1.43	9.6	
Cool Season Grasses		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		
Bromus marginatus	Mountain brome, var. Bromar	2.0	2.9	64,080
Elymus trachycaulus	Slender wheatgrass, var. FirstStrike	2.0	6.2	135,000
Elymus canadensis	Canada wildrye var. Mandan	0.5	1.3	114.000
Pascopyron smithii	Western wheatgrass, var. Arriba	1.5	3.9	113,840
Carl Street Of and	Subtotal	6.0	14.3	
Forbs		2000		
Achillea millifolium	White yarrow, VNS*	0.2	13.1	2,852,012
Dalea purpurea	Purple prairie clover, VNS*	1.5	9.6	278.000
Penstemon strictus	Rocky Mountain penstemon, var. Bandera	0.5	5.6	489,888
Ratibida columnaris	Prairie coneflower, var. Stillwater	0.5	8.5	737,104
Alternate Forbs‡				
Solidago rigida	Showy goldeneye, VNS*	0.25	5.7	1,000,000
Linum lewisii	Lewis flax, var. Apar	1.0	6.8	294,848
Subtotal (Does no	t Include Alternate Species)	2.7	36.8	
Shrubs		1.1.1.1.1.1.1	10.00	
Atriplex canescens	Fourwing saltbush, var. Wytana	4.0	4.1	44,203
Ericameria nauseosus	Rubber rabbitbrush, VNS*	2.0	18.4	400,000
Artemisia ludoviciana	Prairie sage, VNS*	0.05	4.6	4,048.000
Cercocarpus montanus	Mountain mahogany, VNS*	1.0	1.1	47,400
Alternate Shrubs‡		1	1.4	
Fallugia paradoxa	Apache plume	1.0	9.6	420,000
Artemisia frigida	Fringed sagebrush, VNS*	0.05	5.2	4,536,000
Subtotal (Does no	ot Include Alternate Species)	7.05	28.2	
GRAND TOTAL (Doe	s not Include Alternate Species)	17.18	88.9	-

†Seeding rate will be doubled for broadcast seeding applications; \*VNS=Variety Not Specified—A northern seed source will be requested for winter hardiness; ‡ Alternate forbs and shrubs are listed as replacement species in the case that seed for a primary forb or shrub species is not available in any given year, thus providing flexibility in the seed mixture. APPENDIX C

ASBESTOS INSPECTION FORM



Asbestos Insp	<u>ection Form</u>			
		Name		
		Project	Dat	e
Building		Homogeneo	ous Area #	
			antity	
Description of N	laterial:			
Type of Suspect	Material: S	Surfacing	TSI	Miscellaneous
	wing the location of suspect m			
Sample #	Location			Lab Result
				·
Condition		Sig. Damaged	Damaged	Good
	Deterioration			
	Water Damage Physical Damage			
	i nysical banage			
Note: Sig. Damaged	d=>10% scattered or >25	% local damage. Da	maged = <10%/<25%	
Potential for Dis	turbanco	High	Moderate	Low
Potential for Dis	luibance	High	Woderate	Low
	Contact			
	Vibration			
	Air erosion			
Comments:				
Physical Classific	ation			
	aged or significantly damag aged friable surfacing ACBI		nsulation (TSI)	
	ificantly damaged friable su			
	aged or significantly damaged	-	eous ACBM	
	M with potential for damage	-		
	M with potential for signific	-		
Any	remaining friable ACBM or	friable suspected AC	BM	
Comments.				

