

Construction Completion Report

New World Repository Sump

Drain Field

AG-0343-C-17-0019

Project Number 114-710324C

Summer 2017

PRESENTED TO

USDA Forest Service

Custer Gallatin National Forest

Task 600 on Federal Task Order Contract # AG-0343-B-12-0001

Reviewed by:

Tetra Tech

825 W. Custer Ave.

Helena, MT 59602



April 10, 2018

Michael Hatten, P.E.

Date

Prepared by:

Tetra Tech

851 Bridger Drive

Bozeman, MT 59718



April 10, 2018

Shane Matolyak, Project Manager

Date

Approved by:

USDA Forest Service

Mary Beth Marks

Date

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ACRONYMS/ABBREVIATIONS

CGNF	Custer Gallatin National Forest
CQC	Construction Quality Control
CY	Cubic Yards
DEQ	Department of Environmental Quality
HDPE	High Density Polyethylene
LLDPE	Linear Low Density Polyethylene
Lbs	Pounds
LF	Lineal Feet
LS	Lump Sum
NWCS	North Wind Construction Services, LLC
PVC	Polyvinyl Chloride
SY	Square Yards
USDA-FS	United States Department of Agriculture – Forest Service

1.0 INTRODUCTION

Tetra Tech, Inc. (Tetra Tech) was contracted by the United States Department of Agriculture-Forest Service (USDA-FS) Custer Gallatin National Forest (CGNF) to provide construction engineering management and quality assurance oversight during construction of a drain field to dispose of water accumulating in the New World repository sump.

This Construction Completion Report documents the construction activities implemented during construction. Contract documents are provided in **Appendix A** and pre-work documentation is provided in **Appendix B**. Daily construction logs and photos are provided in **Appendix C** and **D** while contractor submittals are included in **Appendix E**. The final inspection report, as-constructed drawings, and the final pay request are provided in **Appendix F, G, and H**.

1.1 PROJECT LOCATION

The drain field construction site is within the New World Mining District which lies adjacent to Yellowstone National Park's northeast corner. The Absaroka-Beartooth Wilderness Area bounds the District to the north and east, with the Montana-Wyoming state line forming the southern boundary of the District. The District is situated entirely in Montana on National Forest System land managed by the USDA-FS, CGNF.

1.2 PURPOSE

The purpose of the repository sump drain field is to passively dispose of water that accumulates within the repository sump due to a suspected breach in the repository liner. Prior to construction, this water was pumped annually and transported to a waste water treatment system. After a review of monitoring data by the USDA-FS and Montana Department of Environmental Quality (DEQ), it was concluded that the water is of sufficient quality to discharge to the subsurface using a drain field.

1.3 PROJECT DESCRIPTION

The New World repository contains approximately 32,000 cubic yards (CY) of mine waste encapsulated within a lined (upper and lower liners) facility capped with a three-foot thickness of cover soil. A gravel-filled sump along the southern edge of the repository serves as a collection point for water draining from the waste or otherwise entering the facility. The sump is accessed by an inclined pipe used to collect samples of the accumulated water and also to allow the water to be removed for off-site disposal.

The project consisted of excavation through cover soil, mine waste material, and sump drainage gravel to expose both the upper and bottom liners to allow installation of a horizontal drainpipe to convey water from the sump to a drain field. A secondary vertical sump access pipe was also installed to allow for sump water monitoring in the event that the preexisting access pipe became inoperable due to construction activities.

Work included the following:

- Mobilization to and demobilization from the project site. Providing the required bonding and insurance.
- Excavation of and separately stockpiling cover soil, mine waste material, and sump drainage gravel.
- Cutting and folding back the repository upper liner and the sloping portion of the bottom liner.
- Excavation of a pipe corridor from the repository sump to the drain field location.
- Excavation of the drain field gallery.
- Installation of the vertical secondary sump access pipe.
- Installation of the horizontal drain pipe and perforated infiltration pipe network.

- Backfilling the drain field and pipe corridor with USDA-FS supplied washed gravel.
- Placement of linear low density polyethylene (LLDPE) patch above cut portion of bottom liner.
- Replacement of excavated drainage gravel into the repository sump.
- Installation of geotextile filter fabric above sump and drain field gravel.
- Full encapsulation of pipe corridor gravel within geotextile filter fabric.
- Replacement of mine waste into the repository.
- Placement of LLDPE patch above cut portion of upper liner.
- Replacement of cover soil over repository and drain field excavations.
- Reseeding, fertilization, and erosion mat placement on disturbed areas.
- Removal of construction debris and unused materials from the site.
- Placement of additional gravel along disturbed portion of access road.

1.4 CONSTRUCTION PLANS AND SPECIFICATIONS

The project plans and specifications (hereinafter, “the Contract Documents”) were prepared by Tetra Tech’s design team. The Contract Documents consisted of seven plan sheets, a bid form, Forest Service standard construction specifications, special project construction specifications, and contract clauses. The final contract, AG-0343-C-17-0019, and Modification No. 1 are included as **Appendix A**. Section J – Plans, of the contract is not included in this appendix but is provided as As-Constructed drawings in **Appendix F**.

2.0 PRE-CONSTRUCTION

2.1 BID AWARD

The USDA-FS completed a sole-source contract award to North Wind Construction Services LLC (NWCS) of Kellogg, Idaho, to complete the work. The contract was issued on April 25, 2017. Pre-work meeting documentation, including the Notice to Proceed are included in **Appendix B**.

2.2 CONSTRUCTION QUALITY CONTROL

In general, CQC responsibilities were mainly the responsibility of Site Superintendent Myron Belgarde, but were shared amongst members of NWCS’s team. NWCS’s project personnel are listed below.

Table 2-1 – Project QC Team

QC Agency	QC Team Personnel	Project Role
North Wind Construction	Chris Richardson Myron Belgarde Shawn Martin Bryan Teeters Garrett Williams	Project Manager Site Superintendent/Project QC Manager Operator/Laborer Operator/Laborer Operator/Laborer
Forsgren Associates, Inc.	Rick Byrem Nick Schofield	Surveyor Surveyor

3.0 CONSTRUCTION

USDA-FS issued the Notice to Proceed to NWCS on August 6, 2017. Equipment inspection and mobilization to the Site began on August 7, 2017. Project construction activities began on August 8, 2017. The project had a contract duration of 21 consecutive calendar days resulting in an anticipated contract completion date of August 27, 2017. **Table 3-1** lists major project construction milestones. **Appendix C** includes daily construction logs prepared by Tetra Tech’s oversight personnel detailing construction activities. **Appendix D** includes project photographs taken by Tetra Tech oversight personnel.

Table 3-1 – Construction Milestones

Milestone	Start Date	Completion Date
Notice to Proceed	-	August 6, 2017
Equipment Mobilization	August 7, 2017	August 23, 2017
Construction Start Date	August 8, 2017	-
Cover soil removed from upper liner and upper liner cut to access waste	August 8, 2017	August 9, 2017
Waste and sump drainage gravel excavated to expose bottom liner	August 9, 2017	August 15, 2017
Trench and drain field are excavated	August 15, 2017	August 24, 2017
Drainpipe is installed into trench	August 15, 2017	August 24, 2017
Patch sump bottom liner	August 16, 2017	August 16, 2017
Secondary sump access pipe is installed	August 23, 2017	August 23, 2017
Drainage gravel and mine waste backfilled into repository	August 24, 2017	August 24, 2017
Repository upper liner patched and cover soil replaced	August 24, 2017	August 24, 2017
Perforated pipe installed in drain field	August 24, 2017	August 25, 2017
Disturbances are reseeded and erosion mat installed over majority of area	August 25, 2017	August 25, 2017
Erosion mat installed over remainder of disturbed area by USDA-FS staff	October 12, 2017	October 12, 2017

3.1 MAJOR CONSTRUCTION ACTIVITIES

3.1.1 Excavate and Stockpile Materials

Cover soil excavated from the repository was stockpiled uphill of the excavation. This allowed the soil to be segregated from waste materials and provided a measure of erosion control, as any soil moving from the stockpile would fall into the excavation.

The access road along the southwest corner of the repository was scraped to remove the upper few inches of road base to prepare a site for mine waste stockpiling. Excavated road materials were stockpiled uphill of the work area along the western side of the repository. The prepared road surface was sloped toward the repository

to minimize the potential for run-off to drain over the repository buttress and off-site. Mine waste was stockpiled along the access road south of the repository.

Sump drainage gravel was excavated and stockpiled within the excavation limits of the repository. Clean gravel brought to the site from the USDA-FS stockpile was staged at the farthest southwest corner of the access road until it was used as backfill within the excavation.

Topsoil excavated from the pipeline corridor and infiltration gallery was stockpiled near to and uphill of those excavations, while subsoil and rock was stockpiled immediately adjacent to the excavations.

3.1.2 Install Drainpipe

Upon observation and survey of sump bottom liner elevation, it was determined that the elevation was 8,361.04 feet rather than the expected 8,360.5 feet. Because the sump elevation was greater than expected and above the design elevation of the horizontal drain pipe invert, the drain pipe invert was positioned at an elevation of 8,364.3 feet to ensure that both the primary and secondary sump access tubes will intercept a pool of water for future monitoring. Increasing the drain pipe entrance invert resulted in a more steeply dipping grade along the drainpipe to its intersection with a designed grade break at station STA:0+95.00, which was approved by the Tetra Tech design engineer.

The inlet of the drainpipe was wrapped in geotextile to prevent ingress of gravel based on discussion between USDA-FS and Tetra Tech engineers.

The floor and sides of the pipeline corridor were lined with geotextile and backfilled with between 12 to 24 inches of washed gravel as needed to maintain the proper grade along the drainpipe. However, interception of bedrock and resultant difficulty excavating required placement of a 4-inch thickness of gravel along an approximate 10-inch length approximately 30-feet west of the drain pipe inlet. This deviation from plan was discussed and approved with the Tetra Tech design engineer who was onsite at this time. An additional 16-foot length of drainpipe was added to the pipeline in order for the drain field pipe network to clear a section of bedrock, the excavation of which would have caused delays.

After placement of the drainpipe, the corridor was backfilled with at least 12 inches of washed gravel and another section of geotextile placed to ensure full encasement of the gravel fill before backfilling with native materials and compacting with the excavator bucket.

3.1.3 Install Drain Field Pipe Network

Following excavation of the infiltration gallery and installation of solid drainpipe from the sump to the gallery location, the drain field pipe network was installed. Due to difficulty excavating through bedrock, the segment of drain field solid pipe perpendicular to the perforated laterals was bedded above 18 inches of washed gravel rather than the 24-inch design thickness. The remainder of the drain field pipe was placed above 24 inches of gravel. Once the drain field pipe was positioned and surveyed to ensure the correct grade and spacing, the pipe was buried with 24 inches of washed gravel which was covered with a geotextile before backfilling with native material. The downstream ends of the three perforated lateral pipes were wrapped with geotextile to prevent ingress of gravel during backfilling.

3.1.4 Install Secondary Sump Access Pipe

A vertical secondary access pipe was installed in the repository sump to allow continuation of sump water monitoring activities in the event that the primary sump access pipe became inoperable following construction. The secondary access pipe consists of a 2-inch diameter PVC pipe, the bottom 58 inches of which are 0.01-inch slotted screen. The access pipe was installed during backfill operations with care taken to protect the pipe from bending or other damage. The bottom of the access pipe was positioned on top of a 6-inch thickness of drainage gravel separating the pipe from the sump bottom liner. The slotted portion of the pipe extends 10.5 inches above

the sump drainage gravel and geotextile filter fabric. The slotted portion of the pipe is surrounded with an approximately 12-inch diameter of drainage gravel. A 4-inch steel well protector was cemented in place at the repository surface to protect the well. A wooden post was installed adjacent to the well protector to alert winter recreationists to the presence of the well during times when snow cover will obscure the well protector.

3.1.5 Repository Backfill and Liner Repair

All waste materials removed from the repository to allow access to the sump bottom liner were returned to the repository before repairing the upper liner. The sump was backfilled with new washed gravel provided by the USDA-FS. The gravel was backfilled to its original elevation within the sump and covered with a new sheet of geotextile. Mine waste and the original sump gravel were placed above the geotextile and compacted. After repairing the upper HDPE liner, stockpiled cover soil was replaced above the liner and tracked with an excavator to limit potential for erosion to occur on the sloped repository surface. All material removed from the repository fit within the excavation limits, and the resulting topography closely matched that of the repository prior to excavation.

The sloping perimeter of the sump bottom liner was sliced and folded back to allow excavation of the pipe corridor and placement of the horizontal drain pipe. After the drainpipe was installed, an attempt was made to reposition the folded edges of the liner. Due to the relative inflexibility and brittleness of the liner, it was not possible to reposition the edges to their original positions above the drain pipe. Instead, creased or otherwise damaged portions of the liner were cut away to allow the remaining liner to be positioned in direct contact with the backfill beneath the liner. A sheet of LLDPE was then placed above and overlapping the bottom liner and spanning the gap between the cut edges of the liner.

Repair of the repository upper liner was much the same as the sump bottom liner. The HDPE and geocomposite layers were repositioned as close to their original position as possible. Damaged portions or those that would not lay flat on the surface of the backfilled mine waste were cut away, and a single sheet of LLDPE was placed above and overlapping the edges of the exposed original liner prior to cover soil replacement.

3.1.6 Seed, Fertilize, and Install Erosion Control Mat

After cover soil was placed on the repository and drain field excavation areas, seed and fertilizer were spread using a hand operated Scott brand broadcast spreader and erosion mat installed. The seed mix was adjusted by the supplier to account for seed purity and viability to achieve the specified application rate of Pure Live Seed. Fertilizer consisted of a 16-16-16 (nitrogen-phosphorous-potassium) formulation.

The total disturbed acreage of the repository excavation was 0.16 acres. Based on the seeding rate and manufacturer's suggested fertilization rate for groundcover establishment, 6.4 lbs of seed and 91 lbs of fertilizer should have been applied to the repository disturbance. Approximately 4.5 lbs of seed were applied to the repository area due to a misunderstanding of information listed on the seed container labels. Approximately 15 lbs of fertilizer was applied to the repository excavation area.

The total disturbed acreage of the drain field excavation was 0.27 acres requiring approximately 11 lbs of seed and 150 lbs of fertilizer. Approximately 20 lbs of seed and 35 lbs of fertilizer were applied to drain field excavation area.

Erosion mat was placed on the entire disturbed area of the repository. Because the project's total disturbance footprint was larger than anticipated, only four rolls of erosion mat remained after covering the repository disturbance. These rolls were placed in discrete strips on the drain field disturbance. The USDA-FS later purchased additional erosion mat which was installed over the remainder of the area on October 12, 2017.

3.2 CONSTRUCTION MANAGEMENT

A functional line of communication was established between NWCS and Tetra Tech. Routine communication was verbal. Change orders and significant design modifications were unnecessary and did not occur, while minor field modifications were handled through onsite verbal communication and documentation in the Daily Construction Report. Project submittals were submitted and administered through a standard engineering review process.

3.2.1 Communication with Contractor

Communication with NWCS was consisted of construction progress meetings held each morning between Tetra Tech and NWCS. Meeting formats typically included review of safety issues, construction progress updates, construction activities expected for the coming day, and discussion of project issues. Tetra Tech's onsite Construction Inspector, Shane Matolyak discussed project-related issues and progress to USDA-FS and Tetra Tech's design engineer as needed.

3.2.2 Submittals

Submittals were handled in accordance with the procedures of the contract documents. **Table 3-2**, below, lists project submittals with submittal dates. **Appendix E** contains copies of submittals.

Table 3-2 – Final Submittal Register

	Submittal Name	Date Received
#001	Baseline Schedule – New World Waste Repository	August 1, 2017
#002	Health and Safety Plan – New World Waste Repository	August 4, 2017
#003	Erosion Control Plan – New World Waste Repository	August 4, 2017
#004	Emergency Response and Spill Prevention Plan – New World Waste Repository	August 4, 2017
#005	HAZWOPER Documentation – New World Waste Repository	August 4, 2017
#006	Product Information – Erosion Control Mat – New World Waste Repository	August 9, 2017
#007	Product Information – Type IV-A Geotextile – New World Waste Repository	August 9, 2017
#008	Product Information – Seed Mix – New World Waste Repository	August 9, 2017
#009	Product Information – HDPE Pipe (Perforated and Solid) – New World Waste Repository	August 9, 2017

3.2.3 Weather Delays

No weather delays were granted for the project nor did shutdowns occur due to weather.

3.2.4 Project Closeout

Revegetation of the repository sump drain field project was completed and final inspection performed on August 25, 2017. The final daily inspection was performed by Shane Matolyak (Tetra Tech Project Representative). The final inspection was signed off on by Mary Beth Marks USDA Forest Service - Contracting Officer Representative (COR) on August 31, 2017, and is included in **Appendix F**.

Work items were bid on a lump sum and unit price basis. Payment was made based on the actual quantity of each bid item completed. **Table 3-3** displays the bid items, bid item unit prices, units of measurement, and estimated and actual quantities. Actual quantities were determined by construction oversight personnel.

As-constructed drawings were prepared and are included in **Appendix G** along with documentation for the final seed mix and additional erosion control mat that was installed by the USDA-FS.

Table 3-3 – Quantities Completed

Bid Item	Description	Unit	Unit Price	Est. Qty.	Act. Qty.	Quantity Difference	Total Price
151	Mobilization, Demobilization, Bonding and Insurance	LS	\$44,777.00	1	1	0	\$44,777.00
151	Load and Haul K-30-B LLDPE Liner from Beal Mountain Mine	LS	\$2,885.00	1	1	0	\$2,885.00
204.02(a)	Excavate and Stockpile Repository Cover Material	LS	\$62,562.00	1	1	0	\$62,562.00
204.02(b)	Excavate and Stockpile Repository Waste to Expose Sump						
204.02(c)	Excavate and Stockpile Sump Drain Gravel						
204.02(d)	Excavate and Stockpile Native Material						
204.02(e)	Infiltration Basin Drain Gravel/Bedding Gravel	CY	\$82.25	149	149	0	\$12,255.25
204.02(f)	Type IV-A Geotextile	SY	\$21.80	90	90	0	\$1,962.00
602.06	8" HDPE Solid Pipe (Sump Drain Pipe)	LF	\$36.26	125	125	0	\$4,532.00
602.06	8" HDPE Perforated Pipe	LF	\$31.83	75	75	0	\$2,387.25
204.02(g)	Repair Bottom Liner System Cut and Place K-30-B LLDPE Liner Strip	LS	\$2,756.00	1	1	0	\$2,756.00
204.02(h)	Secondary Sampling Sump	LS	\$7,140.00	1	1	0	\$7,140.00
204.02(i)	Replace Sump Drain Gravel	LS	\$20,440.00	1	1	0	\$20,440.00
204.02(j)	Install Type IV-A Geotextile Sump Separation Geotextile						
204.02(k)	Replace Repository Waste						
204.02(l)	Replace and Regrade Native Material						

Bid Item	Description	Unit	Unit Price	Est. Qty.	Act. Qty.	Quantity Difference	Total Price
204.02(m)	Repair Top Liner System	LS	\$14,965.00	1	1	0	\$14,965.00
204.02(n)	Cut an Place K-30-B LLDPE Liner Strip						
	Replace Repository Cover Material						
625	Fertilize and Seed	LS	\$8,275.00	1	1	0	\$8,275.00
713.17	Temporary Rolled Erosion Control Mat						
Total Contract Price							\$184,937.00
LS – Lump sum CY – Cubic yard LF – Linear feet SY – Square yard							

3.3 PROJECT COSTS

NWCS base bid for the Project contract was \$184,937.00. No cost modifications were issued for the Project. NWCS was paid a total of \$184,937.00. One payment was made to NWCS. The pay request is included in **Appendix H**.

4.0 LESSONS LEARNED

As the project progressed, Tetra Tech, USDA-FS, and NWCS personnel became aware of issues on this project that resulted in lessons that may be of use on future construction projects, particularly those in remote locations. These items include the following:

- NWCS’s initial mobilization to the site did not include a number of materials such as pipe, erosion mat, or hand tools. The repeated need to acquire items from distant locations or via delivery to Cooke City resulted in minor delays and one day of lost work during the first work week.
- A substantial volume of bedrock was encountered during excavation of the pipeline corridor on August 15, 2017. As this was not expected, a rock hammer attachment was not initially on site for use; however, this equipment was ordered and delivered to the site on August 17, 2017. Once installed on the mini-excavator, it was observed that the rock hammer was not functioning properly and could only break rock very slowly. Because of this, the large excavator and its bucket were also used to excavate through the bedrock which eventually resulted in damage to the excavator’s hydraulic system, subsequent spill response actions, and work delays while replacement parts were retrieved from a supplier in Butte, Montana. It was determined that the rock hammer was defective from the factory, and this hammer and mini-excavator were replaced with a different excavator and hammer that arrived on site on August 23, 2017.
- Less seed was applied to the repository disturbance due to a misunderstanding of the labels affixed to the two seed bags. Each bag had a label showing that the seed was adequate for “2.5 acres” which was interpreted as being enough seed for both bags to cover 5 acres, and the amount of seed to apply to each disturbed area was based on this. However, the label was intended to communicate that both bags were adequate to seed a total area of 2.5 acres. See section 3.1.6 for more information.

APPENDIX A – CONTRACT DOCUMENTS

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE



CONTRACT NO:

AG-0343-C-17-0019

CONTRACTOR:

North Wind Construction
Services, LLC
1176 Big Creek Road
Kellogg, ID 83837

Phone (208) 783-1255

PROJECT:

New World Mine Repository
Sump Drainage Field
Construction

LOCATION:

Custer-Gallatin National Forest

AWARDING OFFICE:

USDA - Forest Service
R1, Acquisition Management
24 Fort Missoula Road
Missoula, MT 59804

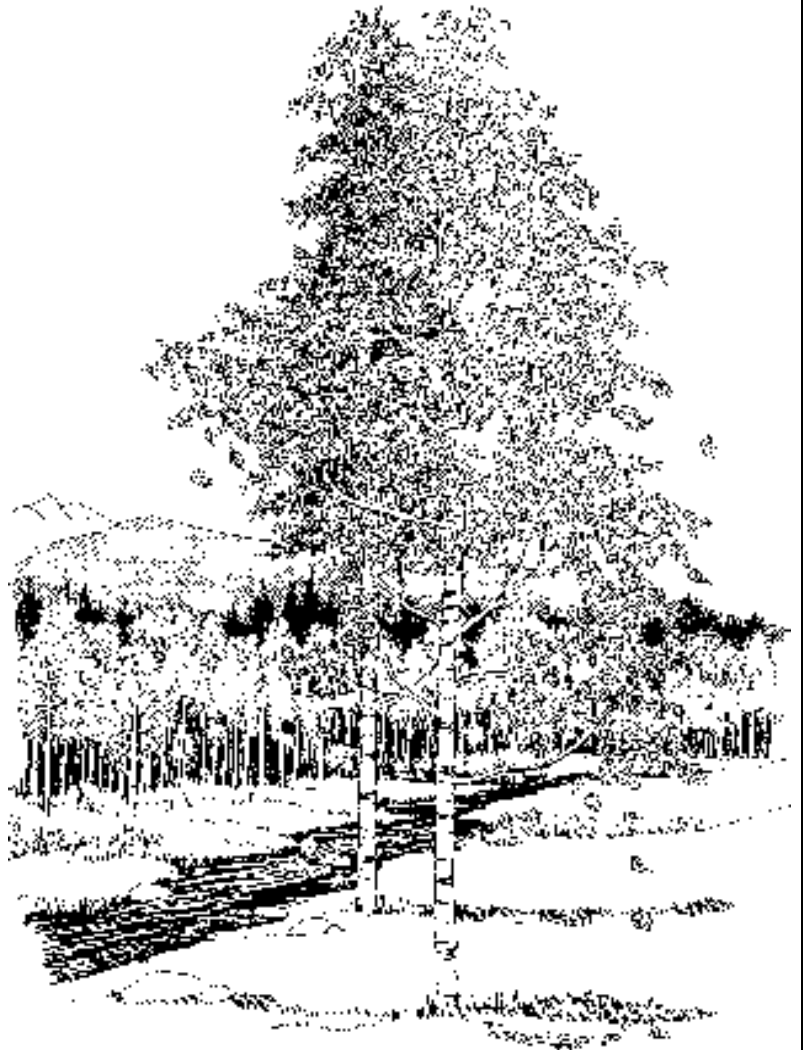


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SOLICITATION, OFFER, AND AWARD <i>(Construction, Alteration, or Repair)</i>	1. SOLICITATION NO. RFP AG-0343-S-17-0015	2. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)	3. DATE ISSUED 2/8/2017	PAGE OF PAGES 1 83
	IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.			

4. CONTRACT NO. AG-0343-C-17-0019	5. REQUISITION/PURCHASE REQUEST NO. Req. 841052	6. PROJECT NO.
7. ISSUED BY US - Forest Service Region 1, Acquisition Management 24 Fort Missoula Road Missoula, MT 59804	CODE	8. ADDRESS OFFER TO US - Forest Service Region 1, Acquisition Management 24 Fort Missoula Road Missoula, MT 59804
9. FOR INFORMATION CALL:	a. NAME Dale Reckley	b. TELEPHONE NO. <i>(Include area code) (NO COLLECT CALLS)</i> (406) 329-3525

SOLICITATION

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder."

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS *(Title, identifying no., date):*

**New World Mine Repository Sump Drainage Field Construction
Park County, Montana
Custer-Gallatin Forest**

Price Range

The Government's estimate is:

Between \$100,000 and \$250,000.

11. The Contractor shall begin performance within <u>10</u> calendar days and complete it within <u>21</u> calendar days after receiving <input type="checkbox"/> award, <input checked="" type="checkbox"/> notice to proceed. This performance period is <input checked="" type="checkbox"/> mandatory, <input type="checkbox"/> negotiable. <i>(See Section F, Clause 52.211-10)</i>	
12a. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? <i>(If "YES," indicate within how many calendar days after award in Item 12b.)</i> <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	12b. CALENDAR DAYS 10
13. ADDITIONAL SOLICITATION REQUIREMENTS:	
a. Sealed offers in original and <u>1</u> copies to perform the work required are due at the place specified in Item 8 by 2:00 pm local time February 28, 2017 . If this is a sealed bid solicitation, offers must be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.	
b. An offer guarantee <input type="checkbox"/> is, <input checked="" type="checkbox"/> is not required. (If "is required" see AGAR Clause 452.228-70)	
c. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.	
d. Offers providing less than <u>30</u> calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.	

OFFER (Must be fully completed by offeror)

14. NAME AND ADDRESS OF OFFEROR (Include ZIP Code) North Wind Construction Services, LLC 1176 Big Creek Road Kellogg, ID 83837 Duns No. <u>078502306</u> TIN: <u>80-0651375</u> CAGE Code (see FAR Provision 52.204-16) _____		15. TELEPHONE NO. (Include area code) (208) 783-1255
CODE <u>5JZC3</u> FACILITY CODE _____		16. REMITTANCE ADDRESS (Include only if different than Item 14) North Wind Construction Services Accounting Department 1425 Higham Street Idaho Falls, ID 83402


17. The offeror agrees to perform the work at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government within 30 calendar days after the date offers are due. (Insert any number equal to or greater than the minimum requirement stated in Item 13d. Failure to insert any number means the offeror accepts the minimum in Item 13d.)

AMOUNTS

18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGMENT OF AMENDMENTS

The offeror acknowledges receipt of amendments to the solicitation -- give number and date of each

AMENDMENT NO.									
DATE									
20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print) Kevin Redmond, Remedial Action Manager North Wind Construction Services					20B. SIGNATURE 			20C. OFFER DATE 18 Apr 2017	

AWARD (To be completed by Government)

21. ITEMS ACCEPTED:

ALL

22. AMOUNT <i>1,184,937.00</i>	23. ACCOUNTING AND APPROPRIATION DATA	
24. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	ITEM <i>27</i>	25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO <input type="checkbox"/> 10 U.S.C. 2304(c)() <input type="checkbox"/> 41 U.S.C. 253(c)()
26. ADMINISTERED BY US - Forest Service 24 Fort Missoula Road Missoula, MT 59804	CODE	27. PAYMENT WILL BE MADE BY All invoices will be processed using the Department of Treasury's Invoice Processing Platform (IPP), visit http://www.ipp.gov to learn more. Contractors must follow the instructions on how to register and submit invoices via IPP.