Inspector Signature:\_\_\_\_\_

APPENDIX D

RESERVOIRS ENVIRONMENTAL INC. CHAIN OF CUSTODY FORM



Due Date:\_\_\_\_\_

Due Time:\_\_\_\_\_

# REILAB Reservoirs Environmental, Inc.

Job #\_\_\_\_\_

Page \_\_\_\_1\_\_\_ of \_\_\_\_\_

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Address:	Address:					Pho	one:					Phor	ne:			
						Fax	K:					Fax:	Fax:			
						Ce	II/page	r:				Cell/	pager:			
Project Number and/or P.O. #:						Fir	nal Dat	a Deliverab	e Email Ao	dress	:					
Project Description/Location:																
ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7	pm		REQ	UES	STED	) ANA	LYS	IS		/AL	ID M	ATRIX CO	DDES	LAB NOTES:		
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(Rush PCM = 2hr, TEM = 6h	ır.)	t	Quant,			F	DRO		D	ust =	D:	Pa	aint = P			
CHEMISTRY LABORATORY HOURS: Weekdays: 8am -	5pm	Count	, +/-, ( Preps			Sce	GRO, I		S	Soil =	S	W	ipe = W			
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	turnarounds.**	Long report,						oproved wipe	media only**							
Organics24 hr3 day5 Day	/		Level II, ro-vac, 1	7400B,	Respirable	eldir.	≥ ×									
**Turnaround times establish a laboratory priority, subject to laborator		Short report,	∖, Le icro-			Analyte(s) CLP, Weld	BTEX,		ne							
Additional fees apply for afterhours, weekends ar	nd holidays.**	ort re	AHERA, lant, Micr	7400A,	Total,	- Analy TCLP,			olun	ę	ers					
Special Instructions:		Sho	AH uant	74(	ч Ч	, ⊢ °, °,	IC I	~	e <	õ	aine	Date	Time			
		Σ	<b>TEM</b> - AHERA, Level Semi-quant, Micro-vac	Σ	DUST	<b>METALS</b> RCRA 8,	ORGANICS	OTHER	Sample Volume (L) / Area	Matrix Code	# Containers	Collected	Collected	EM Number		
Client sample ID number (Sample ID's must be u	unique)	PLM	<b>TEM</b> Semi	PCM	DQ	ME NO	OR	ОТ	Sa (L)	ŝ	) #	mm/dd/yy	hh/mm a/p	(Laboratory Use Only)		
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Number of samples received: (. NOTE: REI will analyze incoming samples based upon information received and wi	Additiional samples shall be listed on				'	e inaccu	iracy of	original da	ta By sign	ina cli	ent/cor	mnany renrese	ntative agrees the	at submission of the		
te		Saloui						s.ignia ad			5.10001	mpany represe				

following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

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Laborate Received B	ory Use Only <sup>y:</sup>		Dat	e/Time:			Carrier:	Temp. (Fº)	Y/N	Y/N	Y/N
Results:	Contact	Page Phone Email Fax	Date	Time	Initials	Contact	Page Phone	e Email Fax D	ate	Time	Initials
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	nt C	+/-, Preps			als S	GRO,		Soil = S		ipe = W	
	Poi	ISO, ect F			Meta	ő			ng Water = D e Water = W		
RES Job # Page6 of	sport,	02, -Indii	₹		me,	8260,			Other = $O$	vv	
	ng re	l, 7402, ISO, +/-, Quant, ISO-Indirect Preps	-so	ble	g Fu	TBE,	**AST		approved wipe	media only**	
	Short report, Long report, Point Count	vel II vac,	7400B, OSHA	- Total, Respirable	- Analyte(s) TCLP, Welding Fume, Metals Scan	BTEX, MTBE,					
Submitted by:	eport	A, Le icro-	740	Re	alyte o, W	3TE)	ле				
	ort re	HER⊿ t, Mi	7400A,	otal,	- An		olur	ers ers			
	- Sh	- AF quan		- -	, <sup>8</sup> ,		ole ∖ Area	x Cc	Date	Time	
Client sample ID number (Sample ID's must be unique)	PLM	<b>TEM</b> - AHERA, Level II, Semi-quant, Micro-vac, I\$	PCM	DUST	METALS RCRA 8, <sup>-</sup>	ORGANICS- OTHER -	Sample Volume (L) / Area	Matrix Code # Containers	Collected mm/dd/yy	Collected hh/mm a/p	EM Number (Laboratory Use Only)
138		- 00					0, _	~ *			
139											
140								*******			
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168		,		* *1*1*1*1*1*1*		, , , , , , , , , , , , , , , , , , ,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		a a, a, a cara cara cara da	, p, e, e(e(e(e(e(e(e(e(e(e(e(e(e(e(e(e(e(e	

APPENDIX E

LEAD PAINT SAMPLING FORM



### TRIHYDRO CORPORATION LEAD PAINT SAMPLING FORM

			Date:
			Project Name:
			Project Number:
AAS/ICP –	LEAD in Paint	Samples	
Name of P	roperty Owne	r: ⁄ Address:	
	Area	Location	Lab Results
ID	ID	Description	
Total numb	er of samples	on this page:	
Date of Sar	mple Collectior	n:// Date Shipped to	o Lab://
Sampler Si	gnature		
Page c	of		