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

<input type="checkbox"/> 28. NEGOTIATED AGREEMENT (Contractor is required to sign this document and return _____ copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all work requirements identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.	<input checked="" type="checkbox"/> 29. AWARD (Contractor is not required to sign this document.) Your offer on this solicitation is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.
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30a. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN (Type or print)		31a. NAME OF CONTRACTING OFFICER (Type or print) <i>DALE R. RECKLEY</i>	
30b. SIGNATURE	30c. DATE	31b. UNITED STATES OF AMERICA BY <i>Dale R. Reckley</i>	31c. DATE <i>4/25/17</i>

PART I - THE SCHEDULE

SECTION B - SUPPLIES OR SERVICES AND PRICES

**New World Mine Repository Sump Drainage Field Construction
 Park County, Montana
 Custer-Gallatin National Forest**

B- 1 Schedule of Items

<u>Task and Pay Item</u>	<u>Item Description</u>	<u>MM*</u>	<u>Pay Unit</u>	<u>Est. Quantity</u>	<u>Unit Price</u>	<u>Amount</u>
Administrative						
151	Mobilization, Demobilization, Bonding and Insurance	LSQ	LS	1	XXXXXXXX	\$ <u>44,777.00</u>
Liner Transportation						
151	Load and Haul K-30-B LLDPE Liner from Beal Mountain Mine	LSQ	LS	1	XXXXXXXX	\$ <u>2,885.00</u>
Excavate Overlying Materials						
204.02(a)	Excavate and Stockpile Repository Cover Material					
204.02(b)	Excavate and Stockpile Repository Waste to Expose Sump	LSQ	LS	1	XXXXXXXX	\$ <u>62,562.00</u>
204.02(c)	Excavate and Stockpile Sump Drain Gravel					
204.02(d)	Excavate and Stockpile Native Material					
Install Sump & Infiltration Gallery						
204.02(e)	Infiltration Basin Drain Gravel/ Bedding Gravel	CQ	CY	149	\$ <u>82.25</u>	\$ <u>12,255.25</u>
204.02(f)	Type IV-A Geotextile	CQ	SY	90	\$ <u>21.80</u>	\$ <u>1,962.00</u>
602.06	8" HDPE Solid Pipe (Sump Drain Pipe)	AQ	LF	125	\$ <u>36.26</u>	\$ <u>4,532.50</u>
602.06	8" HDPE Perforated Pipe	AQ	LF	75	\$ <u>31.83</u>	\$ <u>2,387.25</u>
204.02(g)	Repair Bottom Liner System Cut and Place K-30-B LLDPE Liner Strip Bentonite (DELETED)	LSQ	LS	1	XXXXXXX	\$ <u>2,756.00</u>
204.02(h)	Secondary Sampling Sump	LSQ	LS	1	XXXXXXX	\$ <u>7,140.00</u>

<u>Task and Pay Item</u>	<u>Item Description</u>	<u>MM*</u>	<u>Pay Unit</u>	<u>Est. Quantity</u>	<u>Unit Price</u>	<u>Amount</u>
Replace Overlying Materials						
204.02(i)	Replace Sump Drain Gravel					
204.02(j)	Install Type IV-A Geotextile Sump Separation Geotextile					
204.02(k)	Replace Repository Waste	LSQ	LS	1	XXXXXXXX	\$ 20,440.00
204.02(l)	Replace and Regrade Native Material					
Replace Top Cover						
204.02(m)	Repair Top Liner System					
	Cut and Place K-30-B LLDPE Liner Strip					
	Bentonite (DELETED)	LSQ	LS	1	XXXXXXXX	\$ 14,965.00
204.02(n)	Replace Repository Cover Material					
Revegetate						
625	Fertilize and Seed					
713.17	Temporary Rolled Erosion Control Mat	LSQ	LS	1	XXXXXXXX	\$ 8,275.00
TOTAL AMOUNT OFFERED (All Items)						\$ 184,937.00

* Designated Method of Measurement:
 DQ – Designed Quantities; AQ - Actual Quantities,
 LSQ - Lump Sum Quantities; SQ – Staked Quantities; CQ – Contract Quantities

B- 2 Payment for Bond Premiums

Note: Payment for bond premiums in accordance with FAR Clause 52.232-5, Payments Under Fixed-Price Construction Contracts, shall not be in addition to the contract price.

PART I - THE SCHEDULE

SECTION C - DESCRIPTION/SPECIFICATIONS

C-1 - PROJECT DESCRIPTION AND LOCATION

(a) **Description of Work.** The intent of the contract is to provide for the construction and completion of the work described. The precise details of performing the work are not stipulated except as considered essential for successful completion of the work. The CONTRACTOR must furnish all labor, materials, equipment/tools, transportation, supervision, and supplies necessary to complete the work according to the contract. Work includes the following:

- Mobilization, Demobilization, Bonding, and Insurance
- Erosion Control Plan
- Providing and implementing a site specific Health and Safety Plan (HASP)
- Transporting two (2) panels approximately 105 ft X 200 ft each of K-30-B linear low-density polyethylene liner material from the Beal Mountain Mine to the Site.
- Maintaining project access roads
- Stripping and stockpiling topsoil from disturbance area
- Excavating and stockpiling repository cover material, waste material, and sump drain rock
- Excavating and stockpiling native material for trench and infiltration gallery
- Installing infiltration gallery and sump drain pipe, drain rock/pipe bedding, and geotextile
- Providing and installing the secondary sampling sump
- Replacing repository materials and repairing repository liner
- Replacing native material, regrading infiltration gallery, and placing stockpiled topsoil
- Reseeding and fertilizing disturbed areas
- Providing and placing erosion control mat on disturbed areas

Work for this project includes three major tasks. One of the major tasks is to excavate and stockpile material for the construction of the sump drain and infiltration gallery. The second major task is installing the sump drain and infiltration gallery. The third major task is the replacement of materials in the repository, the repair of disturbed liners, and regrading the repository cover and native materials. Ancillary tasks in support of these tasks include road maintenance on haul roads (blading and watering), Mobilization and Demobilization, preparing and implementing an Erosion Control Plan, and preparing and implementing a Health and Safety Plan.

This work requires potentially handling mine waste which may contain metals and other chemicals that are listed as hazardous substances under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 42 U.S.C. 9601 and 9602. The CONTRACTOR and all SUBCONTRACTORS shall provide written documentation that all onsite personnel engaged in the Work have received the Occupational Safety and Health Administration 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) Training required under 29 CFR 1910.120.

(b) **Project Location.** The project is located in the New World Mining District near Cooke City, Montana, in the Beartooth Mountains. The District falls within the boundaries of the Gallatin and Custer National Forests and abuts Yellowstone National Park's northeast corner. The Absaroka-Beartooth Wilderness Area bounds the District to the north and east. The District lies entirely within Park County, Montana. The Work site addressed by this CONTRACT lies at an elevation of approximately 8,360 feet above mean sea level.

The project site can be reached from two access points off U.S. Highway 212 about 0.6 and 1.2 miles east of Cooke City. A map showing the locations of the work is included in the DRAWINGS. Cooke City is accessible by paved roads from the east over Highway 212 and from the west through Yellowstone National Park.

Access to Cooke City through Yellowstone National Park may be permitted, depending on vehicle weight and size limitations, with the following restrictions:

- a commercial permit is required

- special restrictions apply to commercial loads
- special restrictions apply if hauling petroleum products
- special restrictions apply to hauling other hazardous materials

Specific inquiries concerning hauling materials and equipment through the park should be directed to

Visitor Services Office
P.O. Box 168
Yellowstone National Park, WY 82190
Tel: (307) 344-2115
FAX: (307) 344-2104

- (c) **Pre-Bid Tour.** No pre-bid tour is schedule.
- (d) **Start Work.** Work shall commence no later than 10 business days following issuance of the Notice to Proceed.
- (e) **Period of Performance.** It is estimated that work will begin on or around August 7, 2017, and will continue for a period of 21-calendar days. It is important that this work is conducted during late summer or early fall. All work under this contract must be completed before the contract ending date.
- (f) **Price Range.** The project magnitude is estimated to be between \$100,000 and \$250,000.
- (g) **Restoration by CONTRACTOR.** The CONTRACTOR shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the CONTRACTOR shall remove from the work area and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Government. Upon completing the work, the CONTRACTOR shall leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer. All debris not designated for salvage shall be disposed offsite in a State-licensed landfill.
- (h) **Special Construction Techniques.** CONTRACTOR shall be the sole authority for the means and methods necessary to complete the Work as specified and shown in the Drawings, Specifications (FP-03 Standard Specifications and Forest Service Supplemental Specifications.) and Contract Clauses. To the extent specialized or repeated handling, active and passive dewatering and other site-specific work methods are required as the wastes are removed/consolidated, the costs associated with these specialized work methods are incidental to the work. CONTRACTOR shall only be paid in accordance with its bid for those unit price and lump sum items expressly described in the Schedule of Items (Section B- 1).
- CONTRACTOR assumes full and sole responsibility for the capability of selected construction techniques to complete the work in accordance with the contract documents. CONTRACTOR also assumes full responsibility for safety and environmental protection with his/her selected construction techniques. Submittal review in no way relieves CONTRACTOR of these responsibilities. The extent of construction technique submittal review by the CO shall be only to ascertain that the proposed technique appears capable of achieving a completed product consistent with the design intent of the contract documents.
- (i) **Utility Locations.** There are no known utilities available for the CONTRACTOR'S use at the Site. The CONTRACTOR is responsible for location of all underground utilities prior to ground disturbance on National Forest System land. Damaged utilities shall be repaired at the CONTRACTOR'S expense. Contact 811 prior to any ground disturbance.
- (j) **Speed and Weight Limits.** All loads leaving the site shall be covered or tarped. Posted speed limits shall be observed on all roads leading to the site as well as all other public roadways. Haul vehicles and all other vehicles used in the work shall strictly comply with these limits. Legal weight limits for public roadways and bridges shall be observed in all hauling activities.
- (k) **Permits.** It shall be the CONTRACTOR's responsibility to know and abide by any permit requirements for the work. The cost to implement the terms and requirements of the permits shall be considered incidental to the work. Any permit requirements for record keeping and reporting are not necessary for this CERCLA project. Copies of any known permit requirements shall be submitted to the CO prior to initiating construction activities. Delay by the CONTRACTOR in obtaining any permit information, terms and requirements will not be grounds for any extension of the contract time.

(l) **Key Personnel.** The key personnel specified in the Offeror's Technical Proposal are considered to be essential to the work being performed hereunder. Key personnel shall remain on the project for the duration of work.

(m) **Construction Surveying and Staking.** Construction surveying and staking shall be conducted by the Contractor prior to construction.

(n) **Use of Premises.** CONTRACTOR shall confine equipment, storage of materials, and construction operations to the areas shown on the Drawings. Only authorized personnel are allowed to be onsite during construction activities. CONTRACTOR shall not unreasonably encumber the site or public rights-of-way with materials and/or construction equipment. Should CONTRACTOR deem it necessary to work outside of the general construction areas shown, it shall be necessary for CONTRACTOR to obtain written approval from the CO.

Camping will not be permitted in the project area without written authorization of the CO.

The CONTRACTOR shall provide the location(s) of proposed staging area(s) for CO approval. Access must be maintained to other facilities on the site. The CONTRACTOR shall operate all equipment and store, transport, and handle material in a manner that will not damage existing infrastructure.

Site security is the responsibility of the CONTRACTOR. The CONTRACTOR shall be responsible for protecting all equipment and supplies for use on the project and stored at the site. The CONTRACTOR shall be responsible for all costs required to provide such protection.

The CONTRACTOR shall be responsible for solid waste disposal. The CONTRACTOR shall at all times keep the Site in a clean, neat, and orderly condition. **Please Note: The Site is located in the Gallatin and Custer National Forests and abuts Yellowstone National Park. The Site is within Grizzly and Black Bear habitat. Contractor shall comply with Occupancy and Use Order # 01-14-11-00-02:**

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3817710.pdf.

Construction related debris, including but not limited to used motor oil, oil cans, grease cartridges, and refuse shall be removed promptly from the site and disposed on in a lawful manner off National Forest Service System land. The CONTRACTOR shall pay for all landfill or transfer station fees associated with construction debris.

(o) **Maintenance of Fences.** Any fences adjacent to any work site shall be maintained by CONTRACTOR. Any adjacent fence removed or destroyed during the course of this Contract shall be reinstalled or reconstructed in like kind at no cost to Government or landowner. The cost for this work shall be considered incidental and no additional compensation will be allowed.

(p) **Sanitation.** The CONTRACTOR shall provide and maintain portable sanitation toilet facilities for the project. Contractor shall setup the facilities, maintain them during construction and move them at the end of the Project.

(q) **Health and Safety.** Perform all operations in a prudent, conscientious, safe, and professional manner. Ensure that all personnel involved are trained for the level of expertise required for the proper performance of the task. Knowledge of appropriate first aid procedures is also required. Provide administrative or engineering controls and personal protective equipment necessary to ensure worker protection according to 29 CFR 1910.120.

C- 2 – GOVERNMENT-FURNISHED PROPERTY

The U.S. Forest Service will provide the following Government-furnished property for use on this project:

- Infiltration Basin Drain Gravel/Bedding Gravel, 204(e), located approximately 1 mile south-east of the repository.
- Sump Gravel (if needed), located approximately 1 mile south-east of the repository
- K-30-B Linear Low-Density Polyethylene (LLDP) liner material, two (2) panels approximately 105 ft X 200 ft each.

C- 3 – SUBMITTALS

The CONTRACTOR shall submit to the CO the following plans at least 14 days prior to beginning work. In addition, the CONTRACTOR shall supply the CO all required submittals for each bid item at least 14 days prior to commencing work on the corresponding item. All submittals shall be reviewed and accepted or approved by the CO. Preparation of all submittals shall be considered incidental to the other work items in this contract.

(a) **Construction Schedule (S-001)**. The CONTRACTOR shall prepare a detailed construction schedule that outlines the sequence of work, and specifies key construction milestones. The schedule shall allow time for inspection of work by the CO. An annotated bar or Gantt-type schedule will be acceptable for purposes of this deliverable.

(b) **Health and Safety Plan (S-002)**. The CONTRACTOR shall submit to the CO a Health and Safety Plan before work commences. Minimum items to be included in the safety plan are:

- Project Description
- Authority, Roles and Responsibilities
- Proposed Competent Person and Qualifications
- Lines of Communication / Communication System
- Hazard Identification and Control
- Evacuation Plan / Direction to Nearest Hospital
- Proposed Equipment
- Proposed Trenching and Excavation Safety Measures including Competent Person and Qualifications (if any)
- Proposed Personal Protective Equipment (PPE)
- First Aid Station
- Employee Training (40-hour HAZWOPER with 8-hour refresher a minimum)

In accordance with OSHA (29 CFR 1926), the CONTRACTOR is responsible for the safety of all work activities at the site and shall ensure that proper safety requirements are followed. The Site has elevated levels of Arsenic, Barium, Cadmium, Chromium, Copper, Lead and Zinc in soils and surface water. These Contaminates of Concern (COC) could pose an unacceptable risk to human health. The main forms of exposures include soil contact, surface water ingestion, and dust inhalation.

(c) **Erosion Control Plan (S-004)**. The Contractor shall submit an Erosion Control Plan (ECP) for construction activities associated with this project. The plan shall be written in accordance with the U.S. Environmental Protection Agency's *Storm Water Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practices, September, 1992*. The Contractor shall include in the Erosion Control Plan the measures that will be taken for controlling runoff from precipitation and storm water run-on and run-off at the site. The submitted plan is expected to be specific to the project site and shall detail locations and types of best management practices that will be used during construction and address any erosion control measures that will remain after the completion of construction.

The ECP shall identify and describe the types of Best Management Practices (BMPs) to be used during construction activities at the Site and shall identify the Technical Specification(s) for each proposed type of BMP. The ECP shall identify the proposed locations of each of the BMPs on maps and drawings.

The ECP shall describe procedures for inspection, maintenance, replacement and removal of BMP's during construction activities at the Site and shall include a schedule of said inspections and maintenance. The ECP shall describe procedures for documentation of inspections, maintenance, replacement and removal of BMPs and shall include a description of criteria CONTRACTOR will use to evaluate proper inspection and maintenance of BMPs. The ECP shall require inspections which shall occur at a minimum of at least once every 14-calendar days and within 24 hours after any rainfall event of 0.5 inches or greater or as requested by CO.

CONTRACTOR shall install BMPs identified in the ECP, Special and Standard Provisions and Drawings. If, at any time during preparation of the ECP or construction activities at the Site, the CO determines that BMPs, in addition to those required by the Special Provisions, Technical Provisions, and Drawings are necessary to minimize storm water runoff or erosion of disturbed land, CONTRACTOR shall prepare a written modification of the ECP describing, in detail, the type and location of the proposed

additions to the ECP and submit the same to CO for approval. BMPs installed according to the ECP shall be considered incidental to the Work.

The ECP shall describe the method of replacement of BMPs in the event of failure of BMPs, as well as the clean-up and replacement of materials at the Site.

In the event CO determines that CONTRACTOR has failed to install and maintain BMPs as provided in the project specifications, contract provisions, contract drawings, or ECP, the CO may issue a stop work order. If a stop work order is issued, soil binders shall immediately be applied to disturbed surface areas.

The ECP shall provide that removal or movement of all BMPs shall be approved by the CO. CONTRACTOR shall maintain a copy of the ECP, current to date, at the Site.

CONTRACTOR shall install all BMPs and any additional or replacement BMPs in accordance with the ECP, project specifications, contract provisions, contract drawings for the price(s) bid.

(d) **Other Submittals.** The following is a listing of other submittals required under this contract. This list summarizes the requirements shown under each work item; however, the list may not be all-inclusive. The Contractor is responsible for identifying all required submittals.

Item No.	Submittal
US Forest Service Supplemental Specification – Section 107.10	Hazardous Spill Plan
US Forest Service Supplemental Specification – Section 204(f)	Type IV-A Geotextile
US Forest Service Supplemental Specification – Section 204	Bentonite Powder
US Forest Service Supplemental Specification – Section 602	HDPE Pipe (Perforated and Solid)
US Forest Service Supplemental Specification – Section 625.06 & 625.07	Fertilizer and Seed Certifications
US Forest Service Supplemental Specification – Section 713.17	Erosion Control Mat

C- 4 – STAGING AND STORAGE AREAS

Areas for staging operations and storage of materials shall be approved by the CO. The Contractor must request in writing approval from the CO to begin staging/housing material and equipment onsite. Fueling areas will be situated at least 150 feet from the normal high water mark.

C- 5 – STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS FP-03 U.S. Customary Units (U.S. DEPARTMENT OF TRANSPORTATION, Federal Highway Administration) (2003)

Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-03) are included by reference only. The requirements in these Standard Specifications are hereby made a part of this solicitation and any resultant contract.

Copies of the Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-03) are available in PDF format on the Western Federal Lands Highway Division website at <http://flh.fhwa.dot.gov/resources/pse/specs/fp-03.htm>.

C- 6 – FOREST SERVICE FP-03 SUPPLEMENTAL SPECIFICATIONS

The Supplemental Specifications listed below are applicable to this contract and are physically included in this section.

NOTE THAT THE SPECIFICATION LIST INCLUDES THE MAJOR SPECIFICATIONS APPLICABLE TO THIS PROJECT. OTHER SPECIFICATIONS REFERRED TO WITHIN THESE SPECIFICATIONS (EVEN THOUGH NOT SPECIFICALLY LISTED HEREIN) ARE ALSO FULLY APPLICABLE TO THIS REQUEST FOR PROPOSAL AND ANY RESULTANT CONTRACT.

Section No.	Description
Preface	
101	Terms, Format, and Definitions
102	Bid, Award, and Execution of Contract
103	Scope of Work
104	Control of Work
105	Control of Materials
106	Acceptance of Work
107	Legal Relations and Responsibility to the Public
108	Prosecution and Progress
109	Measurement and Payment
151	Mobilization
152	Construction Survey and Staking
155	Schedules of Construction
204	Excavation and Embankment
602	Culverts and Drains
625	Turf Establishment
713	Roadside Improvement Material

Preface

Delete all but the first paragraph and add the following:

The U.S. Forest Service, U.S. Department of Agriculture, has adopted FP-03 for construction of National Forest System Roads.

101 - Terms, Format, and Definitions

101.01 Meaning of Terms.

Delete all references to the TAR (Transportation Acquisition Regulations) in the specifications.

101.03 Abbreviations.

Add the following to (a) Acronyms:

AFPA	American Forest and Paper Association
MSHA	Mine Safety and Health Administration
NIST	National Institute of Standards and Technology
NESC	National Electrical Safety Code
WCLIB	West Coast Lumber Inspection Bureau

Add the following to (b) SI symbols:

<u>mp</u>	<u>Milepost</u>
<u>ppm</u>	<u>Part Per Million</u>

101.04 Definitions.

Delete the following definitions and substitute the following:

Bid Schedule--The Schedule of Items.

Contractor--The individual or legal entity contracting with the Government for performance of prescribed work. In a timber sale contract, the contractor is the “purchaser”.

Culvert--No definition.

Right-of-Way--A general term denoting (1) the privilege to pass over land in some particular line (including easement, lease, permit, or license to occupy, use, or traverse public or private lands), or (2) Real property necessary for the project, including roadway, buffer areas, access, and drainage areas.

Add the following:

Adjustment in Contract Price--“Equitable adjustment,” as used in the Federal Acquisition Regulations, or “construction cost adjustment,” as used in the Timber Sale Contract, as applicable.

Change--“Change” means “change order” as used in the Federal Acquisition Regulations, or “design change” as used in the Timber Sale Contract.

Design Quantity--“Design quantity” is a Forest Service method of measurement from the FS-96 *Forest Service Specifications for the Construction of Roads and Bridges*. Under these FP specifications this term is replaced by the term “Contract Quantities”.

Forest Service--The United States of America, acting through the Forest Service, U.S. Department of Agriculture.

Neat Line--A line defining the proposed or specified limits of an excavation or structure.

Pioneer Road--Temporary construction access built along the route of the project.

Purchaser--The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through agents, employees, or subcontractors.

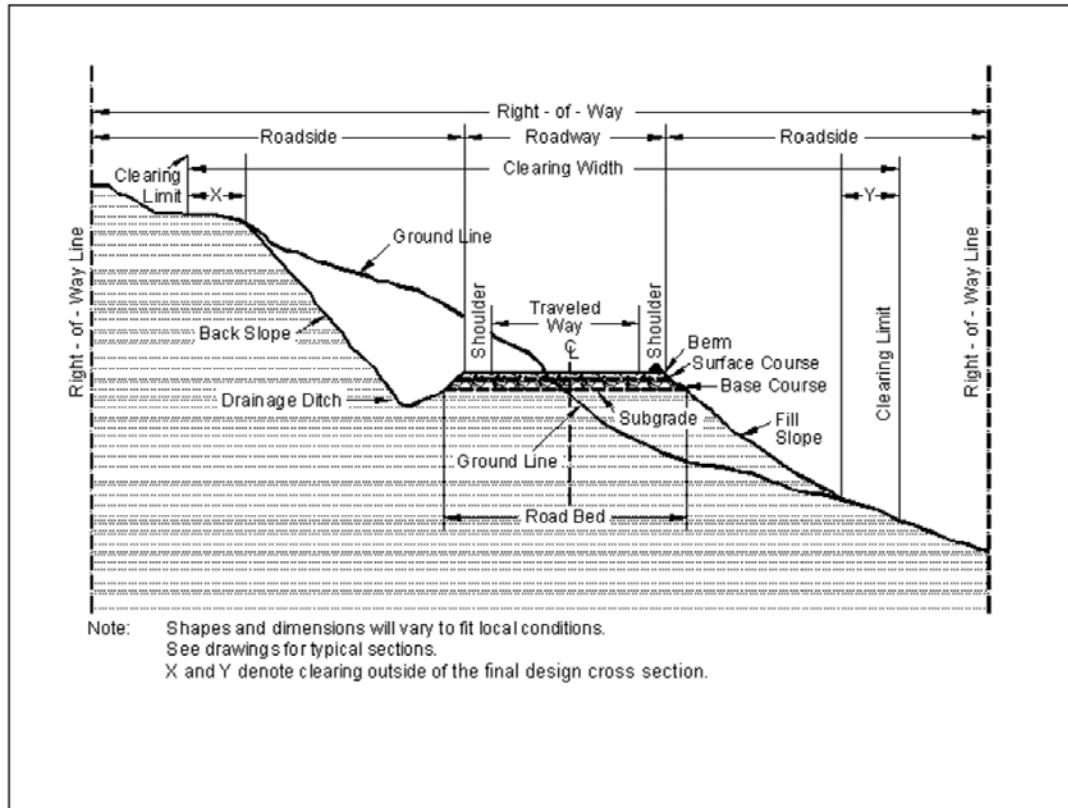
Protected Streamcourse--A drainage shown on the plans or timber sale area map that requires designated mitigation measures.

Road Order--An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

Schedule of Items--A schedule in the contract that contains a listing and description of construction items, quantities, units of measure, unit price, and amount.

Utilization Standards--The minimum size and percent soundness of trees described in the specifications to determine merchantable timber.

Figure 101-1—Illustration of road structure terms.



102 - Bid, Award, and Execution of Contract

Delete Section 102 in its entirety.

103 - Scope of Work

Delete all but Subsection 103.01 Intent of Contract.

104 - Control of Work

Delete Subsections 104.01, 104.02, and 104.04.

Add the following:

104.02 The Contractor shall develop and make any detailed surveys needed for construction of the work involved, including excavation limits, liner elevations, and sump elevations. The Contractor shall be held responsible for the preservation of all primary and other controls. If control markings are destroyed or disturbed by the Contractor, the Contractor shall replace them at no cost to the Government.

104.03 Specifications and Drawings.

Add the following:

(c) As-Built-Plans. Furnish one set of as-built plans. The Government will provide one set of contract plans to be used exclusively for recording the as-built details of the project. Use red pencil or red ink to record the information on the as-built plans.

Note all additions or revisions to the location, character, and dimensions of the prescribed work shown on the contract plans. Line out all details shown that are not applicable to the completed work. Check off details shown that were incorporated into the completed work without change.

Retain the plans at the project site and, as work progresses, continually update them to reflect the as-built details. Upon request, make the plans available to the CO to review for compliance with these specifications.

Show the following types of changes on the as-built plans:

- (1) Typical section(s)
 - Revisions to the alignment
 - Revisions to width or depth
 - Revisions to embankment or back slopes
 - Changes in the construction limits
- (2) Plan and profile
 - Revisions to the alignment
 - Changes in the construction limits
 - Revisions in location, type, and grade of road approaches
 - Location of monuments and permanent references
 - Revisions to grades, elevations, and stationing of intersection PIs
 - Location and type of utilities
 - Equations
- (3) Miscellaneous
 - Revisions to parking areas or turnouts
 - Culvert diameter, length, type and stationing
 - Final location, type and length of curbs, sidewalks, etc.
 - Location, length, and type of fencing and gates
 - Location, elevation and type of aerial or underground utilities
 - Final contours for surfaces disturbed or created by construction

Furnish the as-built working plans to the CO before the final inspection. Correct all details found during the final inspection that are not shown on the as-built plans and return to the CO within 5 days.

104.07 Restoration by Contractor.

Add the following subsection:

All areas disturbed by the Contractor's operations including, but not limited to, access roads, staging areas, stockpiles, haul roads, loading operations, and disposal operations shall be ripped and restored by grading to the original contours, and seeded and fertilized according to Section 625 – Turf Establishment.

105 - Control of Material

105.01 Source of Supply and Quality Requirements.

Add the following:

All materials incorporated into the project shall be certified noxious weed seed free, either through visual inspection or commercial certification.

105.04 Storing and Handling Material.

Add the following to the beginning of the first sentence: Transport,

105.05 Use of Material Found in the Work.

Delete 105.05 (a) and (b) and the last sentence of the second paragraph and substitute the following:

Materials produced or processed from Government lands in excess of the quantities required for performance of this contract are the property of the Government. The Government is not obligated to make reimbursement for the cost of producing these materials.

Add the following:

Stockpile excess material at an approved location in a stable manner. Provide erosion control measures at all stockpile locations to minimize the erosion and transport of stockpile materials by wind and water.

106 - Acceptance of Work

106.01 Conformity with Contract Requirements.

Delete Subsection 106.01 and substitute the following:

Follow the requirements of FAR Clause 52.246-12 Inspection of Construction.

References to standard test methods of AASHTO, ASTM, GSA, and other recognized standard authorities refer to the methods in effect on the date of solicitation for bids.

Perform all work to the lines, grades, cross-sections, dimensions, and processes or material requirements shown on the Drawings or specified in the contract.

Incorporate manufactured materials into the work according to the manufacturer's recommendations or to these specifications, whichever is stricter.

Plan dimensions and contract specification values are the values to be strived for and complied with as the design values from which any deviations are allowed. Perform work and provide material that is uniform in character and reasonably close to the prescribed value or within the specified tolerance range. The purpose of a tolerance range is to accommodate occasional minor variations from the prescribed value that are unavoidable for practical reasons.

When standard manufactured items are specified (such as fence, wire, plates, rolled shapes, pipe conduits, etc., that are identified by gauge, unit mass, section dimensions, etc.), the identification will be considered to be nominal masses or dimensions. Unless specific contract tolerances are noted, established manufacturing tolerances will be accepted.

The Government may inspect, sample, or test all work at any time before final acceptance of the project. When the Government tests work, copies of test reports are furnished to the Contractor upon request. Government tests may or may not be performed at the work site. If Contractor testing and inspection is verified by the Government, the Contractor's results may be used by the Government to evaluate work for acceptance. Do not rely on the availability of Government test results for process control.

Acceptable work conforming to the contract will be paid for at the contract unit bid price. Four methods of determining conformity and accepting work are described in Subsections 106.02 to 106.05 inclusive. The primary method of acceptance is specified in each Section of work. However, work may be rejected at any time it is found by any of the methods not to comply with the contract.

Remove and replace work that does not conform to the contract, or to prevailing industry standards where no specific contract requirements are noted, at no cost to the Government.

(a) Disputing Government test results. If the accuracy of Government test results is disputed, promptly inform the CO. If the dispute is unresolved after reasonable steps are taken to resolve the dispute, further evaluation may be obtained by written request. Include a narrative describing the dispute and a proposed resolution protocol that addresses the following:

- (1) Sampling method;
- (2) Number of samples;
- (3) Sample transport;
- (4) Test procedures;
- (5) Testing laboratories;
- (6) Reporting;
- (7) Estimated time and costs; and
- (8) Validation process.

If the evaluation requires additional sampling or testing be performed, mutually agree with the Government on witnessing procedures and on sampling and testing by a third party laboratory. Use a third party laboratory accredited by the AASHTO accreditation program. Provide proof of the laboratory's accreditation for the test procedures to be used. Do not use the same laboratory that produced the disputed Government test results or that produced the test results used as a basis for the dispute.

The CO will review the proposed resolution protocol and may modify it before final approval and execution.

The Government will use the approved resolution protocol test results to determine the validity of the disputed testing. If the Government test results are validated, the Contractor will be responsible for all costs associated with developing and performing the resolution protocol. If the Government test results are not validated, the Government will be responsible for all costs associated with developing and performing the resolution protocol. If the validity of the Government test results cannot be determined, the Contractor and Government will equally share all costs associated with developing and carrying out the resolution protocol.

(b) Alternatives to removing and replacing non-conforming work. As an alternative to removal and replacement, the Contractor may submit a written request to:

- (1) Have the work accepted at a reduced price; or
- (2) Be given permission to perform corrective measures to bring the work into conformity.

The request must contain supporting rationale and documentation. Include references or data justifying the proposal based on an evaluation of test results, effect on service life, value of material or work, quality, aesthetics, and other tangible engineering basis. The CO will determine disposition of the nonconforming work.

106.07 Partial and Final Acceptance.

Delete Subsection 106.07.

107 - Legal Relations and Responsibility to the Public

107.05 Responsibility for Damage Claims.

Delete the entire subsection.

107.06 Contractor's Responsibility for Work.

Delete the following from the first paragraph.

“except as provided in Subsection 106.07”.

107.08 Sanitation, Health and Safety.

Add the following:

Perform all operations in a prudent, conscientious, safe and professional manner. Ensure that all personnel involved in handling and packaging the hazardous waste are trained for the level of expertise required for the proper performance of the task and, in particular, in the areas of chemical incompatibility, general first aid procedures, and spills. Provide handling and personal protective equipment appropriate to ensure safe handling of the hazardous waste according to 29 CFR 1910.120. Notify the U.S. Forest Service of all hazardous material that may be brought onto the National Forest.

107.09 Legal Relationship of the Parties.

Delete the entire subsection.

107.10 Environmental Protection.

Add the following:

Design and locate equipment repair shops, stationary refueling sites, or other facilities to minimize the potential and impacts of hazardous material spills on Government land.

Before beginning any work, submit a Hazardous Spill Plan. List actions to be taken in the event of a spill. Incorporate preventive measures to be taken, such as the location of mobile refueling facilities, storage and handling of hazardous materials, and similar information. Immediately notify the CO of all hazardous material spills. Provide a written narrative report form no later than 24 hours after the initial report and include the following:

- Description of the item spilled (including identity, quantity, manifest number, and other identifying information).
- Whether amount spilled is EPA or state reportable, and if so whether it was reported, and to whom.
- Exact time and location of spill including a description of the area involved.
- Containment procedures.
- Summary of any communications the Contractor had with news media, Federal, state and local regulatory agencies and officials, or Forest Service officials.
- Description of clean-up procedures employed or to be employed at the site including final disposition and disposal location of spill residue.

- When available provide copies of all spill related clean up and closure documentation and correspondence from regulatory agencies.

The Contractor is solely responsible for all spills or leaks that occur during the performance of this contract. Clean up spills or leaks to the satisfaction of the CO and in a manner that complies with Federal, state, and local laws and regulations.

108 - Prosecution and Progress

Delete Section 108 in its entirety.

109 - Measurement and Payment

Delete the following entire subsections:

- 109.06 Pricing of Adjustments.**
- 109.07 Eliminated Work.**
- 109.08 Progress Payments.**
- 109.09 Final Payment.**

109.02 Measurement Terms and Definitions.

Add the following:

Methods of Measurement - One of the following methods of measurement for determining final payment is DESIGNATED on the SCHEDULE OF ITEMS for each pay item:

A. Contract Quantities (CQ) and Design Quantities (DQ) - These quantities denote the final number of units to be paid for under the terms of the contract. They are based upon the original design data available prior to advertising the project. Original design data include the preliminary survey information, design assumptions, calculations, drawings, and the presentation in the contract. Changes in the number of units SHOWN in the SCHEDULE OF ITEMS may be authorized under any of the following conditions:

As a result of changes in the work authorized by the CO.

As a result of the CO determining that errors exist in the original design data used to determine designed quantities that cause a pay item to change by 15 percent or more.

As a result of the Contractor submitting to the CO a written request showing evidence of errors in the original design data used to determine design quantities that cause a pay item total to change by 15 percent or more. The evidence must be verifiable and consist of calculations, drawings, or other data that show how the designed quantity is believed to be in error.

B. Staked Quantities (SQ) - These quantities are determined from staked measurements prior to construction.

C. Actual Quantities (AQ) - These quantities are determined from measurements of completed work.

D. Vehicle Quantities (VQ) - These quantities are measured or weighed in hauling vehicles.

E. Lump Sum Quantities (LSQ) - These quantities denote one complete unit of work as required by or described in the contract, including necessary materials, equipment, and labor to complete the job. They will not be measured individually.

151 – Mobilization

Delete Section 151 in its entirety and replace with the following.

151.01 Description.

This work consists of moving personnel, equipment, material, and incidentals to the project and performing all work necessary before beginning work at the project site; obtaining of permits, insurance, and bonds. This work also includes washing and treating construction equipment and vehicles necessary for equipment transport to remove seeds, plants, and plant fragments before the equipment is used on Forest Service lands, according to the requirements within.

This work also includes moving personnel, equipment, materials and incidentals off the project at project completion. Contractor is required to transport two (2) panels approximately 105 ft X 200 ft each of K-30-B Linear Low-Density Polyethylene (LLDP) liner material from the Beal Mountain Mine to the Site. The Beal Mountain Mine is located approximately 16 miles west southwest of Butte, Montana. Access to the site is through two separate routes. Personnel vehicles and small trucks shall access the site by turning south off of County Road 441 (Fairmont Road) onto German Gulch Road near Fairmont Hot Springs. Long-wheel base vehicles delivering equipment or materials may access the site by turning south off of County Road 441 (Fairmont Road) onto a private road and following the private road until it rejoins German Gulch Road. This private road has gates at both ends that will be locked. The USFS will provide the Contractor with a key or other means of access. The Contractor is responsible for adhering to the terms of the temporary road use permit for the private road, including the following:

- Closing the gates upon each pass through,
- Preventing unnecessary damage to land, timber, soil, water, other resources and other improvements,
- Minimizing traffic on the road by using alternate routes for most access and only using the private road access for large vehicles and equipment, and
- Displaying a placard, permit or sticker for each vehicle using the private road access.

Construction Decontamination Requirements (Mobilization and Demobilization) - Wash the sides, tops, and undercarriages of all construction equipment. Remove all seeds, plants, plant fragments, dirt, and debris from the construction equipment. Only equipment inspected by the Forest Service will be allowed to operate within the project area. All subsequent move-ins of equipment to the project area will be treated in the same manner as the initial move-in. This requirement does not apply to cars, pickup trucks, and other vehicles that regularly travel between the construction site and areas off the National Forest.

Equipment will be considered free of soil, seed, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment, components or the need for specialized inspection tools is not required.

Notify the CO in writing at least 48 hours before moving any construction equipment onto the National Forest. Notification will include an agreed upon location where the equipment will be available for inspection by the Forest Service. Inspection will be required after every cleaning.

Use methods of cleaning and locations for cleaning approved by the CO.

For work at a commercial washing facility, use an approved facility.

New infestations of noxious weeds of concern to Forest Service and identified by either Contractor or Forest Service, in the Project Area or on the haul route, will be promptly reported to the other party. Contractor and Forest Service will agree on treatment methods to reduce or stop the spread of noxious weeds when new infestations are found. A current list of noxious weeds of concern to Forest Service is available at each Forest Service office.

151.02 Measurement.

The Contractor will be required to clean all equipment prior to moving onto this project. The cost for all required cleaning(s) are to be included in the measurement for payment for mobilization.

Measure mobilization according to Subsection 109.02.

151.03 Payment.

Payment will be based on the lump sum bid for the Section 151 pay items listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this section.

152 - Construction Survey and Staking

Delete Section 152 in its entirety and replace with the following.

Contractor shall perform all necessary surveys and construction staking required for control of excavation of onsite materials, installation of sump drain, and any necessary on site temporary road construction. The Contractor shall establish stable and protected monuments for reference throughout the construction period. A sufficient number of such monuments shall be provided throughout the work to permit verification of the work within the tolerances specified by Table 152-1 Precision Class E. Construction survey shall be completed by a State of Montana Licensed Surveyor as approved by CO. Construction surveying is considered incidental to the construction project.

152.01 Description.

This work consists of furnishing qualified personnel and necessary equipment and material to survey, stake, calculate, and record data for the control of work.

Personnel, equipment, and material shall conform to the following:

- (a) Personnel. Furnish technically qualified survey crews experienced in construction survey and staking. Provide personnel capable of performing in a timely and accurate manner. An acceptable crew supervisor shall be on the project whenever surveying/staking is in progress.

Conduct construction staking under the direct supervision of a licensed land surveyor for the state in which work is completed.

- (b) Equipment. Furnish survey instruments and supporting equipment capable of achieving the specified tolerances.
- (c) Material. Furnish acceptable tools, supplies, and stakes of the type and quality normally used in highway survey work and suitable for the intended use. Furnish stakes and hubs of sufficient length to provide a solid set in the ground with sufficient surface area above ground for necessary legible markings.

Do not use aerosol spray paints in the field. Provide for the safe storage use and clean-up of paint when on National Forest System Lands. Immediately report all spills to the CO, clean-up and disposal of spills and painting waste shall be in accordance with Federal state and local requirements.

Use moisture-resistant paper for survey notes. Keep notes in books with covers that will protect the contents and retain the pages in numerical sequence.

152.02 General.

One major task of this work item is ensure the installing the infiltration drain pipe and associated drain gravel and bedding gravel at the grades shown on the DRAWINGS.

Before beginning construction, notify the CO of any missing initial reference lines, control points, or stakes. Re-establish missing reference, control lines, or stakes as necessary to control subsequent construction staking operations

Perform additional calculations for convenient use of Government-furnished data. Provide immediate notification of apparent errors in the furnished data.

Preserve all initial reference and control points. After beginning construction, replace all destroyed or disturbed initial reference or control points necessary to the work.

Before surveying or staking, discuss and coordinate the following with the CO:

- (a) Surveying and staking methods;
- (b) Stake marking;
- (c) Grade control for courses of material;
- (d) Referencing;
- (e) Structure control; and
- (f) Any other procedures and controls necessary for the work.

Survey and establish controls within the tolerances shown in Table 152-1, Class E.

Prepare field notes in an approved format. Furnish all survey notes at least weekly. All field notes and supporting documentation become the property of the Government upon completion of the work.

Start work only after staking for the affected work is accepted.

The construction survey and staking work may be spot-checked for accuracy, and unacceptable portions of work may be rejected. Resurvey rejected work, and correct work that is not within the tolerances specified in Table 152-1, Class E. Acceptance of the construction staking does not relieve the Contractor of responsibility for correcting errors discovered during the work and for bearing all additional costs associated with the error.

Remove and dispose of all flagging, lath, stakes, and other staking material after the project is complete, unless directed otherwise by the CO.

152.03 Survey and Staking Requirements.

Perform all survey, staking, recording of data, and calculations as necessary to construct the project from the initial layout to final completion. Reset stakes as many times as necessary to construct the work.

- (a) Control points. Relocate initial horizontal and vertical control points in conflict with construction to areas that will not be disturbed by construction operations.

Furnish the coordinates and elevations for the relocated points before the initial points are disturbed.

- (b) Miscellaneous survey and staking. Perform all surveying, staking, and recording of data essential for establishing the layout and control of the following, as applicable:

- (1) Approach roads and trails;
- (2) Utilities;
- (3) Signs, delineators, and object markers
- (4) Salvaged stockpiled materials
- (5) All disturbed and reclaimed areas, including soil borrow areas
- (6) Infiltration Basin Drain Gravel, Infiltration Bedding Gravel, HDPE drain pipe.

(c) **Field Discrepancies.** Immediately notify the CO if a discrepancy is encountered between the plans and field conditions which affect the final road or reclaimed areas location or configuration. Prepare recommendations, in writing, to the CO for adjustments to the design to better fit field conditions. Affix the state authorized seal and sign the recommendation attesting to the adequacy of the adjustment. Ensure that adjustments to the design follow all applicable regulations and are consistent with design standards and criteria. Adjustments shall minimize construction effort, such as clearing and embankment volumes. Gain written approval of the adjusted design from the CO before incorporating such adjustment in the field. Return to the original design as soon as practical.

Table 152-1 Tolerances for reestablishing centerline, traverse, and elevations.

Precision Class	Minimum Position Closure	Angular Accuracy (\pm)	L-Line Tangent Control Points ^a (\pm)	Vertical Closure ^b (\pm)
A (Bridges)	1/10,000	2 sets, direct/reverse 10 second rejection limit	N/A	0.02 ft. or 0.02ft/1000ft ^c
B	1/5,000	2 sets, direct/reverse 20 second rejection limit	0.1 ft.	0.02 ft. or 0.02ft/1000ft ^c
C	1/1,000	1 set, direct/reverse 1 minute rejection limit	0.2 ft.	0.5ft/1000ft
D	1/300	Foresight and backsight; 15 minute rejection limit	0.4 ft.	1.0ft/1000ft
E	1/100	Foresight and backsight; 30 minute rejection limit	0.8 ft.	1.0ft/1000ft

a. Accuracy of offset measurement.
 b. Determine vertical closures at intervals not to exceed 2000 ft. as measured along centerline.
 c. Use greater value.

152.04 Acceptance.

Construction survey and staking will be evaluated under Subsection 106.01.

155 - Schedules for Construction Contracts

Delete Section 155 in its entirety.

204 - Excavation and Embankment

Delete Section 204 in its entirety and replace with the following:

204.01 Description.

Work for this item includes excavation of various onsite materials within the New World Repository. The materials present include repository cover soil material, waste material, sump gravel, sand bedding, and native material to be excavated outside the repository limits. Temporary haul roads may be necessary for construction. Temporary roads shall be approved by the CO prior to construction and reclaimed by Contractor. Temporary haul roads shall be considered incidental to the Work. Contractor shall excavate the sump drain pipeline trench and infiltration gallery as shown on the DRAWINGS. Contractor shall segregate each material (i.e. cover soil, waste material) in separate stockpiles and replace the material following excavation and pipe/infiltration gallery construction. Sand bedding material within the existing top and bottom liner systems can be mixed with other materials and does not need to be segregated and stockpiled.

During excavation the CONTRACTOR may encounter mining debris or other materials. Any debris not designated for salvage, stockpiling and reuse shall be considered solid waste. The CONTRACTOR shall be responsible for solid waste disposal. The CONTRACTOR shall at all times keep the Site in a clean, neat, and orderly condition. Construction related debris and refuse shall be removed promptly from the site and disposed of in a lawful manner off National Forest Service Lands. The CONTRACTOR shall pay for all landfill or transfer station fees. Clearing and grubbing (if needed) shall be considered incidental for this contract. As shown on the DRAWINGS, a top liner system including a geotextile fabric, sand bedding, geocomposite, a high-density polyethylene (HDPE) liner, GCL liner and another layer of sand bedding lies below approximately three (3) feet of cover soil material. Contractor shall cut existing top liner system and temporarily roll back liner to complete the excavation to intercept the repository sump and to complete the pipeline excavation. In addition, the repository sump was constructed using a bottom liner system including a geotextile fabric, HDPE liner, GCL liner, sand bedding and geocomposite liner at the bottom of the sump. Contractor shall cut the bottom liner system and temporarily roll back the liner to complete the excavation.

Following excavation, pipe bedding and HDPE pipe shall be installed for the sump drain pipeline and the infiltration basin. Upon completion of the sump drain pipeline and infiltration basin, Contractor shall replace segregated stockpiled native and repository materials in the same orientation as they were removed. Contractor shall place supplied Linear Low-Density Polyethylene (LLDP) liner over the top and bottom existing liner systems as shown on the DRAWINGS. Four inches of bagged bentonite powder shall be placed above and below the replaced LLDP liner.

Construction Requirements

204.02(a) Excavate and Stockpile Repository Cover Material.

This work consists of the excavation of cover soil from the limits of the repository as shown on the DRAWINGS, and stockpiling the cover soil at a designated stockpile location as approved by the CO. Cover soil consists of approximately the top three (3) feet of material located on the repository. Cover soil material shall be excavated to a depth of three (3) feet below existing ground surface, or to a depth designated by the CO, throughout the construction limits as shown on the DRAWINGS. Side slopes shall be monitored by Contractor for stability, potential safety concerns and dust control. **Handwork provided a by a laborer will likely be necessary to expose the liners.**

Cover soil shall be stockpiled at a designated stockpile area as approved by CO. In the event Contractor chooses to haul cover soil material from the repository area, existing roads must be used.

Contractor shall maintain and protect access roads, including blading and watering the roads. Access road maintenance is considered incidental to this Bid Item.

Following cover soil excavation, Contractor shall cut the existing top liner system and temporarily roll the liner out of the way for future replacement. Cutting and rolling the existing top liner system is considered incidental to this subsection.

204.02(a) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(a) Payment.

Payment will be based on the lump sum bid for the Subsection 204.02(a) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this subsection. See Section 109.

204.02(b) Excavate and Stockpile Repository Waste to Expose Sump.

This work consists of the excavation of repository waste from within the limits of the repository as shown on the DRAWINGS, and stockpiling the waste material at a designated stockpile location as approved by the CO. Waste material consists of approximately 5 feet of material below the top liner system. Waste material shall be excavated to a depth of approximately 5 feet below the top liner system, or until geocomposite sand layer and drain gravel or bottom line system is reached, throughout the construction limits as shown on the DRAWINGS. Side slopes shall be monitored by Contractor for stability, potential safety concerns and dust control. **Handwork provided a by a laborer will likely be necessary to expose the liners.**

Waste material shall be stockpiled at a designated stockpile area as approved by CO. In the event Contractor chooses to haul waste material from the repository area, existing roads must be used.

Contractor shall maintain and protect access roads, including blading and watering the roads. Access road maintenance is considered incidental to this Bid Item.

204.02(b) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(b) Payment.

Payment will be based on the lump sum bid for the Subsection 204.02(b) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this subsection. See Section 109.

204.02(c) Excavate and Stockpile Sump Drain Gravel.

This work consists of the excavation of sump drain from within the limits of the repository as shown on the DRAWINGS, and stockpiling the sump gravel at a designated stockpile location as approved by the CO. Sump gravel shall be excavated to base of the sump which is lined with bottom liner system, as shown on the DRAWINGS. Side slopes shall be monitored by Contractor for stability, potential safety concerns and dust control.

Sump will be pumped (by others) prior to construction; however, some water may be released from the sump during construction. Pumping of the sump during construction shall be considered incidental to the Work. Appropriate BMPs shall be in place to mitigate erosion. BMPs installed shall be considered incidental to the Work.

Sump gravel shall be stockpiled at a designated stockpile area as approved by CO. In the event Contractor chooses to haul the sump gravel from the repository area, existing roads must be used.

Contractor shall maintain and protect access roads, including blading and watering the roads. Access road maintenance is considered incidental to this Bid Item.

Contractor shall cut the existing bottom liner system and temporarily roll the liner out of the way for future replacement. Cutting and rolling the existing bottom liners system is considered incidental to this subsection.

204.02(c) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(c) Payment.

Payment will be based on the lump sum bid for the Subsection 204.02(c) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this subsection. See Section 109.

204.02(d) Excavate and Stockpile Native Material.

This work consists of the excavation of native material from within the limits of the infiltration basin and sump drain pipeline as shown on the DRAWINGS, and stockpiling the native material at a designated stockpile location as approved by the CO. Native material shall be excavated to the neat lines and grades as shown on the DRAWINGS. Side slopes shall be monitored by Contractor for stability, potential safety concerns and dust control.

Native material shall be stockpiled at a designated stockpile area as approved by CO. In the event Contractor chooses to haul native material from the repository area, existing roads must be used.

Contractor shall maintain and protect access roads, including blading and watering the roads. Access road maintenance is considered incidental to this Bid Item.

204.02(d) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(d) Payment.

Payment will be based on the lump sum bid for the Subsection 204.02(d) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this subsection. See Section 109.

204.02(e) Infiltration Basin Drain Gravel/Bedding Gravel.

Haul and install Government-provided Infiltration Basin Drain Gravel/Bedding Gravel as shown on the DRAWINGS. Place drain gravel to the neat lines and grades as shown on the DRAWINGS.

204.02(e) Measurement.

Measure the Subsection 204.02(e) item listed in the Schedule of Items according to Subsection 109.02 and the following as applicable:

The quantity to be paid is the quantity shown in the Schedule of Items based on the contract quantity (CQ). The quantity in the schedule of items is the design placement of infiltration basin drain gravel/bedding gravel.

204.02(e) Payment.

The contract quantities will be paid at the contact price per unit of measurement for the Subsection 204.02(e) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this subsection. See Section 109.

204.02(f) Type IV-A Geotextile.

Provide and install Type IV-A Geotextile in accordance with Section 714. Geotextile and Geocomposite Drain Material, above placed infiltration drain gravel, as shown on the DRAWINGS. Any rips found in the geotextile shall be repaired in accordance with the manufacturer's recommendations.

204.02(f) Measurement.

Measure the Subsection 204.02(f) item listed in the Schedule of Items according to Subsection 109.02 and the following as applicable:

The quantity to be paid is the quantity shown in the Schedule of Items based on the contract quantity (CQ). The quantity in the Schedule of Items is the design placement of Type IV-A Geotextile.

204.02(f) Payment.

The contract quantities will be paid at the contact price per unit of measurement for the Subsection 204.02(f) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Section 109.

204.02(g) Repair Bottom Liner System.

Following collection pipe installation, Contractor shall repair the sump bottom liner by placing 4 inches of moisture conditioned bagged bentonite powder as approved by CO, along the bottom of the sump, replace the rolled bottom liner system, place supplied Linear Low-Density Polyethylene (LLDP) liner over the top of the existing liner, and finally placing another 4 inches of moisture conditioned bentonite powder on top of the bottom liner system, as shown on the DRAWINGS. Care shall be taken to minimize ripping or tearing the existing bottom liner system. The repaired sump liner repair shall be inspected and approved by CO prior to backfilling materials. Compaction of bentonite powder shall be in accordance Subsection 204.04.

204.02(g) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(g) Payment.

Payment will be based on the lump sum bid for the Subsection 204.02(g) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this subsection. See Section 109.

204.02(h) Secondary Sampling Sump.

Prior to replacing sump drain gravel, Contractor shall install a secondary sampling sump at the location as shown on the DRAWINGS. The Secondary Sampling Sump shall be constructed of 2-inch PVC (13 feet of solid pipe, 2 feet of screened pipe) for a total depth of 15 feet including the stickup above ground. The perforated pipe shall include a minimum of 3 feet of pre packed well screen consisting of 10-20 silica sand surrounding 2 feet minimum length of 0.01-inch factory slotted pipe. Contractor shall survey the top and bottom elevation of the Secondary Sampling Sump in accordance with section of secondary sampling sump in accordance with Section 152. Following replacement of waste and the top liner system, a 4-inch steel well protector with locking lid shall be placed on 6 to 12- inches of sand to support the well protector and sealed with concrete as shown on the DRAWINGS. Following the secondary sampling sump construction, stockpiled cover soil shall be place around the constructed secondary sampling sump.

204.02(h) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(h) Payment.

Payment will be based on the lump sum bid for the Subsection 204.02(h) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Section 109.

204.02(i) Replace Sump Drain Gravel.

Following repair of the bottom liner system, stockpiled sump drain gravel shall be placed back within the excavated limits of the repository sump. Stockpiled drain gravel must be approved by CO prior to use. If

CO does not approve the use of stockpiled drain gravel, Contractor shall haul and place GOVERNMENT-FURNISHED drain gravel.

204.02(i) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(i) Payment.

Payment will be based on the lump sum bid for the Subsection 204.02(i) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this subsection. See Section 109

204.02(j) Install Type IV-A Geotextile Sump Separation Geotextile.

Provide and install Type IV-A Geotextile in accordance with Section 714. Geotextile and Geocomposite Drain Material, above placed Sump Drain gravel, as shown on the DRAWINGS. Any rips found in the geotextile shall be repaired in accordance with the manufacturer's recommendations.

204.02(j) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(j) Payment.

Payment will be based on the lump sum bid for the Subsection 204.02(j) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this subsection. See Section 109.

204.02(k) Replace Repository Waste.

Following sump gravel replacement, stockpiled repository waste shall be placed back within the excavated limits of the repository. Compaction shall be in accordance Subsection 204.04.

204.02(k) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(k) Payment.

Payment will be based on the lump sum bid for the Subsection 204.02(k) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this subsection. See Section 109.

204.02(l) Replace and Regrade Native Material.

Replace and regraded stockpiled native material to the neat lines and grades and shown on the DRAWINGS. Replaced native material shall be placed and graded within the excavation extents as shown on the DRAWINGS. Compaction shall be in accordance Subsection 204.04.

204.02(l) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(l) Payment.

Payment will be based on the lump sum bid for the Subsection 204.02(l) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this subsection. See Section 109.

204.02(m) Repair Top Liner System.

Following placement of waste material, Contractor shall replace the top liner system with 4 inches of moisture conditioned bentonite powder, place supplied Linear Low-Density Polyethylene (LLDP) liner over the top of the existing liner, and finally place another 4 inches of moisture conditioned bentonite powder on top of the top liner system, as shown on the DRAWINGS. Care shall be taken to minimize ripping or tearing the existing top liner system. The repaired top liner repair shall be inspected and approved by CO. Compaction of bentonite powder shall be in accordance Subsection 204.04.

204.02(m) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(m) Payment.

Payment will be based on the lump sum bid for the Subsection 204.02(m) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this subsection. See Section 109.

204.02(n) Replace Repository Cover Material.

Following repair of the top liner system, stockpiled repository cover shall be placed to the neat lines and grades as shown on the DRAWINGS. Care shall be taken to avoid damage to the replaced top liner system. Compaction shall be in accordance Subsection 204.04.

204.02(n) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(n) Payment.

Payment will be based on the lump sum bid for the Subsection 204.02(n) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this subsection. See Section 109.

204.03 Compaction.

For purpose of compaction, no sieve test is required.

(a) **Layer Placement Method (Roller Compaction).** Place material by end dumping or bucket dumping to the depth no greater than 12 inches. Adjust the moisture content of the material to obtain a mass that will not visibly deflect under the load of the hauling and spreading equipment. Operate compaction equipment over the full width of each layer until visible deformation of the layer ceases or, when a sheepsfoot roller is used, the roller “walks out” of the layer. Make at least three complete passes.

602 – Culvert and Drains

Delete Subsection 602.06 and replace with the following:

602.06 Description.

This work includes providing and installing 8-inch ADS N-12 HDPE (solid and perforated) or equivalent and as shown on the DRAWINGS. The HDPE pipe shall be installed in accordance with manufacturer's recommendations. Pipe bedding materials shall conform to Section 204(f).

Contractor shall survey both the solid and perforated HDPE prior to backfilling activities in accordance with Section 152 Construction Survey and Staking.

Delete Subsection 602.09 in its entirety and replace with the following:

602.09 Measurement.

Measure pipe by the linear foot along the invert, including the length through fittings.

The quantity to be paid is the actual quantity (AQ) as measured by the CO.

625 - Turf Establishment

625.03 General.

Delete this subsection and replace with the following:

Apply turf establishment to the areas shown on the drawings or in the work lists within 7 days after completion of all ground disturbing activities. Seeded areas damaged by construction activities shall be reseeded within 7 days of the damage. Seed as soon as possible after work is completed, unless otherwise specified in writing by the CO. Do not seed during windy weather or when the ground is excessively wet, frozen, or snow covered.

Ensure that all seed, mulch, and other materials used in the work conforms to the weed free requirements of Section 713.

625.04 Preparing Seedbed.

Delete this subsection and replace with the following:

Contractor shall prepare all reclaimed surfaces by disking or other approved method prior to seeding. Areas heavily compacted by haul traffic shall be ripped to a depth of at least 8 inches prior to disking.

625.05 Watering.

Delete entire subsection.

625.06 Fertilizing.

Delete entire subsection and replace with the following:

Apply fertilizer having a chemical analysis as listed in 713.02 by the following method.

Dry Method. Apply the fertilizer with approved power driven seeders, drills, fertilizer spreaders or other mechanical equipment. Hand-operated methods are satisfactory.

625.07 Seeding.

(a) **Dry method.** Delete the third sentence.

Add the following after paragraph (b).

The specified seed mix provided below is designed to provide species for both sandy and clay dominated soils. The rates are for broadcast seeding. If the seeds are to be drill seeded these rates should be reduced by half. All broadcast sites should be rolled or dragged to place the seeds in closer contact to soil. Hand rake around large placed rocks and other features that prevent rolling or dragging.

PROJECT SEED MIX				
Common Name	<i>Scientific Name</i>	Cultivar	Seeds/lb	Seed Rate (lb PLS/ac)¹
Tufted hairgrass	<i>Deschampsia caespitosa</i>	Nortran	2,500,000	1.6
Alpine bluegrass	<i>Poa alpina</i>	--	1,000,000	4.0
Alpine timothy	Phleum alpinum	Molas Pass, CO	1,300,000	3.1
Slender wheatgrass	<i>Elymus trachycaulus</i>	San Luis	159,000	25.5

Note: 1 lb PLS/ac = pounds pure live seed per acre; seeding rate is for the broadcast seeding method; seed rate designed for 93 PLS per square foot per species; CONTRACTOR shall verify from the seed supplier that seeds/lb are similar to those listed; otherwise an adjustment to the seed rate should be made.

625.09 Protecting and Caring for Seeded Areas.

Delete the first sentence and add the following:

Protect and care for seeded areas until final acceptance.

Add the following at the end of the subsection:

All areas disturbed by the CONTRACTOR’S operations such as, but not limited to, staging areas, stockpiles, and loading operations, shall be restored by grading to the original contours and seeding.

Delete Subsections 625.11 and 625.12 in their entirety and replace with the following:

625.11 Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

625.12 Payment.

Payment will be based on the lump sum bid for the Subsection 625 pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this subsection. See Section 109.

713 –Roadside Improvement Material

713.17 Temporary Rolled Erosion Control Products.

Delete this subsection and replace with the following:

713.17(a) General.

Contractor shall provide erosion control mat on all project disturbed areas requiring fertilization and seed.

- (a) Contractor shall provide and install BioNet SC150BN Extended-Term Biodegradable Double-Net Straw/Coconut Blanket or equivalent. Erosion control material must be biodegradable and certified noxious weed free. Biodegradable stakes or staples shall be used where available.

713.17(b) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

713.17(c) Payment.

Payment will be based on the lump sum bid for the Subsection 713.17 pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this subsection. See Section 109.

C- 7 Biobased Product Utilization

The Contractor must comply with the Agricultural Act of 2014; the Food, Conservation and Energy Act of 2008 (FCEA), 7 U.S.C. 8102; the Farm Security and Rural Investment Act of 2002 (FSRIA), 7 U.S.C. 8102; the Federal Acquisition Regulation; Executive Order (EO) 13514, “*Federal Leadership in Environmental, Energy and Economic Performance*,” dated October 5, 2009; EO 13423, “*Strengthening Federal Environmental, Energy, and Transportation Management*,” dated January 24, 2007; and Presidential Memorandum, “*Driving Innovation and Creating Jobs in Rural America through Biobased and Sustainable Product Procurement*,” dated February 2012, to provide biobased products.

The Contractor shall utilize products and material made from biobased materials to the maximum extent possible without jeopardizing the intended end use or detracting from the overall quality delivered to the end user. All supplies and materials shall be of a type and quality that conform to applicable Federal specifications and standards. All supplies and materials to be used in the performance of work described herein are subject to the approval of the Contracting Officer’s Representative (COR).

The following is an example list of products that may be used in this contract for which biobased products are available. The list is not all inclusive. It is desirable that Contractors be able to supply the greatest number of biobased products listed meeting the health and environmental specifications.

Grease Removers	Insulating Foam	Concrete and Asphalt Release Fluids
Fluid-filled Transformers	Wood and Concrete Sealers	Composite Panels
Adhesive and Mastic Removers	Carpets	Roof Coatings

Hydraulic Fluid

Water Tank Coatings

Biobased products that are designated for preferred procurement under USDA's Biopreferred Program must meet the required minimum biobased content as stated in the USDA Final Rule available at www.biopreferred.gov. The Contractor should provide data for their biobased products such as biobased content and source of biobased material.

In addition to the biobased products designated by the U.S. Department of Agriculture in the Biopreferred Program, the Contractor is encouraged to use other commercially available biobased products.

The Contractor shall submit with the initial proposal a complete list of biobased products, indicating the name of the manufacturer, cost of each material, and the intended use of each of the materials that are to be used in carrying out the requirements of this contract (see Section L, Clause L- * - Instructions for the Preparation of Technical and Business Proposals).

Additionally, the winning Contractor on each anniversary date of the contract shall compile a complete list of biobased products, including the information above, purchased to carry out the contract requirements. The Contractor shall list volume to be used and total cost for each individual product. This information will be used for reporting purposes (see Section I, FAR Clause 52.223-2).

Within thirty (30) days of contract award, the Contractor shall submit an Operation Plan. This submittal will be approved by the COR in writing. The Contractor shall not commence work until this submittal is approved by the COR in writing. The Plan must be reviewed and updated annually, and as required by the COR. The Plan must contain and define the following elements:

- The Contractor's written policy stating its commitment to the use of biobased products, employee health and safety, and sound environmental management practices.
- Detail on how the Contractor intends to keep abreast of the development and increasing availability of designated and non-designated biobased products and how any new or improved products will be incorporated on an ongoing basis into contract performance.
- Proposed biobased construction products which must be selected in accordance with the criteria included above. At a minimum, the Plan must identify products by brand name for each of the product types.

NOTE: A Contractor may propose more than one product within a product category and/or propose a product or products addressing more than one product category.

- The product guides which define standard operating procedures for instructing staff in the proper use, storage, and disposal of biobased products; proper maintenance of equipment; and other procedures/instructions to accomplish work under this contract.

The Contractor shall provide data on the quantity and dollar values of biobased products used in this contract. The data shall be submitted to the COR quarterly.

A demonstration of proper use, an effective training program, and technical assistance are essential to the success of the purchase and use of some biobased products that may function differently than a conventional product.

C- 8 Drawings

See Section J for the listing of Drawings that are incorporated into this solicitation and any resultant contract.

PART I - THE SCHEDULE

SECTION E - INSPECTION AND ACCEPTANCE

E- 1 FAR 52.252-2 Clauses Incorporated by Reference (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es): Federal Acquisition Regulations - <http://www.acquisition.gov/far> and the Agriculture Acquisition Regulations – <http://www.usda.gov/procurement/policy/agar.html>.

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

52.246-12 Inspection of Construction (AUG 1996)

PART I - THE SCHEDULE

SECTION F - DELIVERIES OR PERFORMANCE

F- 1 FAR 52.252-2 Clauses Incorporated by Reference (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es): Federal Acquisition Regulations - <http://www.acquisition.gov/far> and the Agriculture Acquisition Regulations – <http://www.usda.gov/procurement/policy/agar.html>.

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

52.242-14 Suspension of Work (APR 1984)

F- 2 FAR 52.211-10 Commencement, Prosecution, and Completion of Work (APR 1984)

The Contractor shall be required to (a) commence work under this contract within **10-calendar days** after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than 21 days after NTP. The time stated for completion shall include final cleanup of the premises.

PART I - THE SCHEDULE

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H-1 FAR 52.252-2 Clauses Incorporated by Reference (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es): Federal Acquisition Regulations - <http://www.acquisition.gov/far> and the Agriculture Acquisition Regulations – <http://www.usda.gov/procurement/policy/agar.html>.

AGRICULTURE ACQUISITION REGULATION (48 CFR CHAPTER 4) CLAUSES

452.236-72 Use of Premises (NOV 1996)

H-2 Section 8(a) Direct Award (May 1998)

(a) This contract is issued as a direct award between the contracting activity and the 8(a) contractor pursuant to the Memorandum of Understanding between the Small Business Administration (SBA) and the U.S. Forest Service. SBA does retain responsibility for 8(a) certification, 8(a) eligibility determinations and related issues, and providing counseling and assistance to the 8(a) contractor under the 8(a) program. The cognizant SBA district office is Boise, Idaho.

(b) The contracting activity is responsible for administering the contract and taking any action on behalf of the Government under the terms and conditions of the contract. However, the contracting activity shall give advance notice to the SBA before it issues a final notice terminating performance, either in whole or in part, under the contract. The contracting activity may assign contract administration functions to a contract administration office.

(c) The contractor agrees:

(1) to notify the Contracting Officer, simultaneous with its notification to SBA (as required by SBA's 8(a) regulations), when the owner or owners upon whom 8(a) eligibility is based plan to relinquish ownership or control of the concern. Consistent with 15 U.S.C. 637(a)(21), transfer of ownership or control shall result in termination of the contract for convenience, unless SBA waives the requirement for termination prior to the actual relinquishing of ownership and control.

(2) It will adhere to the requirements of 52.219-14, Limitations on Subcontracting.

H-3 Fire Control

(a) *Contractor's Responsibility for Contractor-Caused Fires.* The Contractor, whether or not directed by the Forest Service, shall immediately extinguish, without expense to the Government, all fires on or in the vicinity of the project which are caused by Contractor's employees, whether set directly or indirectly as a result of Contractor operations. The Contractor may be held liable for all damages and costs of additional labor, subsistence, equipment, supplies, and transportation resulting from fires set or caused by the Contractor's employees or resulting from contract operations.

(b) *Other Fires.* For the purpose of fighting forest fires on or in the vicinity of the project which are not caused by the Contractor or the Contractor's employees, the Contractor when requested by the Contracting Officer shall place the employees and equipment temporarily at the disposal of the Forest Service. Payment for such services will be made by the Government at not less than the current rate for fire-fighting services established by the Forest Service in the area concerned.

Any employees and equipment furnished will be relieved from fire fighting as soon as the Forest Service finds that it is practicable to employ other labor and equipment adequate for the protection of the area.

An equitable adjustment in contract time may be made for this period.

(c) *Fire Protection Requirements - Fire Plan.* At all times during closed fire season period, as specified by State law, the Contractor shall comply with each of the following provisions to the extent applicable to the Contractor's operation under the contract.

(1) *Fire Tools.* The Contractor will provide for each employee in the contract area at least one approved handtool of a type appropriate in the contract area, such as shovel, pulaski, or ax. Tools required and furnished under (2) and (4) below, shall count toward fulfillment of the above requirement. Where additional tools, beyond those required under (2) and (4) below, are to be provided, the Contractor shall seal such tools in one or more boxes painted red and marked "Tools for Fire Only." All tools required herein shall be kept sharp and in good serviceable condition and maintained at locations to be designated by the Forest Service.

(2) *Fire Extinguishers and Tools on Mobile or Stationary Equipment.* Each unit of powered equipment used in connection with this contract, including automobiles, trucks, tractors, etc., shall be equipped with serviceable tools and fire extinguishers as follows:

One - fire extinguisher, dry chemical type of not less than 2-1/2 pound capacity with 4 BC or higher rating.

One - shovel, round point #0 lady or equal.

One - ax, 2 pounds or over, 26-inch minimum length, or one pulaski.

One - water container (at least 1-gallon capacity), not required with stationary equipment.

(3) *Spark Arresters.* Each internal combustion engine shall be provided with a spark arrester or spark arresting device approved by the Forest Service. Exceptions where the Forest Service may approve mufflers, or other equipment in lieu of spark arresters qualified and rated under Forest Service Standard 5100-1a are: (a) small multiposition engines, such as chain saws, shall meet Society of Automotive Engineers J335b standards; (b) passenger-carrying vehicles and light trucks may have baffle-type mufflers with tail pipe; (c) heavy-duty trucks may have a vertical stack exhaust system and muffler, provided the exhaust stack extends above the cab of the vehicle. An exhaust-driven turbocharger is considered to be a satisfactory spark arrester. Internal combustion engine exhaust systems, arresters, and other devices must be properly installed and maintained.

(4) *Powersaws.* For each powersaw used in connection with this contract, the following will be provided:

One - shovel, round point #0 lady or equal. Shovel must be immediately available for use.

One - Fire extinguisher, containing not less than 8 ounces of extinguisher fluid, or a dry chemical powder-type of not less than 1-pound capacity. The extinguisher must be immediately accessible to the saw operator at all times.

Any fueling or refueling of a powersaw shall only be done in an area which has first been cleared or is free of all material capable of carrying fire; powersaw shall be moved at least 10 feet from place of fueling before starting.

(5) *Blasting*. Fuse or prima cord shall not be used unless authorized in writing by the COR with special precautions stated.

(6) *Smoking*. Smoking shall not be permitted within the contract area except on surfaced or dirt roads, at landings, within closed vehicles, in camps, or at other posted places, and shall never be allowed while working or traveling on foot.

(7) *Storage of Petroleum and Other Highly Flammable Products*. Gasoline, oil, grease, or other highly flammable material will be stored either in a separate building used exclusively for such storage, or at a site where all combustible debris and vegetation is cleared away within a radius of 25 feet. Fire extinguishers and/or sand barrels may be required at such locations specified by the Forest Service when unusually hazardous conditions exist.

(8) *Debris Burning and Warming Fires*. Burning permits will be required for all debris burning fires. Lunch and warming fires may be allowed in fireproofed areas during periods of low fire danger if and as specified in the fire plan. Such fires must not be left burning unattended.

(9) *Precautions for Stoves*. Stovepipes on all temporary buildings, trailers, and tents using wood burning stoves, will be equipped with roof jacks and serviceable spark arresters of mesh with openings no larger than 5/8 inch.

All stovepipes, inside and out, will not be closer than 2 feet from any wood or other flammable material or 1 foot if the combustible material is protected by a metal or asbestos shield.

(10) *Welding*. Welding or use of cutting torches will be permitted only in areas that have been cleared or are free of all material capable of carrying fire. Flammable debris and vegetation must be removed from within a minimum of 10 feet radius of all welding and cutting torch operations. A shovel and a 5-gallon standard backpack water container (filled) with handpump attached, shall be immediately available for use in the event of a fire start.

(11) *Fire Plan*. Prior to initiating work on the contract area, during the closed fire season period, a fire prevention and suppression plan will usually be prepared. The Contractor and the Forest Service will jointly prepare this plan. Such plan shall include a detailed list of men and equipment at the Contractor's disposal for implementing the plan. The fire plan shall also specify additional measures and/or special requirements, such as Hoot Owl restrictions, necessary during periods of critical fire weather conditions.

When Hoot Owl restrictions are invoked, the Forest Service may curtail or shut down all or portions of a Contractor's operations. The following requirements may be imposed:

- (i) All high fire risk operations could be terminated at 1300 local time.

(ii) All burning could be stopped, including debris burning fires.

(iii) Patrolman may be required for a period of 2 hours after high fire risk operations and 1 hour after end of work shift. The Contractor shall provide the patrolman unless the contract is for equipment rental, in which case the Government will provide the patrolman.

(12) *Pump and Trailer*. Not Applicable.

(13) *Burning*. Before starting any open burning, the Contractor shall comply with the following:

(i) Submit a burning plan, subject to approval by the Contracting Officer, designed to minimize the impact on air quality and to lessen any fire damage.

(ii) Obtain a burning permit from the District Ranger.

(iii) Use weather forecasts as far as possible in scheduling burning for more favorable dispersal of smoke.

(iv) Fuel shall be reasonably free of dirt and piled to facilitate rapid and complete combustion. Piles shall be tended during burning operations to maintain combustion and to eliminate unnecessary smudges. Piles shall be patrolled during off-work hours to avoid wildfires.

(v) Unless fire season controls dictate otherwise, burning shall be scheduled, as far as practicable, for the most favorable conditions during the burning period.

(vi) Under certain atmospheric conditions, smoke accumulations may become excessive and in these cases, the Regional Forester may, at his/her discretion, prohibit all open burning for definite periods within specific areas of the National Forest.

H- 4 Incidental Payment Items

The intent of the contract is to provide for the complete construction of the project described in the contract. Unless otherwise provided, the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies and perform all work required to complete the project in accordance with drawings, specifications, and provisions of the contract. Payment for contract work will be made only for and under those pay items included in the Schedule of Items. All other work and materials will be considered as incidental to and included in the payment for items shown.

H- 5 Conformity With Drawings and Specifications

Unless working tolerances are specified, all work performed and materials furnished shall be in reasonably close conformity with lines, grades, cross sections, dimensions, and material requirements shown on the drawings, indicated in the specifications, or designated on the ground. "Reasonably close conformity" is compliance with reasonable and customary manufacturing and construction tolerances.

H- 6 Local Material Sources

(a) *Designated Sources*--Sources of local materials will be designated on the drawings. The Government assumes responsibility for the quality and quantity of material in the source. The Contractor shall determine the equipment and work required to produce the specified product.

The Contractor shall utilize all suitable material in the source. The designation of source will include the rights of the Contractor to use certain area(s) for plant site, stockpiles, and haul roads. Any Contractor royalty payment requirements will be stated below.

When materials are subject to weight measurement, the weight/volume relationship used for determination of designed quantities will be shown on the Drawings.

Should the designated source, due to causes beyond the control of the Contractor, contain insufficient suitable material, the Government will provide another source with an equitable adjustment in accordance with the Differing Site Conditions and Changes clauses.

(b) *Contractor-Furnished Sources*--When the material sources are not designated as provided above or the Contractor elects not to use designated sources, the Contractor shall be responsible for providing the specified product with no adjustment in contract price, unless weight/volume relationship differences between designated source material and Contractor-furnished source material result in financial disadvantage to the Government. Quality testing shall be the responsibility of the Contractor. Test results shall be furnished to the Contracting Officer.

H- 7 Samples, Tests, Cited Specifications

Reference made in the contract to specifications, standards, or test methods adopted by AASHTO, ASTM, GSA, or other recognized National technical associations, shall mean specifications, standards, or test methods (including interim or tentative issues) which are in effect on the date of the solicitation.

H- 8 Barricades, Warning Signs, and Other Devices

The Contractor shall provide, erect, and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs, and other traffic control devices, and shall take all necessary precautions for the protection of the work and safety of the public. Roads closed to traffic shall be protected by effective barricades, and obstructions shall be illuminated during the hours of darkness. Suitable warning signs shall be provided to properly control and direct traffic.

The Contractor shall erect warning signs in advance to any place on the project where operations may interfere with the use of the road or trail by traffic and at all intermediate points where the new work crosses or coincides with an existing road or trail. All road barricades, warning signs, lights, temporary signals, flagmen and pilot car operators and equipment, and other protective devices, except for special devices, shall conform with Part VI of the Manual on Uniform Traffic Control Devices for Streets and Highways, published by the Federal Highway Administration and applicable safety codes.

Necessary warning signs and guards shall be posted during blasting operations to safeguard the public.

H-9 Weed-Free Equipment

In order to prevent the potential spread of noxious weeds into the project area, the Contractor shall be required to furnish the Contracting Officer with proof of weed-free equipment.

The following is considered proof of weed-free equipment:

The Contractor will be required to clean all construction equipment (equipment that operates off existing roads) prior to entry on the project area. This cleaning shall remove all dirt and plant parts and material that may carry noxious weed seeds into the project area. Only construction equipment inspected by the Contracting Officer will be allowed to operate within the project area. All subsequent move-ins of construction equipment shall be treated the same as the initial move-in.

Prior to initial move-in of all construction equipment, and all subsequent move-ins, the Contractor shall make equipment available for inspection at an agreed location.

H-10 Landscape Preservation

(a) The Contractor shall confine operations to within the clearing limits or other areas designated in contract documents, and prevent the depositing of rocks, excavated materials, stumps, or other debris outside of these limits. Material, which falls outside of these limits, shall be retrieved, disposed of, or incorporated in the work as directed by the Contracting Officer.

(b) Operation shall be scheduled and conducted to minimize erosion of soils and to prevent silting and muddying of streams, rivers, irrigation systems, and impoundments (lakes, reservoirs, etc.).

Pollutants such as fuels, lubricants, bitumens, raw sewage, and other harmful materials shall not be discharged into or near rivers, streams, and impoundments or into natural or manmade channels leading thereto. Wash water or waste water from concrete or aggregate operations shall not be allowed to enter live streams prior to treatment by filtration, settling, or other means sufficient to reduce the sediment content to not more than that of the stream into which it is discharged.

Mechanized equipment shall not be operated in live streams without written approval by the Contracting Officer.

H-11 Invoice Processing Platform (IPP)

The Forest Service is utilizing the Invoice Processing Platform (IPP) for the electronic submission and tracking of contracts/purchase orders, invoices, and payment information. IPP is a secure Government-wide, Web-based invoice processing service. Visit <http://www.ipp.gov> to learn more.

Upon award of a contract, Contractors will be enrolled automatically. Contractor will subsequently receive electronic notification from IPP of enrollment. IPP password will be delivered electronically to allow first login to IPP. Contractors shall submit all invoices electronically via IPP. Paper copies of invoices will no longer be accepted.

H-12 Prework Conference

Prior to commencement of work, the Contracting Officer will arrange a meeting with the Contractor to discuss the contract terms and work performance requirements. Also at this meeting such things as work progress schedule and fire prevention and suppression plans shall be developed and established in writing.

PART II - CONTRACT CLAUSES

SECTION I - CONTRACT CLAUSES

I-1 FAR 52.252-2 Clauses Incorporated by Reference (FEB 1998)

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FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

52.202-1	Definitions (NOV 2013)
52.203-3	Gratuities (APR 1984)
52.203-5	Covenant Against Contingent Fees (MAY 2014)
52.203-7	Anti-Kickback Procedures (MAY 2014)
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity (MAY 2014)
52.203-10	Price or Fee Adjustment for Illegal or Improper Activity (MAY 2014)
52.203-12	Limitation on Payments to Influence Certain Federal Transactions (OCT 2010)
52.203-17	Contractor Employee Whistleblower Rights and Requirement to Inform Employees of Whistleblower Rights (APR 2014)
52.204-4	Printed or Copied Double-Sided on Postconsumer Fiber Content Paper (MAY 2011)
52.204-10	Reporting Executive Compensation and First-Tier Subcontract Awards (OCT 2016)
52.204-13	System for Award Management Maintenance (OCT 2016)
52.209-6	Protecting the Government's Interest when Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (OCT 2015)
52.209-10	Prohibition on Contracting with Inverted Domestic Corporations (NOV 2015))
52.211-18	Variation in Estimated Quantity (APR 1984)
52.222-3	Convict Labor (JUNE 2003)
52.222-4	Contract Work Hours and Safety Standards--Overtime Compensation (MAY 2014)
52.222-6	Construction Wage Rate Requirements (MAY 2014)
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52.222-8	Payrolls and Basic Records (MAY 2014)
52.222-9	Apprentices and Trainees (JULY 2005)
52.222-10	Compliance with Copeland Act Requirements (FEB 1988)
52.222-11	Subcontracts (Labor Standards) (MAY 2014)
52.222-12	Contract Termination - Debarment (MAY 2014)
52.222-13	Compliance with Construction Wage Rate Requirements and Related Regulations (MAY 2014)
52.222-14	Disputes Concerning Labor Standards (FEB 1988)
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52.222-21	Prohibition of Segregated Facilities (APR 2015)
52.222-26	Equal Opportunity (SEPT 2016)
52.222-27	Affirmative Action Compliance Requirements for Construction (APR 2015)
52.222-35	Equal Opportunity for Veterans (OCT 2015)
52.222-36	Equal Opportunity for Workers with Disabilities (JUL 2014)

- 52.222-37 Employment Reports on Veterans (FEB 2016)
- 52.222-40 Notification of Employee Rights Under the National Labor Relations Act (DEC 2010)
- 52.222-50 Combating Trafficking in Persons (MAR 2015)
- 52.222-55 Minimum Wages Under Executive Order 13658 (DEC 2015)
- 52.223-3 Hazardous Material Identification and Material Safety Data (JAN 1997) Alternate I (JULY 1995)
- 52.223-6 Drug-Free Workplace (MAY 2001)
- 52.223-17 Affirmative Procurement of EPA-Designated Items in Service and Construction Contracts (MAY 2008)
- 52.223-18 Encouraging Contractor Policies to Ban Text Messaging While Driving (AUG 2011)
- 52.224-1 Privacy Act Notification (APR 1984)
- 52.225-13 Restrictions on Certain Foreign Purchases (JUNE 2008)
- 52.228-2 Additional Bond Security (OCT 1997)
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- 52.228-14 Irrevocable Letter of Credit (NOV 2014)
- 52.229-3 Federal, State, and Local Taxes (FEB 2013)
- 52.232-5 Payments Under Fixed-Price Construction Contracts (MAY 2014)
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- 52.232-17 Interest (MAY 2014)
- 52.232-23 Assignment of Claims (MAY 2014)
- 52.232-27 Prompt Payment for Construction Contracts (JAN 2017)
- 52.232-33 Payment by Electronic Funds Transfer—System for Award Management (JUL 2013)
- 52.232-39 Unenforceability of Unauthorized Obligations (JUN 2013)
- 52.232-40 Providing Accelerated Payments to Small Business Subcontractors (DEC 2013)
- 52.233-1 Disputes (MAY 2014) Alternate I (DEC 1991)
- 52.233-3 Protest After Award (AUG 1996)
- 52.233-4 Applicable Law for Breach of Contract Claim (OCT 2004)
- 52.236-2 Differing Site Conditions (APR 1984)
- 52.236-3 Site Investigation and Conditions Affecting the Work (APR 1984)
- 52.236-5 Material and Workmanship (APR 1984)
- 52.236-6 Superintendence by the Contractor (APR 1984)
- 52.236-8 Other Contracts (APR 1984)
- 52.236-9 Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements (APR 1984)
- 52.236-10 Operations and Storage Areas (APR 1984)
- 52.236-12 Cleaning Up (APR 1984)
- 52.236-13 Accident Prevention (NOV 1991)
- 52.236-15 Schedules for Construction Contracts (APR 1984)
- 52.236-17 Layout of Work (APR 1984)
- 52.236-21 Specifications and Drawings for Construction (FEB 1997)
- 52.236-21 Specifications and Drawings for Construction (FEB 1997) Alternate II (APR 1984)
- 52.236-26 Preconstruction Conference (FEB 1995)
- 52.242-13 Bankruptcy (JULY 1995)
- 52.243-4 Changes (JUNE 2007)
- 52.244-6 Subcontracts for Commercial Items (JAN 2017)
- 52.245-1 Government Property (JAN 2017)
- 52.245-9 Use and Charges (APR 2012)
- 52.246-21 Warranty of Construction (MAR 1994)

- 52.248-3 Value Engineering--Construction (OCT 2015)
- 52.249-2 Termination for Convenience of the Government (Fixed-Price) (APR 2012) Alternate I (SEPT 1996)
- 52.249-10 Default (Fixed-Price Construction) (APR 1984)
- 52.253-1 Computer Generated Forms (JAN 1991)

AGRICULTURE ACQUISITION REGULATION (48 CFR CHAPTER 4) CLAUSES

- 452.224-70 Confidentiality of Information (FEB 1988)
- 452.236-73 Archeological or Historic Sites (FEB 1988)
- 452.236-74 Control of Erosion, Sedimentation and Pollution (NOV 1996)
- 452.236-76 Samples and Certificates (FEB 1988)

I- 2 FAR 52.219-14 Limitations on Subcontracting (JAN 2017)

(a) This clause does not apply to the unrestricted portion of a partial set-aside.

(b) *Applicability.* This clause applies only to—

(1) Contracts that have been set aside or reserved for small business concerns or 8(a) participants;

(2) Part or parts of a multiple-award contract that have been set aside for small business concerns or 8(a) participants; and

(3) Orders set aside for small business or 8(a) participants under multiple-award contracts as described in 8.405-5 and 16.505(b)(2)(i)(F).

(c) By submission of an offer and execution of a contract, the Offeror/Contractor agrees that in performance of the contract in the case of a contract for--

(1) Services (except construction). At least 50 percent of the cost of contract performance incurred for personnel shall be expended for employees of the concern.

(2) Supplies (other than procurement from a nonmanufacturer of such supplies). The concern shall perform work for at least 50 percent of the cost of manufacturing the supplies, not including the cost of materials.

(3) General construction. The concern will perform at least 15 percent of the cost of the contract, not including the cost of materials, with its own employees.

(4) Construction by special trade contractors. The concern will perform at least 25 percent of the cost of the contract, not including the cost of materials, with its own employees.

I- 3 FAR 52.219-28 Post-Award Small Business Program Rerepresentation (JUL 2013)

(a) *Definitions.* As used in this clause—

Long-term contract means a contract of more than five years in duration, including options. However, the term does not include contracts that exceed five years in duration because the period of performance has

been extended for a cumulative period not to exceed six months under the clause at 52.217-8, Option to Extend Services, or other appropriate authority.

Small business concern means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (c) of this clause. Such a concern is “not dominant in its field of operation” when it does not exercise a controlling or major influence on a national basis in a kind of business activity in which a number of business concerns are primarily engaged. In determining whether dominance exists, consideration shall be given to all appropriate factors, including volume of business, number of employees, financial resources, competitive status or position, ownership or control of materials, processes, patents, license agreements, facilities, sales territory, and nature of business activity.

(b) If the Contractor represented that it was a small business concern prior to award of this contract, the Contractor shall rerepresent its size status according to paragraph (e) of this clause or, if applicable, paragraph (g) of this clause, upon the occurrence of any of the following:

(1) Within 30 days after execution of a novation agreement or within 30 days after modification of the contract to include this clause, if the novation agreement was executed prior to inclusion of this clause in the contract.

(2) Within 30 days after a merger or acquisition that does not require a novation or within 30 days after modification of the contract to include this clause, if the merger or acquisition occurred prior to inclusion of this clause in the contract.

(3) For long-term contracts—

(i) Within 60 to 120 days prior to the end of the fifth year of the contract; and

(ii) Within 60 to 120 days prior to the date specified in the contract for exercising any option thereafter.

(c) The Contractor shall rerepresent its size status in accordance with the size standard in effect at the time of this rerepresentation that corresponds to the North American Industry Classification System (NAICS) code assigned to this contract. The small business size standard corresponding to this NAICS code can be found at <http://www.sba.gov/content/table-small-business-size-standards>.

(d) The small business size standard for a Contractor providing a product which it does not manufacture itself, for a contract other than a construction or service contract, is 500 employees.

(e) Except as provided in paragraph (g) of this clause, the Contractor shall make the rerepresentation required by paragraph (b) of this clause by validating or updating all its representations in the Representations and Certifications section of the System for Award Management (SAM) and its other data in SAM, as necessary, to ensure that they reflect the Contractor’s current status. The Contractor shall notify the contracting office in writing within the timeframes specified in paragraph (b) of this clause that the data have been validated or updated, and provide the date of the validation or update.

(f) If the Contractor represented that it was other than a small business concern prior to award of this contract, the Contractor may, but is not required to, take the actions required by paragraphs (e) or (g) of this clause.

(g) If the Contractor does not have representations and certifications in SAM, or does not have a representation in SAM for the NAICS code applicable to this contract, the Contractor is required to complete the following rerepresentation and submit it to the contracting office, along with the contract number and the date on which the rerepresentation was completed:

The Contractor represents that it is, is not a small business concern under NAICS Code 237990 assigned to contract number _____.
[Contractor to sign and date and insert authorized signer's name and title].

I- 4 FAR 52.222-62 Paid Sick Leave Under Executive Order 13706 (JAN 2017)

(a) *Definitions.* As used in this clause (in accordance with 29 CFR 13.2)–

“Child”, “domestic partner”, and “domestic violence” have the meaning given in 29 CFR 13.2.
“Employee”–

(1) (i) Means any person engaged in performing work on or in connection with a contract covered by Executive Order (E.O.) 13706, and

(A) Whose wages under such contract are governed by the Service Contract Labor Standards statute ([41 U.S.C. chapter 67](#)), the Wage Rate Requirements (Construction) statute ([40 U.S.C. chapter 31](#), subchapter IV), or the Fair Labor Standards Act ([29 U.S.C. chapter 8](#)),

(B) Including employees who qualify for an exemption from the Fair Labor Standards Act's minimum wage and overtime provisions,

(C) Regardless of the contractual relationship alleged to exist between the individual and the employer; and

(ii) Includes any person performing work on or in connection with the contract and individually registered in a bona fide apprenticeship or training program registered with the Department of Labor's Employment and Training Administration, Office of Apprenticeship, or with a State Apprenticeship Agency recognized by the Office of Apprenticeship.

(2) (i) An employee performs “on” a contract if the employee directly performs the specific services called for by the contract; and

(ii) An employee performs “in connection with” a contract if the employee's work activities are necessary to the performance of a contract but are not the specific services called for by the contract.

“Individual related by blood or affinity whose close association with the employee is the equivalent of a family relationship” has the meaning given in 29 CFR 13.2.

“Multiemployer” plan means a plan to which more than one employer is required to contribute and which is maintained pursuant to one or more collective bargaining agreements between one or more employee organizations and more than one employer.

“Paid sick leave” means compensated absence from employment that is required by E.O. 13706 and 29 CFR part 13.

“Parent”, “sexual assault”, “spouse”, and “stalking” have the meaning given in 29 CFR 13.2.

“United States” means the 50 States and the District of Columbia.

(b) Executive Order 13706.

(1) This contract is subject to E.O. 13706 and the regulations issued by the Secretary of Labor in 29 CFR part 13 pursuant to the E.O.

(2) If this contract is not performed wholly within the United States, this clause only applies with respect to that part of the contract that is performed within the United States.

(c) *Paid sick leave*. The Contractor shall—

(1) Permit each employee engaged in performing work on or in connection with this contract to earn not less than 1 hour of paid sick leave for every 30 hours worked;

(2) Allow accrual and use of paid sick leave as required by E.O. 13706 and 29 CFR part 13;

(3) Comply with the accrual, use, and other requirements set forth in 29 CFR 13.5 and 13.6, which are incorporated by reference in this contract;

(4) Provide paid sick leave to all employees when due free and clear and without subsequent deduction (except as otherwise provided by 29 CFR 13.24), rebate, or kickback on any account;

(5) Provide pay and benefits for paid sick leave used no later than one pay period following the end of the regular pay period in which the paid sick leave was taken; and

(6) Be responsible for the compliance by any subcontractor with the requirements of E.O. 13706, 29 CFR part 13, and this clause.

(d) Contractors may fulfill their obligations under E.O. 13706 and 29 CFR part 13 jointly with other contractors through a multiemployer plan, or may fulfill their obligations through an individual fund, plan, or program (see 29 CFR 13.8).

(e) *Withholding*. The Contracting Officer will, upon his or her own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Contractor under this or any other Federal contract with the same Contractor, so much of the accrued payments or advances as may be considered necessary to pay employees the full amount owed to compensate for any violation of the requirements of E.O. 13706, 29 CFR part 13, or this clause, including—

- (1) Any pay and/or benefits denied or lost by reason of the violation;
- (2) Other actual monetary losses sustained as a direct result of the violation; and
- (3) Liquidated damages.

(f) Payment suspension/contract termination/contractor debarment.

(1) In the event of a failure to comply with E.O. 13706, 29 CFR part 13, or this clause, the contracting agency may, on its own action or after authorization or by direction of the Department of Labor and written notification to the Contractor take action to cause suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(2) Any failure to comply with the requirements of this clause may be grounds for termination for default or cause.

(3) A breach of the contract clause may be grounds for debarment as a contractor and subcontractor as provided in 29 CFR 13.52.

(g) The paid sick leave required by E.O. 13706, 29 CFR part 13, and this clause is in addition to the Contractor's obligations under the Service Contract Labor Standards statute and Wage Rate Requirements (Construction) statute, and the Contractor may not receive credit toward its prevailing wage or fringe benefit obligations under those Acts for any paid sick leave provided in satisfaction of the requirements of E.O. 13706 and 29 CFR part 13.

(h) Nothing in E.O. 13706 or 29 CFR part 13 shall excuse noncompliance with or supersede any applicable Federal or State law, any applicable law or municipal ordinance, or a collective bargaining agreement requiring greater paid sick leave or leave rights than those established under E.O. 13706 and 29 CFR part 13.

(i) Recordkeeping

(1) The Contractor shall make and maintain, for no less than three (3) years from the completion of the work on the contract, records containing the following information for each employee, which the Contractor shall make available upon request for inspection, copying, and transcription by authorized representatives of the Administrator of the Wage and Hour Division of the Department of Labor:

- (i) Name, address, and social security number of each employee.
- (ii) The employee's occupation(s) or classification(s).
- (iii) The rate or rates of wages paid (including all pay and benefits provided).
- (iv) The number of daily and weekly hours worked.
- (v) Any deductions made.
- (vi) The total wages paid (including all pay and benefits provided) each pay period.

(vii) A copy of notifications to employees of the amount of paid sick leave the employee has accrued, as required under 29 CFR 13.5(a)(2).

(viii) A copy of employees' requests to use paid sick leave, if in writing, or, if not in writing, any other records reflecting such employee requests.

(ix) Dates and amounts of paid sick leave taken by employees (unless the Contractor's paid time off policy satisfies the requirements of E.O. 13706 and 29 CFR part 13 as described in 29 CFR 13.5(f)(5), leave shall be designated in records as paid sick leave pursuant to E.O. 13706).

(x) A copy of any written responses to employees' requests to use paid sick leave, including explanations for any denials of such requests, as required under 29 CFR 13.5(d)(3).

(xi) Any records reflecting the certification and documentation the Contractor may require an employee to provide under 29 CFR 13.5(e), including copies of any certification or documentation provided by an employee.

(xii) Any other records showing any tracking of or calculations related to an employee's accrual or use of paid sick leave.

(xiii) The relevant contract.

(xiv) The regular pay and benefits provided to an employee for each use of paid sick leave.

(xv) Any financial payment made for unused paid sick leave upon a separation from employment intended, pursuant to 29 CFR 13.5(b)(5), to relieve the Contractor from the obligation to reinstate such paid sick leave as otherwise required by 29 CFR 13.5(b)(4).

(2) (i) If the Contractor wishes to distinguish between an employee's covered and noncovered work, the Contractor shall keep records or other proof reflecting such distinctions. Only if the Contractor adequately segregates the employee's time will time spent on noncovered work be excluded from hours worked counted toward the accrual of paid sick leave. Similarly, only if the Contractor adequately segregates the employee's time may the Contractor properly refuse an employee's request to use paid sick leave on the ground that the employee was scheduled to perform noncovered work during the time he or she asked to use paid sick leave.

(ii) If the Contractor estimates covered hours worked by an employee who performs work in connection with contracts covered by the E.O. pursuant to 29 CFR 13.5(a)(i) or (iii), the Contractor shall keep records or other proof of the verifiable information on which such estimates are reasonably based. Only if the Contractor relies on an estimate that is reasonable and based on verifiable information will an employee's time spent in connection with noncovered work be excluded from hours worked counted toward the accrual of paid sick leave. If the Contractor estimates the amount of time an employee spends performing in connection with contracts covered by the E.O., the Contractor shall permit the employee to use his or her paid sick leave during any work time for the Contractor.

(3) In the event the Contractor is not obligated by the Service Contract Labor Standards statute, the Wage Rate Requirements (Construction) statute, or the Fair Labor Standards Act to keep records of an employee's hours worked, such as because the employee is exempt from the Fair Labor Standards Act's minimum wage and overtime requirements, and the Contractor chooses to use the assumption permitted

by 29 CFR 13.5(a)(1)(iii), the Contractor is excused from the requirement in paragraph (i)(1)(iv) of this clause and 29 CFR 13.25(a)(4) to keep records of the employee's number of daily and weekly hours worked.

(4) (i) Records relating to medical histories or domestic violence, sexual assault, or stalking, created for purposes of E.O. 13706, whether of an employee or an employee's child, parent, spouse, domestic partner, or other individual related by blood or affinity whose close association with the employee is the equivalent of a family relationship, shall be maintained as confidential records in separate files/records from the usual personnel files.

(ii) If the confidentiality requirements of the Genetic Information Nondiscrimination Act of 2008 (GINA), section 503 of the Rehabilitation Act of 1973, and/or the Americans with Disabilities Act (ADA) apply to records or documents created to comply with the recordkeeping requirements in this contract clause, the records and documents shall also be maintained in compliance with the confidentiality requirements of the GINA, section 503 of the Rehabilitation Act of 1973, and/or ADA as described in 29 CFR 1635.9, 41 CFR 60-741.23(d), and 29 CFR 1630.14(c)(1), respectively.

(iii) The Contractor shall not disclose any documentation used to verify the need to use 3 or more consecutive days of paid sick leave for the purposes listed in 29 CFR 13.5(c)(1)(iv) (as described in 29 CFR 13.5(e)(1)(ii)) and shall maintain confidentiality about any domestic abuse, sexual assault, or stalking, unless the employee consents or when disclosure is required by law.

(5) The Contractor shall permit authorized representatives of the Wage and Hour Division to conduct interviews with employees at the worksite during normal working hours.

(6) Nothing in this contract clause limits or otherwise modifies the Contractor's recordkeeping obligations, if any, under the Service Contract Labor Standards statute, the Wage Rate Requirements (Construction) statute, the Fair Labor Standards Act, the Family and Medical Leave Act, E.O. 13658, their respective implementing regulations, or any other applicable law.

(j) Interference/discrimination.

(1) The Contractor shall not in any manner interfere with an employee's accrual or use of paid sick leave as required by E.O. 13706 or 29 CFR part 13. Interference includes, but is not limited to—

(i) Miscalculating the amount of paid sick leave an employee has accrued;

(ii) Denying or unreasonably delaying a response to a proper request to use paid sick leave;

(iii) Discouraging an employee from using paid sick leave;

(iv) Reducing an employee's accrued paid sick leave by more than the amount of such leave used;

(v) Transferring an employee to work on contracts not covered by the E.O. to prevent the accrual or use of paid sick leave;

(vi) Disclosing confidential information contained in certification or other documentation provided to verify the need to use paid sick leave; or

(vii) Making the use of paid sick leave contingent on the employee's finding a replacement worker or the fulfillment of the Contractor's operational needs.

(2) The Contractor shall not discharge or in any other manner discriminate against any employee for—

(i) Using, or attempting to use, paid sick leave as provided for under E.O. 13706 and 29 CFR part 13;

(ii) Filing any complaint, initiating any proceeding, or otherwise asserting any right or claim under E.O. 13706 and 29 CFR part 13;

(iii) Cooperating in any investigation or testifying in any proceeding under E.O. 13706 and 29 CFR part 13; or

(iv) Informing any other person about his or her rights under E.O. 13706 and 29 CFR part 13.

(k) *Notice.* The Contractor shall notify all employees performing work on or in connection with a contract covered by the E.O. of the paid sick leave requirements of E.O. 13706, 29 CFR part 13, and this clause by posting a notice provided by the Department of Labor in a prominent and accessible place at the worksite so it may be readily seen by employees. Contractors that customarily post notices to employees electronically may post the notice electronically, provided such electronic posting is displayed prominently on any website that is maintained by the Contractor, whether external or internal, and customarily used for notices to employees about terms and conditions of employment.

(l) *Disputes concerning labor standards.* Disputes related to the application of E.O. 13706 to this contract shall not be subject to the general disputes clause of the contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR part 13. Disputes within the meaning of this contract clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the Department of Labor, or the employees or their representatives.

(m) *Subcontracts.* The Contractor shall insert the substance of this clause, including this paragraph (m), in all subcontracts, regardless of dollar value, that are subject to the Service Contract Labor Standards statute or the Wage Rate Requirements (Construction) statute, and are to be performed in whole or in part in the United States.

I- 5 FAR 52.223-2 Affirmative Procurement of Biobased Products Under Service and Construction Contracts (SEPT 2013)

(a) In the performance of this contract, the contractor shall make maximum use of biobased products that are United States Department of Agriculture (USDA)-designated items unless—

(1) The product cannot be acquired—

(i) Competitively within a time frame providing for compliance with the contract performance schedule;

(ii) Meeting contract performance requirements; or

(iii) At a reasonable price.

(2) The product is to be used in an application covered by a USDA categorical exemption (see 7 CFR 3201.3(e)). For example, all USDA-designated items are exempt from the preferred procurement requirement for the following:

(i) Spacecraft system and launch support equipment.

(ii) Military equipment, *i.e.*, a product or system designed or procured for combat or combat-related missions.

(b) Information about this requirement and these products is available at <http://www.biopreferred.gov>.

(c) In the performance of this contract, the Contractor shall—

(1) Report to <http://www.sam.gov>, with a copy to the Contracting Officer, on the product types and dollar value of any USDA-designated biobased products purchased by the Contractor during the previous Government fiscal year, between October 1 and September 30; and

(2) Submit this report no later than—

(i) October 31 of each year during contract performance; and

(ii) At the end of contract performance.

I- 6 FAR 52.228-13 Alternative Payment Protections (JULY 2000)

(a) The Contractor shall submit one of the following payment protections:

(1) Payment or Performance Bond

(2) Irrevocable Letter of Credit

(3) Money orders, drafts, cashier's check, or certified check.

(b) The amount of the payment protection shall be 100 percent of the contract price.

(c) The submission of the payment protection is required within 10 days of contract award.

(d) The payment protection shall provide protection for the full contract performance period plus a one-year period.

(e) Except for escrow agreements and payment bonds, which provide their own protection procedures, the Contracting Officer is authorized to access funds under the payment protection when it has been alleged in writing by a supplier of labor or material that a nonpayment has occurred, and to withhold such funds pending resolution by administrative or judicial proceedings or mutual agreement of the parties.

(f) When a tripartite escrow agreement is used, the Contractor shall utilize only suppliers of labor and material that signed the escrow agreement.

- OR -

I- 7 FAR 52.228-15 Performance and Payment Bonds--Construction (OCT 2010)

(a) *Definition.* "Original contract price" means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

(b) *Amount of required bonds.* Unless the resulting contract price is \$150,000 or less, the successful offeror shall furnish performance and payment bonds to the Contracting Officer as follows:

(1) *Performance bonds (Standard Form 25).* The penal amount of performance bonds at the time of contract award shall be 100 percent of the original contract price.

(2) *Payment Bonds (Standard Form 25-A).* The penal amount of payment bonds at the time of contract award shall be 100 percent of the original contract price.

(3) *Additional bond protection.*

(i) The Government may require additional performance and payment bond protection if the contract price is increased. The increase in protection generally will equal 100 percent of the increase in contract price.

(ii) The Government may secure the additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(c) *Furnishing executed bonds.* The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) *Surety or other security for bonds.* The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the *Federal Register* or may be obtained from the:

U.S. Department of Treasury
Financial Management Service
Surety Bond Branch
3700 East West Highway, Room 6F01
Hyattsville, MD 20782
Or via the internet at <http://www.fms.treas.gov/e570/>

(e) *Notice of subcontractor waiver of protection (40 U.S.C. 3313(c)).* Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

I- 8 AGAR 452.228-70 Alternative Forms of Security (NOV 1996)

If furnished as security, money orders, drafts, cashiers checks, or certified checks shall be drawn payable to: USDA, Forest Service.

I- 9 AGAR 452.232-70 Reimbursement for Bond Premiums--Fixed-Price Construction Contracts (NOV 1996)

The Contract Price includes the total amount for premiums that the Contractor attributes to the furnishing of performance and payment bonds required by the contract. Reimbursement for bond premiums under the clause at FAR 52.232-5, Payments Under Fixed-Price Construction Contracts, shall not cover any amount therefore not included in the contract price.

I-10 FAR 52.236-7 Permits and Responsibilities (NOV 1991)

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

I-11 FAR 52.252-4 Alterations in Contract (APR 1984)

Portions of this contract are altered as follows: None

I-12 FAR 52.252-6 Authorized Deviations in Clauses (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of “(DEVIATION):” after the date of the clause.

(b) The use in this solicitation or contract of any Agriculture Acquisition Regulation (48 CFR Chapter 4) clause with an authorized deviation is indicated by the addition of “(DEVIATION)” after the name of the regulation.

I-13 Order of Precedence - Construction

Any inconsistency in this solicitation or contract shall be resolved by giving precedence in the following order:

(a) The Schedule (excluding the Specifications) (Sections A-H).

(b) The representations and other instructions (Sections K and L).

- (c) Contract clauses (Section I).
- (d) Special Project Specifications.
- (e) General Specifications.
- (f) Drawings and Exhibits (Section J).

ATTACHMENTS

Wage Rate Requirements (Construction) Statute: If this is a contract in excess of \$2,000, the Wage Rate Requirements (Construction) statute requires the Contractor to pay certain minimum wages and benefits to employees working under this contract. These required minimum wages are stated in the attached Wage Decision. **Pursuant to Executive Order 13658, the minimum hourly wage rate required to be paid to workers performing on, or in connection with, contracts and subcontracts subject to FAR Subpart 22.19, is at least \$10.20 per hour beginning January 1, 2017 , and annually thereafter, an amount determined by the Secretary of Labor. See FAR Subpart 22.19.**

The following attachments are a part of this solicitation and any resulting contract.

J- 1 Wage Rate Decision No. MT170072, Dated 01/06/2017, 6 pages.

NOTE: THIS PROJECT IS LOCATED IN ZONE 3

J- 2 Drawings (see separate document)

Sheet G-01 – Cover and Sheet Index

Sheet G-02 – Legend and Schedule of Items

Sheet C-01 – Repository Site Plan

Sheet C-02 – Sump drain and Infiltration Gallery Plan

Sheet C-03 – Sump Drain and Infiltration Gallery

Sheet C-04 – Sump drain and Infiltration Gallery Excavation Plan

Sheet C-05 – Sump Drain and Infiltration Gallery Pipe Plan

Sheet C-06 – Sump Drain and Infiltration Gallery Regrading Plan

Sheet C-07 – Sump drain and Infiltration Gallery Details

Wage Rate Decision No. MT170072, Dated 01/06/2017

General Decision Number: MT170072 01/06/2017 MT72

Superseded General Decision Number: MT20160072

State: Montana

Construction Type: Heavy

County: Park County in Montana.

HEAVY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.20 for calendar year 2017 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2017

* BRMT0005-003 06/01/2016

	Rates	Fringes
BRICKLAYER.....	\$ 26.22	13.70

 ELEC0044-003 06/01/2016

	Rates	Fringes
LINE CONSTRUCTION (1) Lineman.....	\$ 43.43	15.15

ELEC0532-015 06/01/2016

	Rates	Fringes
ELECTRICIAN.....	\$ 29.00	12.70

ENGI0400-014 05/01/2013

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
(Zone 1)		
(1) A-frame truck Crane, oiler (except crane).....	\$ 23.47	10.40
(2) Crane Oiler,Bulldozer, Roller (Dirt and Grade Compaction), Backhoe.....	\$ 23.94	10.40
(3) Mechanic, Scraper.....	\$ 24.34	10.40
(4) Cranes, 25 tons - 44 tons.....	\$ 27.00	11.40
(5) Cranes, 45 tons to and incl. 74 tons.....	\$ 28.00	11.40
(6)Cranes, 75 tons to and incl. 149 tons; Cranes, Whirley (All).....	\$ 29.00	11.40
(7) Cranes, 150 tons to including 250 tons (add \$1.00 for every 100 tons over 250 tons); Crane, Stiff- Leg or Derrick; Helicopter Hoist; Crane, Tower (all).....	\$ 30.00	11.40

ZONE DEFINITIONS FOR POWER EQUIPMENT OPERATORS:

The zone hourly rates applicable to each project shall be determined by measuring the road miles over the shortest practical maintained route from the nearest County Court House of the following listed towns to the center of the job:

BILLINGS, BOZEMAN, BUTTE, GREAT FALLS, HELENA, KALISPELL, MISSOULA

- Zone 1: 0 to 30 miles - Base Pay
- Zone 2: 30 to 60 miles - Base Pay + \$3.50
- Zone 3: Over 60 miles - Base Pay + \$5.50

IRON0732-018 06/01/2015

	Rates	Fringes
IRONWORKER: Reinforcing and Structural.....	\$ 27.00	19.78

LABO1686-011 05/01/2012

	Rates	Fringes
LABORER		
(2) Mason Tender.....	\$ 20.10	9.05
(3) Pipelayer.....	\$ 20.24	9.05

ZONE DEFINITIONS FOR LABORERS

The zone hourly rates applicable to each project shall be determined by measuring the road miles over the shortest practical maintained route from the County Courthouse of the following listed town to the center of the job:

Billings, Bozeman, Butte, Helena, Great Falls, Missoula, Kalispell

TRAVEL ZONES:

- ZONE 1: 0 to 30 miles, Base Pay
- ZONE 2: 30-60, add \$3.05 to Base Pay
- ZONE 3: Over 60 miles, add \$4.85 to Base Pay

SUMT2011-047 02/08/2011

	Rates	Fringes
CARPENTER (Form Work Only)....	\$ 24.30	7.80
CARPENTER, Excludes Form Work..	\$ 21.13	7.00
LABORER: Common or General...	\$ 18.21	0.00
LABORER: Landscape and Irrigation.....	\$ 15.14	1.30
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 21.99	8.55

OPERATOR: Excavator.....	\$ 23.12	7.81
OPERATOR: Grader/Blade.....	\$ 24.69	8.40
OPERATOR: Loader (Front End)....	\$ 24.20	7.84
TRUCK DRIVER: Dump Truck.....	\$ 18.84	5.92

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an

internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response

from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

Mark Mod #1

SECTION C - DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK

C-1 - PROJECT DESCRIPTION AND LOCATION

(a) **Description of Work.** The intent of the contract is to provide for the construction and completion of the work described. The precise details of performing the work are not stipulated except as considered essential for successful completion of the work. The CONTRACTOR must furnish all labor, materials, equipment/tools, transportation, supervision, and supplies necessary to complete the work according to the contract. Work includes the following:

- Mobilization, Demobilization, Bonding, and Insurance
- Erosion Control Plan
- Providing and implementing a site specific Health and Safety Plan (HASP)
- Transporting ~~two (2) panels~~ one panel approximately 105 ft X 200 ft each of K-30-B linear low-density polyethylene liner material from the Beal Mountain Mine to the Site.
- Maintaining project access roads
- Striping and stockpiling topsoil from disturbance area
- Excavating and stockpiling repository cover material, waste material, and sump drain rock
- Excavating and stockpiling native material for trench and infiltration gallery
- Installing infiltration gallery and sump drain pipe, drain rock/pipe bedding, and geotextile
- Providing and installing the secondary sampling sump
- Replacing repository materials and repairing repository liner
- Replacing native material, regrading infiltration gallery, and placing stockpiled topsoil
- Reseeding and fertilizing areas disturbed areas for excavation of the trench and infiltration gallery. All other areas disturbed in the course of work shall be ripped and seeded.
- Providing and placing erosion control mat on areas disturbed areas for excavation of the trench and infiltration gallery

Work for this project includes three major tasks. One of the major tasks is to excavate and stockpile material for the construction of the sump drain and infiltration gallery. The second major task is installing the sump drain and infiltration gallery. The third major task is the replacement of materials in the repository, the repair of disturbed liners, and regrading the repository cover and native materials. Ancillary tasks in support of these tasks include road maintenance on haul roads (blading and watering), Mobilization and Demobilization preparing and implementing an Erosion Control Plan, and preparing and implementing a Health and Safety Plan.

This work requires potentially handling mine waste which may contain metals and other chemicals that are listed as hazardous substances under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 42 U.S.C. 9601 and 9602. The CONTRACTOR and all SUBCONTRACTORS shall provide written documentation that all on-site personnel engaged in the Work have received the Occupational Safety and Health Administration 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) Training required under 29 CFR 1910.120.

(b) **Project Location.** The project is located in the New World Mining District near Cooke City, Montana in the Beartooth Mountains. The District falls within the boundaries of the Gallatin and Custer National Forests and abuts Yellowstone National Park's northeast corner. The Absaroka-Beartooth Wilderness Area bounds the District to the north and east. The District lies entirely within Park County, Montana. The Work site addressed by this CONTRACT lies at an elevation of approximately 8,360 feet above mean sea level.

The project site can be reached from two access points off U.S. Highway 212 about 0.6 and 1.2 miles east of Cooke City. A map showing the locations of the work is included in the DRAWINGS. Cooke City is accessible by paved roads from the east over Highway 212 and from the west through Yellowstone National Park.

Access to Cooke City through Yellowstone National Park may be permitted, depending on vehicle weight and size limitations, with the following restrictions:

- a commercial permit is required
- special restrictions apply to commercial loads
- special restrictions apply if hauling petroleum products
- special restrictions apply to hauling other hazardous materials

Specific inquiries concerning hauling materials and equipment through the park should be directed to

<INSERT NAME>>

Visitor Services Office

P.O. Box 168

Yellowstone National Park, WY 82190

Tel: (307) 344-2115

FAX: (307) 344-2104

(c) **Pre-Bid Tour.** The pre-bid tour is scheduled for <<INSERT DATE>>, 10:00 a.m., Mountain Standard time beginning at the <<INSERT LOCATION>>.

(d) **Start Work.** Work shall commence no later than 10 business days following issuance of the Notice to Proceed.

(e) **Period of Performance.** It is estimated that work will begin on or around August 7, 2017 and will continue for a period of 21 calendar days. It is important that this work is conducted during late summer or early fall.. All work under this contract must be completed before the contract ending date.

(f) **Price Range.** The project magnitude is estimated to be between \$<<INSERT>> and \$<<INSERT>>.

(g) **Restoration by CONTRACTOR.** The CONTRACTOR shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the CONTRACTOR shall remove from the work area and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Government. Upon completing the work, the CONTRACTOR shall leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer. All debris not designated for salvage shall be disposed off-site in a state-licensed landfill.

(h) **Special Construction Techniques.** CONTRACTOR shall be the sole authority for the means and methods necessary to complete the Work as specified and shown in the Drawings, Specifications (FP-03 Standard Specifications and Forest Service Supplemental Specifications.) and Contract Clauses. To the extent specialized or repeated handling, active and passive dewatering and other site-specific work methods are required as the wastes are removed/consolidated, the costs associated with these specialized work methods are incidental to the work. CONTRACTOR shall only be paid in accordance with its bid for those unit price and lump sum items expressly described in the Schedule of Items (Section B-1).

CONTRACTOR assumes full and sole responsibility for the capability of selected construction techniques to complete the work in accordance with the contract documents. CONTRACTOR also assumes full responsibility for safety and environmental protection with his/her selected construction techniques. Submittal review in no way relieves CONTRACTOR of these responsibilities. The extent of construction technique submittal review by the CO shall be only to ascertain that the proposed technique appears capable of achieving a completed product consistent with the design intent of the contract documents.

(i) **Utility Locations.** There are no known utilities available for the CONTRACTOR'S use at the Site. The CONTRACTOR is responsible for location of all underground utilities prior to ground disturbance on National Forest System land. Damaged utilities shall be repaired at the CONTRACTOR'S expense. Contact 811 prior to any ground disturbance.

(j) **Speed and Weight Limits.** All loads leaving the site shall be covered or tarped. Posted speed limits shall be observed on all roads leading to the site as well as all other public roadways. Haul vehicles and all other vehicles used in the work shall strictly comply with these limits. Legal weight limits for public roadways and bridges shall be observed in all hauling activities.

(k) **Permits.** It shall be the CONTRACTOR's responsibility to know and abide by any permit requirements for the work. The cost to implement the terms and requirements of the permits shall be considered incidental to the work. Any permit requirements for record keeping and reporting are not necessary for this CERCLA project. Copies of any known permit requirements shall be submitted to the CO prior to initiating construction activities. Delay by the CONTRACTOR in obtaining any permit information, terms and requirements will not be grounds for any extension of the contract time.

(l) **Key Personnel.** The key personnel specified in the Offeror's Technical Proposal are considered to be essential to the work being performed hereunder. Key personnel shall remain on the project for the duration of work.

(m) **Construction Surveying and Staking.** Construction surveying and staking shall be conducted by the Contractor prior to construction.

(n) **Use of Premises.** CONTRACTOR shall confine equipment, storage of materials, and construction operations to the areas shown on the Drawings. Only authorized personnel are allowed to be on-site during construction activities. CONTRACTOR shall not unreasonably encumber the site or public rights-of-way with materials and/or construction equipment. Should CONTRACTOR deem it necessary to work outside of the general construction areas shown, it shall be necessary for CONTRACTOR to obtain written approval from the CO.

Camping will not be permitted in the project area without written authorization of the CO.

The CONTRACTOR shall provide the location(s) of proposed staging area(s) for CO approval. Access must be maintained to other facilities on the site. The CONTRACTOR shall operate all equipment and store, transport, and handle material in a manner that will not damage existing infrastructure.

Site security is the responsibility of the CONTRACTOR. The CONTRACTOR shall be responsible for protecting all equipment and supplies for use on the project and stored at the site. The CONTRACTOR shall be responsible for all costs required to provide such protection.

The CONTRACTOR shall be responsible for solid waste disposal. The CONTRACTOR shall at all times keep the Site in a clean, neat, and orderly condition. **Please Note: The Site is located in the Gallatin and Custer National Forests and abuts Yellowstone National Park. The Site is within Grizzly and Bleak Bear habitat. Contractor shall comply with Occupancy and Use Order # 01-14-11-00-02:**

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3817710.pdf

Construction related debris, including but not limited to used motor oil, oil cans, grease cartridges, and refuse shall be removed promptly from the site and disposed on in a lawful manner off National Forest Service System land. The CONTRACTOR shall pay for all landfill or transfer station fees associated with construction debris.

(o) **Maintenance of Fences.** Any fences adjacent to any work site shall be maintained by CONTRACTOR. Any adjacent fence removed or destroyed during the course of this Contract shall be reinstalled or reconstructed in like kind at no cost to Government or landowner. The cost for this work shall be considered incidental and no additional compensation will be allowed.

(p) **Sanitation.** The CONTRACTOR shall provide and maintain portable sanitation toilet facilities for the project. Contractor shall setup the facilities, maintain them during construction and move them at the end of the Project.

(q) **Health and Safety.**

Perform all operations in a prudent, conscientious, safe, and professional manner. Ensure that all personnel involved are trained for the level of expertise required for the proper performance of the task. Knowledge of appropriate first aid procedures is also required. Provide administrative or engineering controls and personal protective equipment necessary to ensure worker protection according to 29 CFR 1910.120.

C-2 – GOVERNMENT-FURNISHED PROPERTY

The US Forest Service will provide the following Government-furnished property for use on this project:

- Infiltration Basin Drain Gravel/Bedding Gravel, 204(e), located approximately 1 mile south-east of the repository.
- Sump Gravel (if needed), located approximately 1 mile south-east of the repository
- K-30-B Linear Low-Density Polyethylene (LLDP) liner material, ~~two (2) panels~~ one panel approximately 105 ft X 200 ft each.

C-3 – SUBMITTALS

The CONTRACTOR shall submit to the CO the following plans at least 14 days prior to beginning work. In addition, the CONTRACTOR shall supply the CO all required submittals for each bid item at least 14 days prior to commencing work on the corresponding item. All submittals shall be reviewed and accepted or approved by the CO. Preparation of all submittals shall be considered incidental to the other work items in this contract.

(a) **Construction Schedule (S-001).** The CONTRACTOR shall prepare a detailed construction schedule that outlines the sequence of work, and specifies key construction milestones. The schedule shall allow time for inspection of work by the CO. An annotated bar or Gantt-type schedule will be acceptable for purposes of this deliverable.

(b) **Health and Safety Plan (S-002).** The CONTRACTOR shall submit to the CO a Health and Safety Plan before work commences. Minimum items to be included in the safety plan are:

- Project Description
- Authority, Roles and Responsibilities
- Proposed Competent Person and Qualifications
- Lines of Communication / Communication System
- Hazard Identification and Control
- Evacuation Plan / Direction to Nearest Hospital
- Proposed Equipment
- Proposed Trenching and Excavation Safety Measures including Competent Person and Qualifications (if any)
- Proposed Personnel Protective Equipment (PPE)
- First Aid Station
- Employee Training (40-hour HAZWOPER with 8-hour refresher a minimum)

In accordance with OSHA (29 CFR 1926), the CONTRACTOR is responsible for the safety of all work activities at the site and shall ensure that proper safety requirements are followed. The Site has elevated levels of Arsenic, Barium, Cadmium, Chromium, Copper, Lead and Zinc in soils and surface water. These Contaminates of Concern (COC) could pose an unacceptable risk to human health. The main forms of exposures include soil contact, surface water ingestion, and dust inhalation.

(c) **Erosion Control Plan (S-004).** The Contractor shall submit an Erosion Control Plan (ECP) for construction activities associated with this project. The plan shall be written in accordance with the U.S. Environmental Protection Agency's Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices, September, 1992. The Contractor shall include in the Erosion Control Plan the measures that will be taken for controlling runoff from precipitation and stormwater run-on and run-off at the site. The submitted

plan is expected to be specific to the project site and shall detail locations and types of best management practices that will be used during construction and address any erosion control measures that will remain after the completion of construction.

The ECP shall identify and describe the types of Best Management Practices (BMPs) to be used during construction activities at the Site and shall identify the Technical Specification(s) for each proposed type of BMP. The ECP shall identify the proposed locations of each of the BMPs on maps and drawings.

The ECP shall describe procedures for inspection, maintenance, replacement and removal of BMP's during construction activities at the Site and shall include a schedule of said inspections and maintenance. The ECP shall describe procedures for documentation of inspections, maintenance, re-placement and removal of BMPs and shall include a description of criteria CONTRACTOR will use to evaluate proper inspection and maintenance of BMPs. The ECP shall require inspections which shall occur at a minimum of at least once every fourteen calendar days and within 24 hours after any rainfall event of 0.5 inches or greater or as requested by CO.

CONTRACTOR shall install BMPs identified in the ECP, Special and Standard Provisions and Drawings. If, at any time during preparation of the ECP or construction activities at the Site, the CO determines that BMPs, in addition to those required by the Special Provisions, Technical Provisions, and Drawings are necessary to minimize storm water runoff or erosion of disturbed land, CONTRACTOR shall prepare a written modification of the ECP describing, in detail, the type and location of the proposed additions to the ECP and submit the same to CO for approval. BMPs installed according to the ECP shall be considered incidental to the Work.

The ECP shall describe the method of re-placement of BMPs in the event of failure of BMPs, as well as the clean-up and re-placement of materials at the Site.

In the event CO determines that CONTRACTOR has failed to install and maintain BMPs as provided in the project specifications, contract provisions, contract drawings, or ECP, the CO may issue a stop work order. If a stop work order is issued, soil binders shall immediately be applied to disturbed surface areas.

The ECP shall provide that removal or movement of all BMPs shall be approved by the CO. CONTRACTOR shall maintain a copy of the ECP, current to date, at the Site.

CONTRACTOR shall install all BMPs and any additional or replacement BMPs in accordance with the ECP, project specifications, contract provisions, contract drawings for the price(s) bid.

(d) **Other Submittals.** The following is a listing of other submittals required under this contract. This list summarizes the requirements shown under each work item; however, the list may not be all-inclusive. The Contractor is responsible for identifying all required submittals.

Item No.	Submittal
US Forest Service Supplemental Specification – Section 107.10	Hazardous Spill Plan
US Forest Service Supplemental Specification – Section 204(f)	Type IV-A Geotextile
US Forest Service Supplemental Specification – Section 204	Bentonite Powder
US Forest Service Supplemental Specification – Section 602	HDPE Pipe (Perforated and Solid)
US Forest Service Supplemental Specification – Section 625.06 & 625.07	Fertilizer and Seed Certifications
US Forest Service Supplemental Specification – Section 713.17	Erosion Control Mat

C-4 – STAGING AND STORAGE AREAS

Areas for staging operations and storage of materials shall be approved by the CO. The Contractor must request in writing approval from the CO to begin staging/housing material and equipment on site. Fueling areas will be situated at least 150 feet from the normal high water mark.

C-5 – STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS FP-03 U.S. Customary Units (U.S. DEPARTMENT OF TRANSPORTATION, Federal Highway Administration) (2003)

Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-03) are included by reference only. The requirements in these Standard Specifications are hereby made a part of this solicitation and any resultant contract.

Copies of the Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-03) are available in PDF format on the Western Federal Lands Highway Division website at <http://flh.fhwa.dot.gov/resources/pse/specs/fp-03.htm>.

C-6 – FOREST SERVICE FP-03 SUPPLEMENTAL SPECIFICATIONS

The Supplemental Specifications listed below are applicable to this contract and are physically included in this section (C-9).

NOTE THAT THE SPECIFICATION LIST INCLUDES THE MAJOR SPECIFICATIONS APPLICABLE TO THIS PROJECT. OTHER SPECIFICATIONS REFERRED TO WITHIN THESE SPECIFICATIONS (EVEN THOUGH NOT SPECIFICALLY LISTED HEREIN) ARE ALSO FULLY APPLICABLE TO THIS REQUEST FOR PROPOSAL AND ANY RESULTANT CONTRACT.

Section No.	Description
Preface	
101	Terms, Format, and Definitions
102	Bid, Award, and Execution of Contract
103	Scope of Work
104	Control of Work
105	Control of Materials
106	Acceptance of Work
107	Legal Relations and Responsibility to the Public
108	Prosecution and Progress
109	Measurement and Payment
151	Mobilization
152	Construction Survey and Staking
155	Schedules of Construction
204	Excavation and Embankment
602	Culverts and Drains
625	Turf Establishment
713	Temporary Rolled Erosion Control Products

Preface

Delete all but the first paragraph and add the following:

The US Forest Service, US Department of Agriculture has adopted FP-03 for construction of National Forest System Roads.

101 - Terms, Format, and Definitions

101.01 Meaning of Terms

Delete all references to the TAR (Transportation Acquisition Regulations) in the specifications.

101.03 Abbreviations.

Add the following to (a) Acronyms:

AFPA	American Forest and Paper Association
MSHA	Mine Safety and Health Administration
NIST	National Institute of Standards and Technology
NESC	National Electrical Safety Code
WCLIB	West Coast Lumber Inspection Bureau

Add the following to (b) SI symbols:

<u>mp</u>	<u>Milepost</u>
<u>ppm</u>	<u>Part Per Million</u>

101.04 Definitions.

Delete the following definitions and substitute the following:

Bid Schedule--The Schedule of Items.

Contractor--The individual or legal entity contracting with the Government for performance of prescribed work. In a timber sale contract, the contractor is the "purchaser".

Culvert--No definition.

Right-of-Way--A general term denoting (1) the privilege to pass over land in some particular line (including easement, lease, permit, or license to occupy, use, or traverse public or private lands), or (2) Real property necessary for the project, including roadway, buffer areas, access, and drainage areas.

Add the following:

Adjustment in Contract Price--"Equitable adjustment," as used in the Federal Acquisition Regulations, or "construction cost adjustment," as used in the Timber Sale Contract, as applicable.

Change--"Change" means "change order" as used in the Federal Acquisition Regulations, or "design change" as used in the Timber Sale Contract.

Design Quantity--"Design quantity" is a Forest Service method of measurement from the FS-96 *Forest Service Specifications for the Construction of Roads and Bridges*. Under these FP specifications this term is replaced by the term "Contract Quantities".

Forest Service--The United States of America, acting through the Forest Service, U.S. Department of Agriculture.

Neat Line--A line defining the proposed or specified limits of an excavation or structure.

Pioneer Road--Temporary construction access built along the route of the project.

Purchaser--The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through agents, employees, or subcontractors.

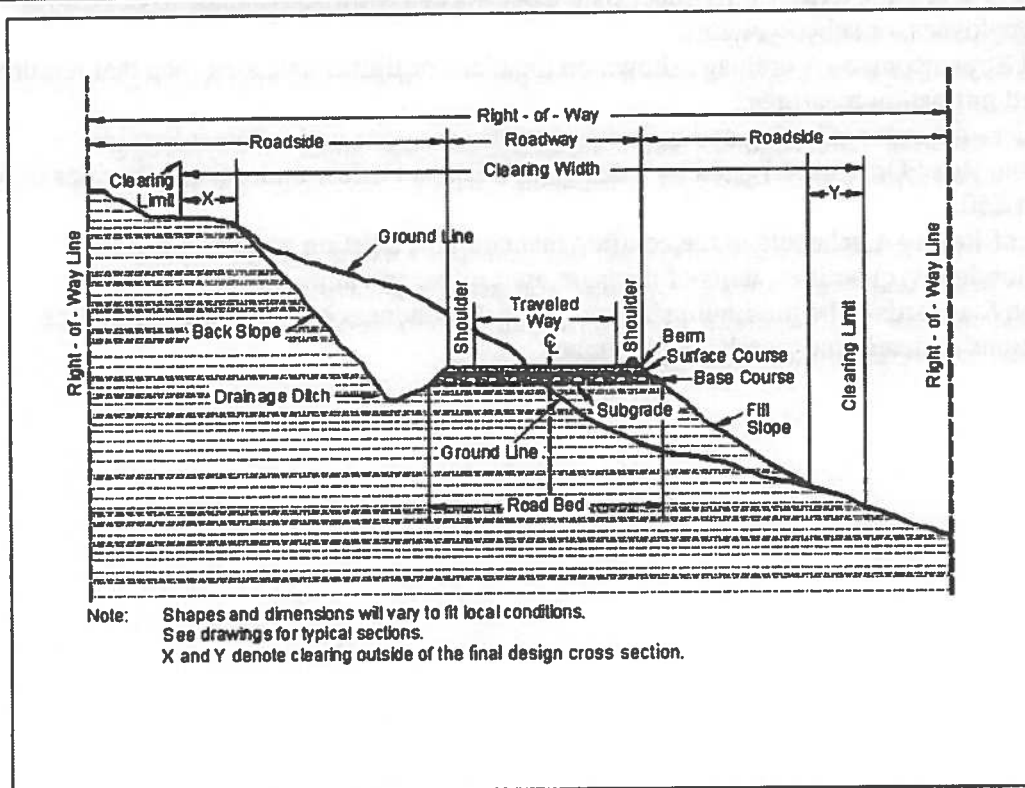
Protected Streamcourse--A drainage shown on the plans or timber sale area map that requires designated mitigation measures.

Road Order--An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

Schedule of Items--A schedule in the contract that contains a listing and description of construction items, quantities, units of measure, unit price, and amount.

Utilization Standards--The minimum size and percent soundness of trees described in the specifications to determine merchantable timber.

Figure 101-1—Illustration of road structure terms.



102 - Bid, Award, and Execution of Contract

102 Bid, Award, and Execution of Contract

Delete Section 102 in its entirety.

103 - Scope of Work

Deletions

Delete all but subsection 103.01 Intent of Contract.

104 - Control of Work

Deletions

Delete Sections 104.01, 104.02, and 104.04.

Add the following:

104.02 The Contractor shall develop and make any detailed surveys needed for construction of the work involved, including excavation limits, liner elevations, and sump elevations. The Contractor shall be held responsible for the preservation of all primary and other controls. If control markings are destroyed or disturbed by the Contractor, the Contractor shall replace them at no cost to the Government.

104.03 Specifications and Drawings

Add the following:

(c) As-Built-Plans. Furnish one set of as built plans. The Government will provide one set of contract plans to be used exclusively for recording the as-built details of the project. Use red pencil or red ink to record the information on the as-built plans.

Note all additions or revisions to the location, character, and dimensions of the prescribed work shown on the contract plans. Line out all details shown that are not applicable to the completed work. Check off details shown that were incorporated into the completed work without change.

Retain the plans at the project site and, as work progresses, continually update them to reflect the as-built details. Upon request, make the plans available to the CO to review for compliance with these specifications.

Show the following types of changes on the as-built plans:

- (1) Typical section(s)
 - Revisions to the alignment
 - Revisions to width or depth Revisions to embankment or back slopes
 - Changes in the construction limits
- (2) Plan and profile
 - Revisions to the alignment
 - Changes in the construction limits
 - Revisions in location, type, and grade of road approaches
 - Location of monuments and permanent references
 - Revisions to grades, elevations, and stationing of intersection PIs
 - Location and type of utilities
 - Equations
- (3) Miscellaneous
 - Revisions to parking areas or turnouts
 - Culvert diameter, length, type and stationing
 - Final location, type and length of curbs, sidewalks, etc.
 - Location, length, and type of fencing and gates
 - Location, elevation and type of aerial or underground utilities
 - Final contours for surfaces disturbed or created by construction

Furnish the as-built working plans to the CO before the final inspection. Correct all details found during the final inspection that are not shown on the as-built plans and return to the CO within 5 days.

104.07 Restoration by Contractor

Add the following subsection:

All areas disturbed by the Contractor's operations including, but not limited to, access roads, staging areas, stockpiles, haul roads, loading operations, and disposal operations shall be ripped and restored by grading to the original contours, and seeded and fertilized according to Section 625 – Turf Establishment.

105 - Control of Material

105.01 Source of Supply and Quality Requirements.

Add the following:

All materials incorporated into the project shall be certified noxious weed seed free, either through visual inspection or commercial certification.

105.024 Storing and Handling Material.

Add the following to the beginning of the first sentence: Transport,

105.05 Use of Material Found in the Work.

Delete 105.05 (a) and (b) and the last sentence of the second paragraph and substitute the following:

Materials produced or processed from Government lands in excess of the quantities required for performance of this contract are the property of the Government. The Government is not obligated to make reimbursement for the cost of producing these materials.

Add the following:

Stockpile excess material at an approved location in a stable manner. Provide erosion control measures at all stockpile locations to minimize the erosion and transport of stockpile materials by wind and water.

106 - Acceptance of Work

106.01 Conformity with Contract Requirements.

Delete Subsection 106.01 and substitute the following:

Follow the requirements of FAR Clause 52.246-12 Inspection of Construction.

References to standard test methods of AASHTO, ASTM, GSA, and other recognized standard authorities refer to the methods in effect on the date of solicitation for bids.

Perform all work to the lines, grades, cross-sections, dimensions, and processes or material requirements shown on the Drawings or specified in the contract.

Incorporate manufactured materials into the work according to the manufacturer's recommendations or to these specifications, whichever is stricter.

Plan dimensions and contract specification values are the values to be strived for and complied with as the design values from which any deviations are allowed. Perform work and provide material that is uniform in character and reasonably close to the prescribed value or within the specified tolerance range. The purpose of a tolerance range is to accommodate occasional minor variations from the prescribed value that are unavoidable for practical reasons.

When standard manufactured items are specified (such as fence, wire, plates, rolled shapes, pipe conduits, etc., that are identified by gauge, unit mass, section dimensions, etc.), the identification will be considered to be nominal masses or dimensions. Unless specific contract tolerances are noted, established manufacturing tolerances will be accepted.

The Government may inspect, sample, or test all work at any time before final acceptance of the project. When the Government tests work, copies of test reports are furnished to the Contractor upon request. Government tests may or may not be performed at the work site. If Contractor testing and inspection is verified by the Government, the Contractor's results may be used by the Government to evaluate work for acceptance. Do not rely on the availability of Government test results for process control.

Acceptable work conforming to the contract will be paid for at the contract unit bid price. Four methods of determining conformity and accepting work are described in Subsections 106.02 to 106.05 inclusive. The primary method of acceptance is specified in each Section of work. However, work may be rejected at any time it is found by any of the methods not to comply with the contract.

Remove and replace work that does not conform to the contract, or to prevailing industry standards where no specific contract requirements are noted, at no cost to the Government.

(a) Disputing Government test results. If the accuracy of Government test results is disputed, promptly inform the CO. If the dispute is unresolved after reasonable steps are taken to resolve the dispute, further evaluation may be obtained by written request. Include a narrative describing the dispute and a proposed resolution protocol that addresses the following:

- (1) Sampling method;
- (2) Number of samples;
- (3) Sample transport;
- (4) Test procedures;
- (5) Testing laboratories;
- (6) Reporting;
- (7) Estimated time and costs; and
- (8) Validation process.

If the evaluation requires additional sampling or testing be performed, mutually agree with the Government on witnessing procedures and on sampling and testing by a third party laboratory. Use a third party laboratory accredited by the AASHTO accreditation program. Provide proof of the laboratory's accreditation for the test procedures to be used. Do not use the same laboratory that produced the disputed Government test results or that produced the test results used as a basis for the dispute.

The CO will review the proposed resolution protocol and may modify it before final approval and execution.

The Government will use the approved resolution protocol test results to determine the validity of the disputed testing. If the Government test results are validated, the Contractor will be responsible for all costs associated with developing and performing the resolution protocol. If the Government test results are not validated, the Government will be responsible for all costs associated with developing and performing the resolution protocol. If the validity of the Government test results cannot be determined, the Contractor and Government will equally share all costs associated with developing and carrying out the resolution protocol.

(b) Alternatives to removing and replacing non-conforming work. As an alternative to removal and replacement, the Contractor may submit a written request to:

- (1) Have the work accepted at a reduced price; or
- (2) Be given permission to perform corrective measures to bring the work into conformity.

The request must contain supporting rationale and documentation. Include references or data justifying the proposal based on an evaluation of test results, effect on service life, value of material or work, quality, aesthetics, and other tangible engineering basis. The CO will determine disposition of the nonconforming work.

106.07 Delete

Delete subsection 106.07.

107 - Legal Relations and Responsibility to the Public

107.05 Responsibility for Damage Claims.

Delete the entire subsection.

107.06 Contractor's Responsibility for Work.

Delete the following from the first paragraph.
"except as provided in Subsection 106.07".

107.08 Sanitation, Health and Safety.

Add the following:

Perform all operations in a prudent, conscientious, safe and professional manner. Ensure that all personnel involved in handling and packaging the hazardous waste are trained for the level of expertise required for the proper performance of the task and, in particular, in the areas of chemical incompatibility, general first aid procedures, and spills. Provide handling and personal protective equipment appropriate to ensure safe handling of the hazardous waste according to 29 CFR 1910.120. Notify the US Forest Service of all hazardous material that may be brought onto the National Forest.

107.09 Legal Relationship of the Parties.

Delete the entire subsection.

107.10 Environmental Protection.

Add the following:

Design and locate equipment repair shops, stationary refueling sites, or other facilities to minimize the potential and impacts of hazardous material spills on Government land.

Before beginning any work, submit a Hazardous Spill Plan. List actions to be taken in the event of a spill. Incorporate preventive measures to be taken, such as the location of mobile refueling facilities, storage and handling of hazardous materials, and similar information. Immediately notify the CO of all hazardous material spills. Provide a written narrative report form no later than 24 hours after the initial report and include the following:

- Description of the item spilled (including identity, quantity, manifest number, and other identifying information).
- Whether amount spilled is EPA or state reportable, and if so whether it was reported, and to whom.
- Exact time and location of spill including a description of the area involved.
- Containment procedures.
- Summary of any communications the Contractor had with news media, Federal, state and local regulatory agencies and officials, or Forest Service officials.
- Description of clean-up procedures employed or to be employed at the site including final disposition and disposal location of spill residue.

- When available provide copies of all spill related clean up and closure documentation and correspondence from regulatory agencies.

The Contractor is solely responsible for all spills or leaks that occur during the performance of this contract. Clean up spills or leaks to the satisfaction of the CO and in a manner that complies with Federal, state, and local laws and regulations.

108 - Prosecution and Progress

Delete Section 108 in its entirety.

109 - Measurement and Payment

109 Deletions

Delete the following entire subsections:

109.06 Pricing of Adjustments.

109.07 Eliminated Work.

109.08 Progress Payments.

109.09 Final Payment.

109.02 Measurement Terms and Definitions.

Add the following:

Methods of Measurement - One of the following methods of measurement for determining final payment is DESIGNATED on the SCHEDULE OF ITEMS for each pay item:

A. **Contract Quantities (CQ) and Design Quantities (DQ)** - These quantities denote the final number of units to be paid for under the terms of the contract. They are based upon the original design data available prior to advertising the project. Original design data include the preliminary survey information, design assumptions, calculations, drawings, and the presentation in the contract. Changes in the number of units SHOWN in the SCHEDULE OF ITEMS may be authorized under any of the following conditions:

As a result of changes in the work authorized by the CO.

As a result of the CO determining that errors exist in the original design data used to determine designed quantities that cause a pay item to change by 15 percent or more.

As a result of the Contractor submitting to the CO a written request showing evidence of errors in the original design data used to determine design quantities that cause a pay item total to change by 15 percent or more. The evidence must be verifiable and consist of calculations, drawings, or other data that show how the designed quantity is believed to be in error.

B. **Staked Quantities (SQ)** - These quantities are determined from staked measurements prior to construction.

C. **Actual Quantities (AQ)** - These quantities are determined from measurements of completed work.

D. **Vehicle Quantities (VQ)** - These quantities are measured or weighed in hauling vehicles.

E. **Lump Sum Quantities (LSQ)** - These quantities denote one complete unit of work as required by or described in the contract, including necessary materials, equipment, and labor to complete the job. They will not be measured individually.

151 – Mobilization

Delete Section 151 in its entirety and replace with the following.

151.01 Description.

This work consists of moving personnel, equipment, material, and incidentals to the project and performing all work necessary before beginning work at the project site; obtaining of permits, insurance, and bonds. This work also includes washing and treating construction equipment and vehicles necessary for equipment transport to remove seeds, plants, and plant fragments before the equipment is used on Forest Service lands, according to the requirements within.

This work also includes moving personnel, equipment, materials and incidentals off the project at project completion. Contractor is required to transport ~~two (2) panels~~ one panel approximately 105 ft X 200 ft each of K-30-B Linear Low-Density Polyethylene (LLDP) liner material from the Beal Mountain Mine to the Site. The Beal Mountain Mine is located approximately 16 miles west southwest of Butte, Montana. Access to the site is through two separate routes. Personnel vehicles and small trucks shall access the site by turning south off of County Road 441 (Fairmont Road) onto German Gulch Road near Fairmont Hot Springs. Long wheel base vehicles delivering equipment or materials may access the site by turning south off of County Road 441 (Fairmont Road) onto a private road and following the private road until it rejoins German Gulch Road. This private road has gates at both ends that will be locked. The USFS will provide the Contractor with a key or other means of access. The contractor is responsible for adhering to the terms of the temporary road use permit for the private road, including the following:

- closing the gates upon each pass through,
- preventing unnecessary damage to land, timber, soil, water, other resources and other improvements,
- minimizing traffic on the road by using alternate routes for most access and only using the private road access for large vehicles and equipment, and
- displaying a placard, permit or sticker for each vehicle using the private road access.

Construction Decontamination Requirements (Mobilization and Demobilization) - Wash the sides, tops, and undercarriages of all construction equipment. Remove all seeds, plants, plant fragments, dirt, and debris from the construction equipment. Only equipment inspected by the Forest Service will be allowed to operate within the project area. All subsequent move-ins of equipment to the project area will be treated in the same manner as the initial move-in. This requirement does not apply to cars, pickup trucks, and other vehicles that regularly travel between the construction site and areas off the National Forest.

Equipment will be considered free of soil, seed, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment, components or the need for specialized inspection tools is not required.

Notify the CO in writing at least 48 hours before moving any construction equipment onto the National Forest. Notification will include an agreed upon location where the equipment will be available for inspection by the Forest Service. Inspection will be required after every cleaning.

Use methods of cleaning and locations for cleaning approved by the CO.

For work at a commercial washing facility, use an approved facility.

New infestations of noxious weeds of concern to Forest Service and identified by either Contractor or Forest Service, in the Project Area or on the haul route, will be promptly reported to the other party. Contractor and Forest Service will agree on treatment methods to reduce or stop the spread of noxious weeds when new infestations are found. A current list of noxious weeds of concern to Forest Service is available at each Forest Service office.

151.02 Measurement.

The contractor will be required to clean all equipment prior to moving onto this project. The cost for all required cleaning(s) are to be included in the measurement for payment for mobilization.

Measure mobilization according to Subsection 109.02.

152 - Construction Survey and Staking

Delete Section 152 in its entirety and replace with the following.

Contractor shall perform all necessary surveys and construction staking required for control of excavation of onsite materials, installation of sump drain, and any necessary on site temporary road construction. The contractor shall establish stable and protected monuments for reference throughout the construction period. A sufficient number of such monuments shall be provided throughout the work to permit verification of the work within the tolerances specified by Table 152-1 Precision Class E. Construction survey shall be completed by a State of Montana Licensed Surveyor as approved by CO. Construction surveying is considered incidental to the construction project.

152.01 Description.

This work consists of furnishing qualified personnel and necessary equipment and material to survey, stake, calculate, and record data for the control of work.

Personnel, equipment, and material shall conform to the following:

- (a) **Personnel.** Furnish technically qualified survey crews experienced in construction survey and staking. Provide personnel capable of performing in a timely and accurate manner. An acceptable crew supervisor shall be on the project whenever surveying/staking is in progress.

Conduct construction staking under the direct supervision of a licensed land surveyor for the state in which work is completed.

- (b) **Equipment.** Furnish survey instruments and supporting equipment capable of achieving the specified tolerances.
- (c) **Material.** Furnish acceptable tools, supplies, and stakes of the type and quality normally used in highway survey work and suitable for the intended use. Furnish stakes and hubs of sufficient length to provide a solid set in the ground with sufficient surface area above ground for necessary legible markings.

Do not use aerosol spray paints in the field. Provide for the safe storage use and clean-up of paint when on National Forest System Lands. Immediately report all spills to the CO, clean-up and disposal of spills and painting waste shall be in accordance with Federal state and local requirements.

Use moisture-resistant paper for survey notes. Keep notes in books with covers that will protect the contents and retain the pages in numerical sequence.

152.02 General.

One major task of this work item is ensure the installing the infiltration drain pipe and associated drain gravel and bedding gravel at the grades shown on the DRAWINGS.

Before beginning construction, notify the CO of any missing initial reference lines, control points, or stakes. Reestablish missing reference, control lines, or stakes as necessary to control subsequent construction staking operations

Perform additional calculations for convenient use of Government-furnished data. Provide immediate notification of apparent errors in the furnished data.

Preserve all initial reference and control points. After beginning construction, replace all destroyed or disturbed initial reference or control points necessary to the work.

Before surveying or staking, discuss and coordinate the following with the CO:

- (a) Surveying and staking methods;
- (b) Stake marking;
- (c) Grade control for courses of material;
- (d) Referencing;
- (e) Structure control; and
- (f) Any other procedures and controls necessary for the work.

Survey and establish controls within the tolerances shown in Table 152-1, Class E.

Prepare field notes in an approved format. Furnish all survey notes at least weekly. All field notes and supporting documentation become the property of the Government upon completion of the work.

Start work only after staking for the affected work is accepted.

The construction survey and staking work may be spot-checked for accuracy, and unacceptable portions of work may be rejected. Resurvey rejected work, and correct work that is not within the tolerances specified in Table 152-1, Class E. Acceptance of the construction staking does not relieve the Contractor of responsibility for correcting errors discovered during the work and for bearing all additional costs associated with the error.

Remove and dispose of all flagging, lath, stakes, and other staking material after the project is complete, unless directed otherwise by the CO.

152.03 Survey and Staking Requirements.

Perform all survey, staking, recording of data, and calculations as necessary to construct the project from the initial layout to final completion. Reset stakes as many times as necessary to construct the work.

(a) Control points. Relocate initial horizontal and vertical control points in conflict with construction to areas that will not be disturbed by construction operations.

Furnish the coordinates and elevations for the relocated points before the initial points are disturbed.

(b) Miscellaneous survey and staking. Perform all surveying, staking, and recording of data essential for establishing the layout and control of the following, as applicable:

- (1) Approach roads and trails;
- (2) Utilities;
- (3) Signs, delineators, and object markers
- (4) Salvaged stockpiled materials
- (5) All disturbed and reclaimed areas, including soil borrow areas
- (6) Infiltration Basin Drain Gravel, Infiltration Bedding Gravel, HDPE drain pipe.

(c) Field Discrepancies. Immediately notify the CO if a discrepancy is encountered between the plans and field conditions which affect the final road or reclaimed areas location or configuration. Prepare recommendations, in writing, to the CO for adjustments to the design to better fit field conditions. Affix the state authorized seal and sign the recommendation attesting to the adequacy of the adjustment. Ensure that adjustments to the design follow all applicable regulations and are consistent with design standards and criteria. Adjustments shall minimize construction effort, such as clearing and embankment volumes. Gain written approval of the adjusted design from the CO before incorporating such adjustment in the field. Return to the original design as soon as practical.

Table 152-1 Tolerances for reestablishing centerline, traverse, and elevations.

Precision Class	Minimum Position Closure	Angular Accuracy (\pm)	L-Line Tangent Control Points ^a (\pm)	Vertical Closure ^b (\pm)
A (Bridges)	1/10,000	2 sets, direct/reverse 10 second rejection limit	N/A	0.02 ft. or 0.02ft/1000ft ^c
B	1/5,000	2 sets, direct/reverse 20 second rejection limit	0.1 ft.	0.02 ft. or 0.02ft/1000ft ^c
C	1/1,000	1 set, direct/reverse 1 minute rejection limit	0.2 ft.	0.5ft/1000ft
D	1/300	Foresight and backsight; 15 minute rejection limit	0.4 ft.	1.0ft/1000ft
E	1/100	Foresight and backsight; 30 minute rejection limit	0.8 ft.	1.0ft/1000ft

a. Accuracy of offset measurement.

b. Determine vertical closures at intervals not to exceed 2000 ft. as measured along centerline.

c. Use greater value.

152.04 Acceptance.

Construction survey and staking will be evaluated under Subsections 106.01.

155 - Schedules for Construction Contracts

Delete Section 155 in its entirety.

Item No.	Description	Quantity	Unit	Rate	Total
155-001	Excavation and backfill	100	cu yd	10.00	1000.00
155-002	Foundation concrete	50	cu yd	20.00	1000.00
155-003	Structural steel	100	lb	1.00	100.00
155-004	Reinforcing steel	200	lb	1.00	200.00
155-005	Formwork	100	sq ft	1.00	100.00
155-006	Brickwork	100	sq ft	1.00	100.00
155-007	Plaster	100	sq ft	1.00	100.00
155-008	Paint	100	sq ft	1.00	100.00
155-009	Roofing	100	sq ft	1.00	100.00
155-010	Interior finish	100	sq ft	1.00	100.00

204 - Excavation and Embankment

Delete Section 204 in its entirety and replace with the following:

204.01 Description

Work for this item includes excavation of various onsite materials within the New World Repository. The materials present include repository cover soil material, waste material, sump gravel, sand bedding, and native material to be excavated outside the repository limits. Temporary haul roads may be necessary for construction. Temporary roads shall be approved by the CO prior to construction and reclaimed by Contractor. Temporary haul roads shall be considered incidental to the Work. Contractor shall excavate the sump drain pipeline trench and infiltration gallery as shown on the DRAWINGS. Contractor shall segregate each material (i.e. cover soil, waste material) in separate stockpiles and replace the material following excavation and pipe/infiltration gallery construction. Sand bedding material within the existing top and bottom liner systems can be mixed with other materials and does not need to be segregated and stockpiled.

During excavation the CONTRACTOR may encounter mining debris or other materials. Any debris not designated for salvage, stockpiling and reuse shall be considered solid waste. The CONTRACTOR shall be responsible for solid waste disposal. The CONTRACTOR shall at all times keep the Site in a clean, neat, and orderly condition. Construction related debris and refuse shall be removed promptly from the site and disposed of in a lawful manner off National Forest Service Lands. The CONTRACTOR shall pay for all landfill or transfer station fees. Clearing and grubbing (if needed) shall be considered incidental for this contract. As shown on the DRAWINGS, a top liner system including a geotextile fabric, sand bedding, geocomposite, a high-density polyethylene (HDPE) liner, GCL liner and another layer of sand bedding lies below approximately three (3) feet of cover soil material. Contractor shall cut existing top liner system and temporarily roll back liner to complete the excavation to intercept the repository sump and to complete the pipeline excavation. In addition, the repository sump was constructed using a bottom liner system including a geotextile fabric, HDPE liner, GCL liner, sand bedding and geocomposite liner at the bottom of the sump. Contractor shall cut the bottom liner system and temporarily roll back the liner to complete the excavation.

Following excavation, pipe bedding and HDPE pipe shall be installed for the sump drain pipeline and the infiltration basin. Upon completion of the sump drain pipeline and infiltration basin, Contractor shall replace segregated stockpiled native and repository materials in the same orientation as they were removed. Contractor shall place supplied Linear Low-Density Polyethylene (LLDP) liner over the top and bottom existing liner systems as shown on the DRAWINGS. ~~Four inches of bagged bentonite powder shall be placed above and below the replaced LLDP liner.~~

Construction Requirements

204.02(a) Excavate and Stockpile Repository Cover Material

This work consists of the excavation of cover soil from the limits of the repository as shown on the DRAWINGS, and stockpiling the cover soil at a designated stockpile location as approved by

the CO. Cover soil consists of approximately the top three (3) feet of material located on the repository. Cover soil material shall be excavated to a depth of Three (3) feet below existing ground surface, or to a depth designated by the CO, throughout the construction limits as shown on the DRAWINGS. Side slopes shall be monitored by Contractor for stability, potential safety concerns and dust control. **Handwork provided a by a laborer will likely be necessary to expose the liners.**

Cover soil shall be stockpiled at a designated stockpile area as approved by CO. In the event Contractor chooses to haul cover soil material from the repository area, existing roads must be used.

Contractor shall maintain and protect access roads, including blading and watering the roads. Access road maintenance is considered incidental to this Bid Item.

Following cover soil excavation, Contractor shall cut the existing top liner system and temporarily roll the liner out of the way for future replacement. Cutting and rolling the existing top liner system is considered incidental to this Section.

204.02(a) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(a) Payment.

Payment will be based on the lump sum bid for the Section 204.02(a) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

204.02(b) Excavate and Stockpile Repository Waste to Expose Sump

This work consists of the excavation of repository waste from within the limits of the repository as shown on the DRAWINGS, and stockpiling the waste material at a designated stockpile location as approved by the CO. Waste material consists of approximately five feet of material below the top liner system. Waste material shall be excavated to a depth of approximately five feet below the top liner system, or until geocomposite sand layer and drain gravel or bottom line system is reached, throughout the construction limits as shown on the DRAWINGS. Side slopes shall be monitored by Contractor for stability, potential safety concerns and dust control. **Handwork provided a by a laborer will likely be necessary to expose the liners.**

Waste material shall be stockpiled at a designated stockpile area as approved by CO. In the event Contractor chooses to haul waste material from the repository area, existing roads must be used.

Contractor shall maintain and protect access roads, including blading and watering the roads. Access road maintenance is considered incidental to this Bid Item.

204.02(b) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(b) Payment.

Payment will be based on the lump sum bid for the Section 204.02(b) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

204.02(c) Excavate and Stockpile Sump Drain Gravel

This work consists of the excavation of sump drain from within the limits of the repository as shown on the DRAWINGS, and stockpiling the sump gravel at a designated stockpile location as approved by the CO. Sump gravel shall be excavated to base of the sump which is lined with bottom liner system, as shown on the DRAWINGS. Side slopes shall be monitored by Contractor for stability, potential safety concerns and dust control.

Sump will be pumped (by others) prior to construction; however, some water may be released from the sump during construction. Pumping of the sump during construction shall be considered incidental to the Work. Appropriate BMPs shall be in place to mitigate erosion. BMPs installed shall be considered incidental to the Work.

Sump gravel shall be stockpiled at a designated stockpile area as approved by CO. In the event Contractor chooses to haul the sump gravel from the repository area, existing roads must be used.

Contractor shall maintain and protect access roads, including blading and watering the roads. Access road maintenance is considered incidental to this Bid Item.

Contractor shall cut the existing bottom liner system and temporarily roll the liner out of the way for future replacement. Cutting and rolling the existing bottom liners system is considered incidental to this Section.

204.02(c) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(c) Payment.

Payment will be based on the lump sum bid for the Section 204.02(c) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

204.02(d) Excavate and Stockpile Native Material

This work consists of the excavation of native material from within the limits of the infiltration basin and sump drain pipeline as shown on the DRAWINGS, and stockpiling the native material

at a designated stockpile location as approved by the CO. Native material shall be excavated to the neat lines and grades as shown on the DRAWINGS. Side slopes shall be monitored by Contractor for stability, potential safety concerns and dust control.

Native material shall be stockpiled at a designated stockpile area as approved by CO. In the event Contractor chooses to haul native material from the repository area, existing roads must be used. Contractor shall maintain and protect access roads, including blading and watering the roads. Access road maintenance is considered incidental to this Bid Item.

204.02(d) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(d) Payment.

Payment will be based on the lump sum bid for the Section 204.02(d) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

204.02(e) Infiltration Basin Drain Gravel/Bedding Gravel

Haul and install Government provided Infiltration Basin Drain Gravel/Bedding Gravel as shown on the DRAWINGS. Place drain gravel to the neat lines and grades as shown on the DRAWINGS.

204.02(e) Measurement.

Measure the Section 204.02(e) item listed in the Schedule of Items according to Subsection 109.02 and the following as applicable:

The quantity to be paid is the quantity shown in the Schedule of Items based on the contract quantity (CQ). The quantity in the schedule of items is the design placement of infiltration basin drain gravel/bedding gravel.

204.02(e) Payment.

The contract quantities will be paid at the contract price per unit of measurement for the Section 204.02(e) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

204.02(f) Type IV-A Geotextile

Provide and install Type IV-A Geotextile in accordance with Section 714. Geotextile and Geocomposite Drain Material, above placed infiltration drain gravel, as shown on the DRAWINGS. Any rips found in the geotextile shall be repaired in accordance with the manufacturer's recommendations.

204.02(f) Measurement.

Measure the Section 204.02(f) item listed in the Schedule of Items according to Subsection 109.02 and the following as applicable:

The quantity to be paid is the quantity shown in the Schedule of Items based on the contract quantity (CQ). The quantity in the Schedule of Items is the design placement of Type IV-A Geotextile.

204.02(f) Payment.

The contract quantities will be paid at the contract price per unit of measurement for the Section 204.02(f) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

204.02(g) Repair Bottom Liner System

Following collection pipe installation, Contractor shall repair the sump bottom liner by ~~placing 4 inches of moisture conditioned bagged bentonite powder as approved by CO, along the bottom of the sump,~~ replacing the rolled bottom liner system ~~and,~~ placing supplied Linear Low-Density Polyethylene (LLDP) liner over the top of the existing liner, ~~and finally placing another 4 inches of moisture conditioned bentonite powder on top of the bottom liner system,~~ as shown on the DRAWINGS. Care shall be taken to minimize ripping or tearing the existing bottom liner system. The repaired sump liner repair shall be inspected and approved by CO prior to backfilling materials. ~~Compaction of bentonite powder shall be in accordance Section 204.04.~~

204.02(g) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(g) Payment.

Payment will be based on the lump sum bid for the Section 204.02(g) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

204.02(h) Secondary Sampling Sump

Prior to replacing sump drain gravel, Contractor shall install a secondary sampling sump at the location as shown on the DRAWINGS. The Secondary Sampling Sump shall be constructed of 2-inch PVC (13 feet of solid pipe, 2 feet of screened pipe) for a total depth of 15 feet including the stickup above ground. The perforated pipe shall include a minimum of 3 feet of pre packed well screen consisting of 10-20 silica sand surrounding 2 feet minimum length of 0.01-inch factory slotted pipe. Contractor shall survey the top and bottom elevation of the Secondary Sampling Sump in accordance with section of secondary sampling sump in accordance with Section No.

152. Following replacement of waste and the top liner system, a 4-inch steel well protector with locking lid shall be placed on 6 to 12- inches of sand to support the well protector and sealed with concrete as shown on the DRAWINGS. Following the secondary sampling sump construction, stockpiled cover soil shall be placed around the constructed secondary sampling sump.

204.02(h) Measurement

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(h) Payment.

Payment will be based on the lump sum bid for the Section 204.02(h) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

204.02(i) Replace Sump Drain Gravel

Following repair of the bottom liner system, stockpiled sump drain gravel shall be placed back within the excavated limits of the repository sump. Stockpiled drain gravel must be approved by CO prior to use. If CO does not approve the use of stockpiled drain gravel, Contract shall haul and place GOVERNMENT FURNISHED drain gravel.

204.02(i) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(i) Payment.

Payment will be based on the lump sum bid for the Section 204.02(i) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109

204.02(j) Install Type IV-A Geotextile Sump Separation Geotextile

Provide and install Type IV-A Geotextile in accordance with Section 714. Geotextile and Geocomposite Drain Material, above placed Sump Drain gravel, as shown on the DRAWINGS. Any rips found in the geotextile shall be repaired in accordance with the manufacturer's recommendations.

204.02(j) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(j) Payment.

Payment will be based on the lump sum bid for the Section 204.02(j) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

204.02(k) Replace Repository Waste

Following sump gravel replacement, stockpiled repository waste shall be placed back within the excavated limits of the repository. Compaction shall be in accordance Section 204.04.

204.02(k) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(k) Payment.

Payment will be based on the lump sum bid for the Section 204.02(k) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

204.02(l) Replace and Regrade Native Material

Replace and regraded stockpiled native material to the neat lines and grades and shown on the DRAWINGS. Replaced native material shall be placed and graded within the excavation extents as shown on the DRAWINGS. Compaction shall be in accordance Section 204.04.

204.02(l) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(l) Payment.

Payment will be based on the lump sum bid for the Section 204.02(l) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

204.02(m) Repair Top Liner System

Following placement of waste material, Contractor shall replace the top liner system ~~with 4 inches of moisture conditioned bentonite powder, and~~ place the supplied Linear Low-Density Polyethylene (LLDP) liner over the top of the existing liner, ~~and finally place another 4 inches of moisture conditioned bentonite powder on top of the top liner system,~~ as shown on the DRAWINGS.. Care shall be taken to minimize ripping or tearing the existing top liner system,

The repaired top liner repair shall be inspected and approved by CO. ~~Compaction of bentonite powder shall be in accordance Section 204.04.~~

204.02(m) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(m) Payment.

Payment will be based on the lump sum bid for the Section 204.02(m) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

204.02(n) Replace Repository Cover Material

Following repair of the top liner system, stockpiled repository cover shall be placed to the neat lines and grades as shown on the DRAWINGS. Care shall be taken to avoid damage to the replaced top liner system. Compaction shall be in accordance Section 204.04.

204.02(n) Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

204.02(n) Payment.

Payment will be based on the lump sum bid for the Section 204.02(n) pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

204.04 Compaction.

For purpose of compaction, no sieve test is required.

- (a) ~~Layer Placement Equipment~~ Method ~~(Roller Compaction)~~. Place material by end dumping or bucket dumping to the depth no greater than 12 inches. Adjust the moisture content of the material to obtain a mass that will not visibly deflect under the load of ~~the hauling and spreading equipment~~ compaction by a bucket or other means. ~~Operate compaction equipment over the full width of each layer until visible deformation of the layer ceases or, when a sheepsfoot roller is used, the roller "walks out" of the layer. Make at least three complete passes.~~

602 – Culvert and Drains

Delete Section 602.06 and replace with the following section

602.06 Description

This work includes providing and installing 8-inch ADS N-12 HDPE (solid and perforated) or equivalent and as shown on the DRAWINGS. The HDPE pipe shall be installed in accordance with manufacturer's recommendations. Pipe bedding materials shall conform to Section 204(f).

Contractor shall survey both the solid and perforated HDPE prior to backfilling activities in accordance with Section No. 152 Construction Survey and Staking.

Delete Section 602.09 in its entirety and replace with the following:

Add the following new section:

602.09 Measurement

Measure pipe by the linear foot along the invert, including the length through fittings.

The quantity to be paid is the actual quantity (AQ) as measured the CO.

602.10 Payment

The accepted quantities will be paid at the contract price per unit of measurement for Section 602 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

625 - Turf Establishment

625.03 General.

Delete this subsection and replace with the following:

Apply turf establishment to the areas shown on the drawings or in the work lists within 7 days after completion of all ground disturbing activities. Seeded areas damaged by construction activities shall be reseeded within 7 days of the damage. Seed as soon as possible after work is completed, unless otherwise specified in writing by the CO. Do not seed during windy weather or when the ground is excessively wet, frozen, or snow covered.

Ensure that all seed, mulch, and other materials used in the work conforms to the weed free requirements of Section 713.

625.04 Prepare seed bed

Contractor shall prepare all reclaimed surfaces by disking or other approved method prior to seeding. Areas heavily compacted by haul traffic shall be ripped to a depth of at least eight inches prior to disking.

625.05 Watering.

Delete entire subsection.

625.06 Fertilizing.

Delete entire section and replace with the following:

Apply fertilizer having a chemical analysis as listed in 713.02 by the following methods.

Dry Method. Apply the fertilizer with approved power driven seeders, drills, fertilizer spreaders or other mechanical equipment. Hand operated methods are satisfactory.

625.07 Seeding.

Apply seed mix by the following methods:

- (a) **Dry method.** Delete the third sentence.

Add the following after subsection (b).

The specified seed mix provided below is designed to provide species for both sandy and clay dominated soils. The rates are for broadcast seeding. If the seeds are to be drill seeded these rates should be reduced by half. All broadcast sites should be rolled or dragged to place the seeds in closer contact to soil. Hand rake around large placed rocks and other features that prevent rolling or dragging.

PROJECT SEED MIX				
Common Name	Scientific Name	Cultivar	Seeds/lb	Seed Rate (lb PLS/ac) ¹
Tufted hairgrass	<i>Deschampsia caespitosa</i>	Nortran	2,500,000	1.6
Alpine bluegrass	<i>Poa alpina</i>	—	1,000,000	4.0
Alpine timothy	<i>Phleum alpinum</i>	Molas Pass, CO	1,300,000	3.1
Slender wheatgrass	<i>Elymus trachycaulus</i>	San Luis	159,000	25.5

Note: 1 lb PLS/ac = pounds pure live seed per acre; seeding rate is for the broadcast seeding method; seed rate designed for 93 PLS per square foot per species; CONTRACTOR shall verify from the seed supplier that seeds/lb are similar to those listed; otherwise an adjustment to the seed rate should be made.

625.09 Protecting and Caring for Seeded Areas.

Delete the first sentence and add the following:
Protect and care for seeded areas until final acceptance.

Add the following at the end of the section:

All areas disturbed by the CONTRACTOR'S operations such as, but not limited to, staging areas, stockpiles, and loading operations, shall be restored by grading to the original contours and seeding.

625.11 Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

625.12 Payment.

Payment will be based on the lump sum bid for the Section 625.12 pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

713.17 Temporary Rolled Erosion Control Products.

713.17 General.

Delete this subsection and replace with the following:

Contractor shall provide erosion control mat on all project disturbed areas requiring fertilization and seed. This area is the disturbed area for the installation of the pipeline and infiltration field (0.2 acres).

- (a) Contractor shall provide and install BioNet SC150BN Extended-Term Biodegradable Double-Net Straw/Coconut Blanket or equivalent. Erosion control material must be biodegradable and certified noxious weed free. Biodegradable stakes or staples shall be used where available.

713.17 Measurement.

Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item.

713.17 Payment.

Payment will be based on the lump sum bid for the Section 713.17 pay item listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

APPENDIX B – PRE-WORK MEETING DOCUMENTATION AND NOTICE TO PROCEED

RECORD OF PRE-WORK MEETING (Reference FSH 6309.11)

Forest Custer-Gallatin NF	Contractor North Wind Construction Services, LLC	Contract Number AG-0343-C-17-0019
Project New World Mine Repository Sump Drainage Field Construction	Meeting Place <i>Cooke City Office</i>	Date <i>8-8-17</i>
COR Mary Beth Marks Custer-Gallatin NF	Notice to proceed issued, contract time begins B.O.B. _____ (Date)	Contract Time <u>21-Cal. Days</u> (or complete by date)
Contractor's Representative <i>Chris Richardson</i>		Authority <input type="checkbox"/> Full <input type="checkbox"/> Except Price

Contract Provisions Discussed (Indicate by use of an "X" those items discussed)

<input checked="" type="checkbox"/> 1. Authorities - FS Personnel	<input checked="" type="checkbox"/> 16. Payroll Records	<input checked="" type="checkbox"/> 31. Accident Prevention, Safety, Multi-employer Workplace
<input checked="" type="checkbox"/> 2. Inspection & Acceptance	<input checked="" type="checkbox"/> 17. Posters	<input checked="" type="checkbox"/> 32. Progress Schedule
<input checked="" type="checkbox"/> 3. Contract Time	<input checked="" type="checkbox"/> 18. Affirmative Action	<input checked="" type="checkbox"/> 33. Specifications
<input checked="" type="checkbox"/> 4. Damages	<input checked="" type="checkbox"/> 19. Drug-Free Workplace Act	<input checked="" type="checkbox"/> 34. Changes & Work Orders
<input checked="" type="checkbox"/> 5. Variation in Estimated Quantity	<input checked="" type="checkbox"/> 20. Buy American Act	<input checked="" type="checkbox"/> 35. Government Furnished Property Delivery Location
<input checked="" type="checkbox"/> 6. Suspension of Work	<input checked="" type="checkbox"/> 21. Payments	<input checked="" type="checkbox"/> 36. Termination for Convenience
<input checked="" type="checkbox"/> 7. Worker's Compensation	<input checked="" type="checkbox"/> 22. Electronic Fund Transfer	<input checked="" type="checkbox"/> 37. Termination for Default
<input checked="" type="checkbox"/> 8. Fire Control	<input checked="" type="checkbox"/> 23. Prompt Payment	<input checked="" type="checkbox"/> 38. Submittals, Drawings, Signs
<input checked="" type="checkbox"/> 9. Use of Premises	<input checked="" type="checkbox"/> 24. Disputes	<input checked="" type="checkbox"/> 39. Quality Control
<input checked="" type="checkbox"/> 10. Archaeological Concerns	<input checked="" type="checkbox"/> 25. Differing Site Conditions	<input checked="" type="checkbox"/> 40. Subcontracting
<input checked="" type="checkbox"/> 11. Material Sources	<input checked="" type="checkbox"/> 26. Materials & Workmanship	<input checked="" type="checkbox"/> 41. EMS Environmental Management System
<input checked="" type="checkbox"/> 12. Barricades & Detours	<input checked="" type="checkbox"/> 27. Supt. by Contractor	<input checked="" type="checkbox"/> 42. Security – Building, Computer, PII
<input checked="" type="checkbox"/> 13. Procurement Integrity Act	<input checked="" type="checkbox"/> 28. Civil Rights (Sexual Harassment/Violent Workplace)	
<input checked="" type="checkbox"/> 14. CWHSSA (Overtime)	<input checked="" type="checkbox"/> 29. Permits & Responsibilities	
<input checked="" type="checkbox"/> 15. Labor Provisions	<input checked="" type="checkbox"/> 30. Protection of Improvements	

Attendees:

REMARKS

Remarks

--	--

Contractor (Signature)

Government (Signature)

DESIGNATION OF REPRESENTATIVE	CONTRACT NO. AG-0343-C-17-0019
	UNIT: Custer-Gallatin National Forest
CONTRACTOR NAME & ADDRESS North Wind Construction Services, LLC 1176 Big Creek Road Kellogg, ID 83837	PROJECT New World Mine Repository Sump Drainage Field Construction

The individual named below is designated as my representative for this contract and, in my absence, is authorized to act in my behalf.


CHRIS RICHARDSON
(Name)

PROJECT MANAGER
(Title)

This delegation extends authority to take any action necessary with respect to the execution of work, including acknowledging receipt of Notice to Proceed, Suspend and Resume Work Orders, and Notices of Noncompliance. The items check below indicates additional authority authorized by this delegation:

- Sign progress payment estimates and invoices.
- Sign contract modifications.
- Sign final payment estimate and invoice and contract release.
- Execute contract termination settlement agreement.
- Full authority in all contractual matters.

8/8/2017
(Date)


(Signature)
PROJECT MANAGER
(Title)

DESIGNATION OF INSPECTOR

(Reference FSH 6309.11, Ch. 10)

To: *Shane Matolyak*
Tetra Tech

Date: *8/8/17*

Contract No.: AG-0343-C-17-0019

Contractor: North Wind Construction Services

Project: NWM Repository Sump Drainage Const

You are designated as Inspector on this project with responsibility for:

1. Checking Contractor's performance for compliance with the technical specifications, drawings, work schedules, and Labor Standards provisions of the Contract.
2. Issuing notice of noncompliance to the Contractor when work is not being done, or materials being furnished are not in compliance with the Contract.
3. Reporting to me any refusal or failure by the Contractor to comply with the Contract provisions.
4. Maintaining a project diary of all occurrences or developments which occur while you are on the project.

All actions taken to secure Contractor's compliance with any portion of the Contract, including issuance of Work Orders or Suspend and Resume Work Orders, and Contract modifications are the responsibility of myself and the Contracting Officer.

Please refer to me any questions regarding interpretation of specifications.

Remarks:

Mary Beth Mars

Contracting Officer's Representative
USDA - Forest Service

cc: Contracting Officer
Contractor
COR

**NOTICE TO PROCEED,
SUSPEND, OR RESUME
WORK ORDER**
(Reference FSH 6309.31)

CONTRACT NUMBER

AG-0343-C-17-0019

UNIT

Custer-Gallatin NF

PROJECT

New World Mine Repository Sump Drainage Field Construction

NAME AND ADDRESS OF CONTRACTOR

**North Wind Construction Services, LLC
1176 Big Creek Road
Kellogg, ID 83837**

ORDER NUMBER

DATE ISSUED

THIS IS YOUR NOTICE TO PROCEED, SUSPEND, OR RESUME WORK ON THE CONTRACT AS NOTED.

NOTICE TO PROCEED

This is your notice to proceed with the work on the above contract for the following items: _____.

The time on this contract will start at the beginning of business on 8/6/17

SUSPENSION OF WORK

You are to suspend work for the following reason(s): _____.

Effective close of business _____. Item Numbers _____.

Type of Suspension Total Partial

No charge will be made against contract time for period of suspension.

Full count of contract time will continue.

An equitable adjustment of contract time will be made for period of partial suspension upon resumption of work.

DO NOT RESUME WORK UNTIL YOU ARE NOTIFIED TO DO SO IN WRITING

RESUMPTION OF WORK

Item Numbers _____. Effective Beginning of Business _____.

Time charged during period of partial suspension _____ calendar days.

SIGNATURE

TITLE

DATE

Contracting Officer

PLEASE ACKNOWLEDGE RECEIPT BY RETURNING 1 COPY(S) TO USDA, FOREST SERVICE R1, AQM

SIGNATURE

TITLE

DATE

INSTRUCTIONS:

If mailed to Contractor, send original by Certified Mail - Return Receipt Requested.

If delivered in person, have Contractor sign the acknowledgement and retain the original.

APPENDIX C – TETRA TECH DAILY CONSTRUCTION LOGS

USDA - Forest Service CONTRACT DAILY DIARY <i>(reference FSH 6309.11)</i>		1. FOREST Custer Gallatin National Forest																																										
		2. CONTRACT NO. AG-0355-C-17-0019																																										
3. PROJECT New World Mine Waste Repository																																												
4. CONTRACTOR North Wind Construction Services			5. CONTRACTOR REPRESENTATIVE ON SITE																																									
6. GOVERNMENT OFFICIALS ON SITE:																																												
7. DATE	8. DAY OF WEEK	9. TIME ARRIVED	10. TIME DEPARTED	11. WEATHER																																								
12. TEMPERATURE °F.	13. GROUND CONDITION		14. CONTRACT TIME	15. DAYS USED	16. COMPLETION DATE <i>With MOD</i>																																							
17. TIME USED (%)	18. WORK COMPLETED (%)	19. WORK ON SCHEDULE <input type="checkbox"/> YES <input type="checkbox"/> NO		20. CONTRACTOR'S WORK - <i>(X Appropriate Box)</i> <input type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable - <i>Explain in narrative</i>																																								
21. CHANGE ORDERS/AMENDMENTS ISSUED			22. WORK ORDERS ISSUED <i>(Include SUSPEND/RESUME)</i> <p style="text-align: center;">None</p>																																									
23. MATERIALS FURNISHED TO JOB SITE <i>(Furnished By: G-Govt.; C-Cont.; S-Subcont.)</i> → → →			24. LIST EQUIPMENT ON SITE <i>(Furnished by G-Govt.; C-Cont.; S-Subcont.)</i> → → → →																																									
			↓	Type	Contract Item Number and Location of Use																																							
					Hours Used																																							
					↓																																							
25. LIST CONTRACT PAYMENTS, REPORTS, CORRESPONDENCE, ETC. <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;"><u>Item</u></th> <th style="width: 33%;"><u>Prep</u></th> <th style="width: 33%;"><u>Submit</u></th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>			<u>Item</u>	<u>Prep</u>	<u>Submit</u>																26. WORKERS ON SITE <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"><u>Classification</u></th> <th colspan="2" style="text-align: center;">Number</th> </tr> <tr> <th></th> <th style="width: 20%;">PRIME</th> <th style="width: 20%;">SUB</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>			<u>Classification</u>	Number			PRIME	SUB															
<u>Item</u>	<u>Prep</u>	<u>Submit</u>																																										
<u>Classification</u>	Number																																											
	PRIME	SUB																																										
27. GOVERNMENT PROVIDED SERVICES ADEQUATELY AND TIMELY <input type="checkbox"/> YES <input type="checkbox"/> NO - Explain in narrative			*See additional personnel below*																																									
28. NARRATIVE REPORT Photos pasted into this report per Mary Beth Mark's request. MBM has hardcopy that she intends to complete to document her inspection of rental equipment.																																												

PROJECT NAME New World Mine Waste Repository	CONTRACT NO. AG-0355-C-17-0019	DATE
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NARRATIVE REPORT CONTINUED:

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29. SIGNATURE	30. TITLE	31. ADDTL SPACE NEEDED <input type="checkbox"/>
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Personnel

PROJECT NAME
New World Mine Waste Repository

CONTRACT NO.
AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:

Photos



Cab of mini excavator



Mini excavator (rear)

PROJECT NAME New World Mine Waste Repository	CONTRACT NO. AG-0355-C-17-0019	DATE
--	--	------

NARRATIVE REPORT CONTINUED:



Mini excavator (side)



Excavator serial number

PROJECT NAME
New World Mine Waste Repository

CONTRACT NO.
AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:



Excavator model number



Excavator cab

PROJECT NAME
New World Mine Waste Repository

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DATE

NARRATIVE REPORT CONTINUED:



Excavator track



Excavator bucket

PROJECT NAME
New World Mine Waste Repository

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AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:



Front end loader



Front end loader model number

PROJECT NAME
New World Mine Waste Repository

CONTRACT NO.
AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:



Front end loader tire and hydraulic lines



Front end loader serial number

PROJECT NAME New World Mine Waste Repository	CONTRACT NO. AG-0355-C-17-0019	DATE
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NARRATIVE REPORT CONTINUED:

7:00 Meet with North Winds crew and USFS for H&S meeting. Forsgren Survey staff (2) arrive mid-meeting.

7:30 Front-end loader arrives on site.

8:00 Surveyors and North Wind discuss survey needs. Three control points have already been established and survey crew begins to survey/mark excavation limits, elevations, and center line.

Brian departs for Cody, WY to procure hand tools and other supplies.

USFS, Tt, and North Winds conduct pre-construction meeting including review of contract and drawings. Mary Beth Marks states that she does NOT want temporary access roads to be surveyed. Chris Richardson observes that a water truck is not included in contract but may be necessary for compaction work. The lack of a haul truck is also noted. It is decided that the haul truck and maybe the water truck could be hired in Cooke City (Bob Smith) if they are needed.

Excavator is delivered sometime during pre-construction meeting.

14:15 Myron and Shawn begin excavation of cover soil and clearing top few inches of gravel from access road to prepare for temporary storage of waste material. Cover soil is stockpiled on undisturbed cover/ground immediately adjacent to excavation. Majority of soil is stockpiled uphill of excavation. Myron operates excavator continuously from 14:15 until 17:00. Shawn operates front-end loader sporadically during this time, alternatively providing ground assistance to excavator operator.

Cover soil is only about 12" deep at excavation center line but increases to about 36" to the north and west of initial excavation.

Excavator was delivered with a toothed bucket which is not ideal for excavation above liner and slows progress somewhat. It is hoped that a different buck will arrive tomorrow when mini-excavator is delivered.

17:00 Shane Matolyak leaves site to prepare for public meeting. MB Marks and Chris Richardson remain on site.

18:00 North Winds crew is back to town for evening.

PROJECT NAME New World Mine Waste Repository	CONTRACT NO. AG-0355-C-17-0019	DATE
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NARRATIVE REPORT CONTINUED:

29. SIGNATURE	30. TITLE	31. ADDTL SPACE NEEDED <input type="checkbox"/>
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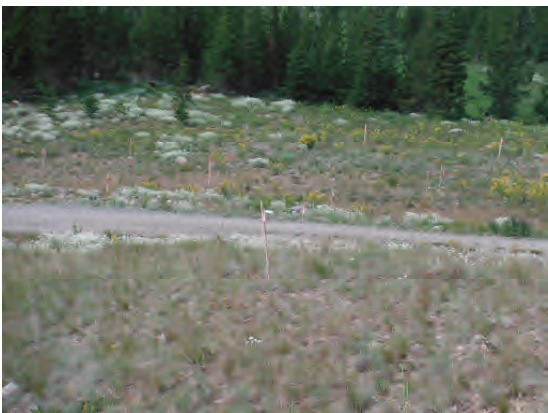
Photos



Moose (physical/biological hazard) sighted immediately south of repository during H&S meeting.



“Rocky” one of three survey control points. This is along access road south of excavation area.



Center line, excavation limits, and offsets surveyed prior to excavation. View is from repository toward drain field.

PROJECT NAME
New World Mine Waste Repository

CONTRACT NO.
AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:



Scraping gravel from road surface to prepare for mine waste stockpiling. Excavator begins removing cover soil.



Initial excavation of cover soil. View is toward west.

USDA - Forest Service CONTRACT DAILY DIARY <i>(reference FSH 6309.11)</i>			1. FOREST Custer Gallatin National Forest		
			2. CONTRACT NO. AG-0355-C-17-0019		
3. PROJECT New World Mine Waste Repository					
4. CONTRACTOR North Wind Construction Services			5. CONTRACTOR REPRESENTATIVE ON SITE Myron Belgarde		
6. GOVERNMENT OFFICIALS ON SITE: Mary Beth Marks (USFS) until 6:30.					
7. DATE 8-9-17	8. DAY OF WEEK Wednesday	9. TIME ARRIVED 6:00	10. TIME DEPARTED	11. WEATHER Cool, cloudy	
12. TEMPERATURE °F. 50s F	13. GROUND CONDITION Dry		14. CONTRACT TIME 21 Days	15. DAYS USED 4	16. COMPLETION DATE <i>With MOD</i> 8-25-17
17. TIME USED (%) 19%	18. WORK COMPLETED (%) 15%	19. WORK ON SCHEDULE YES		20. CONTRACTOR'S WORK - <i>(X Appropriate Box)</i> <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable - <i>Explain in narrative</i>	
21. CHANGE ORDERS/AMENDMENTS ISSUED None			22. WORK ORDERS ISSUED <i>(Include SUSPEND/RESUME)</i> None		
23. MATERIALS FURNISHED TO JOB SITE <i>(Furnished By: G-Govt.; C-Cont.; S-Subcont.)</i> →			24. LIST EQUIPMENT ON SITE <i>(Furnished by G-Govt.; C-Cont.; S-Subcont.)</i> →		
			Type Contract Item Number and Location of Use Hours Used		
Replacement liner from Beal Mountain Project (Govt)			Cat 938K Front end loader (Contractor rented from T&E Equipment)		3
1" Minus washed Gravel (Govt)			Cat 320 D Excavator (Contractor rented from T&E Equipment)		2.5
			2 pick up trucks (Contractor)		
			Cat 305.5E Mini Excavator		5
25. LIST CONTRACT PAYMENTS, REPORTS, CORRESPONDENCE, ETC.			26. WORKERS ON SITE		Number
<u>Item</u> <u>Prep</u> <u>Submit</u>			<u>Classification</u>		PRIME SUB
			Chris Richardson (PM during H&S only)		
			Myron Belgarde (Site Supervisor)		
			Shawn Martin (Laborer/Operator)		
			Bryan Teeters (Laborer/Operator)		
			Shane Matolyak (Inspector)		
			Mary Beth Marks (COR during H&S only)		
27. GOVERNMENT PROVIDED SERVICES ADEQUATELY AND TIMELY					
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO - Explain in narrative					
28. NARRATIVE REPORT: See Below					

PROJECT NAME New World Mine Waste Repository	CONTRACT NO. AG-0355-C-17-0019	DATE
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NARRATIVE REPORT CONTINUED:

6:00 Meet with North Winds crew and USFS for H&S meeting.

6:30 S. Matolyak and MB Marks depart site to inspect other areas of New World District. C. Richardson departs for office work and to meet mini-excavator delivery.

7:30 Bryan, Myron, and Shawn are excavating liner using hand tools.

7:45 Mini excavator arrives on site. No replacement bucket for large excavator is with delivery but mini-ex has appropriate shovel. S. Matolyak, MB Marks, and C. Richardson depart site for other activities.

9:30 Shawn departs site. Myron running mini-ex while Brian uses front-end loader to excavate cover soil between repository and road. Bottom layer (geocomposite/HDPE) is fully uncovered. No sand land layer was present between upper and bottom cover layers. Geocomposite/HDPE layer has holes in it that were not sealed during construction (did not occur during excavation). These holes are presumed to have occurred during placement of cover soil or other activities due to lack of sand cushion layers.

10:15 Shawn returns to site, cover liner is marked for cutting, geotextile layer to be disposed of is removed from excavated area.

10:45 Myron continues to excavate toward west edge of repository using mini-ex.

11:30 Chris visits site while Bryan moves cover soil with loader. Chris wonders if we should figure out how to seal holes in liner and/or if we should place Beal Mountain liner material in a "shingle fashion" to more effectively prevent water infiltration through liner (Mike Hatten supports this decision. Shane will confirm with Mary Beth).

11:45 through 13:30 All equipment is used at times to continue to remove cover soil from excavation boundary.

14:00 Geocomposite/HDPE is cut to expose waste material. Myron operates excavator to pull liner while Shawn and Bryan cut with hand tools, Shawn also operate loader to position waste in storage area along access road south of repository. White fabric portion of liner and mine waste are damp but not saturated.

16:00 Work halted to discuss observation of unexpected filter layer of fabric/sand above drainage gravel and at 8 feet below original surface of mine waste. Mike Hatten is called to confirm that this layer is shown, but not labelled on drawings, and that excavation can proceed.

16:30 Crew departs work site.

Notes: Matolyak's presence on site was sporadic between 12:00 and 13:45 due to meeting with DEQ staff and vehicle issues.

Pipe and surveyors will not be available until 8-14-17, therefore tomorrow's work will consist of excavation of drainage gravel and no work is expected on 8-11-17.

PROJECT NAME New World Mine Waste Repository	CONTRACT NO. AG-0355-C-17-0019	DATE
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NARRATIVE REPORT CONTINUED:

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29. SIGNATURE	30. TITLE	31. ADDTL SPACE NEEDED <input type="checkbox"/>
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Photos



Geocomposite/HDPE liner exposed in excavation. Holes visible at left (south) side believed to be present prior to excavation. Note lack of sand layer between layers of synthetic liner.



Marking center line for cutting liner.

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NARRATIVE REPORT CONTINUED:



Excavating toward road to west of repository. "X" marks future location of sump access tube.



Anchor trench along western edge of repository.



Wide view of exposed cover liner.

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NARRATIVE REPORT CONTINUED:



Close up of waste beneath cut liner.



Beginning to excavate mine waste from repository.



Waste excavation and stockpiling.

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NARRATIVE REPORT CONTINUED:



Unexpectedly uncovering filtration layer presumed to be installed above drainage gravel.

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3. PROJECT New World Mine Waste Repository																																	
4. CONTRACTOR North Wind Construction Services			5. CONTRACTOR REPRESENTATIVE ON SITE Myron Belgarde																														
6. GOVERNMENT OFFICIALS ON SITE: None																																	
7. DATE 8-10-17		8. DAY OF WEEK Thursday		9. TIME ARRIVED 7:00		10. TIME DEPARTED		11. WEATHER Sunny																									
12. TEMPERATURE °F. 60s F		13. GROUND CONDITION Damp, rained during night			14. CONTRACT TIME 21 Days		15. DAYS USED 5		16. COMPLETION DATE <i>With MOD</i> 8-25-17																								
17. TIME USED (%) 24%		18. WORK COMPLETED (%) 18%		19. WORK ON SCHEDULE YES		20. CONTRACTOR'S WORK - (<i>X Appropriate Box</i>) <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable - <i>Explain in narrative</i>																											
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27. GOVERNMENT PROVIDED SERVICES ADEQUATELY AND TIMELY <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO - Explain in narrative																																	
28. NARRATIVE REPORT: See Below																																	

PROJECT NAME New World Mine Waste Repository	CONTRACT NO. AG-0355-C-17-0019	DATE
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NARRATIVE REPORT CONTINUED:

7:00 Arrive at site and hold H&S meeting.

7:15 Myron uses mini-ex to dig to bottom layer of filtration fabric immediately above sump gravel. Approximately 20" of sand present in filtration layer.

Bryan and Shawn use loader and large excavator to reposition excavated waste stockpile and road gravel stockpile to make room for bedding gravel delivery.

8:00 Chris visits site and asks whether bottom of secondary sump access tube could be determined after it is installed by subtracting the total length of the tube from the surveyed elevation of the top, or another known reference point marked on the tube. This would eliminate the need to have the surveyor on site for a second day and ensure that the surveyed elevation would not change during backfilling. Mike Hatten was contacted for his opinion and thought that this would be acceptable. Shane Matolyak also contacted Mary Beth Marks to seek approval.

Upon discussion (Mary Beth Marks and Peter Werner (USFS), Shane Matolyak (Tt), Chris Richardson and Myron Belgarde (North Winds)) it became apparent USFS feels it necessary to survey the elevation of the existing bottom repository liner so that final elevation of drainpipe invert can be adjusted relative to the reported as-built elevation of the primary sump access tube (8359.58 ft) as well as the bottom liner prior to backfilling. USFS stated that, if the bottom liner is not at an adequately low elevation to allow for the drainpipe to be placed at the 8361.5 ft elevation and also 2' above the access tube base, that a redesign would be necessary.

North Winds agreed to have surveyor on site to measure elevation of repository bottom liner and bottom of secondary access tube. If the measured elevations are not as expected, Mary Beth Marks will be contacted and a path forward determined.

11:00 Crew departs site.

29. SIGNATURE

30. TITLE

31. ADDTL SPACE NEEDED

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NARRATIVE REPORT CONTINUED:

Photos



Filtration layer sand in excavated trench.



Close-up of sand layer (appx 20" thickness of sand).

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6. GOVERNMENT OFFICIALS ON SITE: Peter Werner (USFS)																																												
7. DATE 8-14-17	8. DAY OF WEEK Monday	9. TIME ARRIVED 9:00	10. TIME DEPARTED 17:00	11. WEATHER Raining steady until around noon, then cloudy																																								
12. TEMPERATURE °F. 50s F	13. GROUND CONDITION Wet and muddy		14. CONTRACT TIME 21 Days	15. DAYS USED 8																																								
16. COMPLETION DATE With MOD 8-25-17																																												
17. TIME USED (%) 38%	18. WORK COMPLETED (%) 30%	19. WORK ON SCHEDULE YES	20. CONTRACTOR'S WORK - (X Appropriate Box) X Acceptable <input type="checkbox"/> Unacceptable - Explain in narrative																																									
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PROJECT NAME New World Mine Waste Repository	CONTRACT NO. AG-0355-C-17-0019	DATE
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NARRATIVE REPORT CONTINUED:

9:00 Arrive at site and take stock of new materials that were delivered.

9:20 Myron and Shawn arrive after making morning phone calls and sending Bryan to pick up liner and erosion control cloth in Billings.

9:45 Myron uses mini-ex to remove more sand from drainage layer then stand-down to wait for surveyor to arrive to relocate secondary sump access tube location. Shawn begins using front-end loader to move drainage gravel from stockpile to site for use in backfilling (Bob Smith is out of town on Mondays so we can't hire him and his truck). Myron informs Shane that 3" pre-packed well screen isn't available for another week. It is decided that "sonotube" made from 5-gal plastic buckets will be backfilled into excavation as a place holder and access tube will be installed when screen is available.

10:37 First load of gravel arrives via front-end loader.

11:00 Myron leaves site to make phone calls.

11:30 Second load of gravel arrives. Rain is steady but erosion is controlled due to disturbed area being graded toward excavation.

11:45 Third load of gravel arrives.

12:00 Peter Werner (USFS) arrives to observe excavation of bottom liner. Shane and Peter leave site to inspect other New World facilities.

13:20 Shane and Peter return to site. Surveyor is on-site and liner excavation continues with mini-ex and hand tools.

14:00 Large rocks (around 12" diam) found beneath drainage gravel along with horizontal 8" HDPE pipe running east-west, possibly connecting to primary sump access tube.

16:00 Bottom sump liner exposed and surveyed (8361.838' amsl). Peter and Shane leave site to have phone call with Mary Beth Marks and Mike Hatten to decide final elevation of drain pipe invert (8364.3') and other details (i.e. place secondary access pipe 6" above liner, drain pipe invert does not need to have 45 deg bend – can be run straight from liner at 8364.3' elevation to its junction with more steeply dipping section at Sta:0+95.00 and invert elevation 8359.43'). Mike directs Shane to ensure surveyor gets elevations from top of pipe along pipeline for as-builts.

Bryan returns to site with materials from Billings (erosion mat and geotextile).

17:00 Peter and Shane return to site. Myron and Shawn are excavating sloping portion of bottom liner. Peter leave site.

17:15 Crew departs site.

PROJECT NAME New World Mine Waste Repository	CONTRACT NO. AG-0355-C-17-0019	DATE
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NARRATIVE REPORT CONTINUED:

29. SIGNATURE	30. TITLE	31. ADDTL SPACE NEEDED <input type="checkbox"/>
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Photos



Slotted and solid (marked with blue) HDPE drain pipe.



Drain pipe couplings, gaskets, cement.

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NARRATIVE REPORT CONTINUED:



Sump access tube solid and slotted 2" pvc.



Excavating bottom liner. Rocks to right of worker were pulled from lower portion of drainage gravel.



Close up of rocks found in gravel drainage layer.

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NARRATIVE REPORT CONTINUED:



Appx 6" of water above bottom liner. 8" HDPE pipe is to the right side of right puddle.



Excavating sloping edge of bottom liner. White plastic bucket "sono-tube" visible in foreground is holding back fill from location where secondary access tube will be installed.

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6. GOVERNMENT OFFICIALS ON SITE:																																																											
7. DATE 8-15-17		8. DAY OF WEEK Tuesday		9. TIME ARRIVED 7:00		10. TIME DEPARTED		11. WEATHER Partly cloudy																																																			
12. TEMPERATURE °F. 60s F		13. GROUND CONDITION Damp			14. CONTRACT TIME 21 Days		15. DAYS USED 9	16. COMPLETION DATE <i>With MOD</i> 8-25-17																																																			
17. TIME USED (%) 43%		18. WORK COMPLETED (%) 33%		19. WORK ON SCHEDULE YES		20. CONTRACTOR'S WORK - (<i>X Appropriate Box</i>) <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable - <i>Explain in narrative</i>																																																					
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PROJECT NAME New World Mine Waste Repository	CONTRACT NO. AG-0355-C-17-0019	DATE
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NARRATIVE REPORT CONTINUED:

7:00 Arrive at site and was informed that Rick from Forsgren Surveyors is trying to reach Shane via phone. Shane calls Rick who wanted to confirm that elevations are changing due to sump liner elevation being different than expected.

7:45 Mary Beth calls Shane to further discuss how increasing elevation of drain pipe will affect sump performance (i.e. constant pool of water will be present due to no longer pumping dry in fall. Constant water level in sump will be about 48" above current sump level. Recent sump level maximum heights have been around 30" to 35" and a maximum height of 70" has been measured in 2006). This may influence chemistry of water samples collected from sump and this will need to be discussed in final construction report.

8:00 Myron uses mini-ex and excavator to fully expose sloped portion of bottom liner. Shawn uses loader to move more gravel from stockpile to site.

10:00 Mike Hatten (Tt) and Nick Scofield (surveyor) arrive on site. Nick surveys trench elevation to guide installation of drain pipe.

12:00 First section of drain pipe is positioned in sump and trench. Excavation of trench continues westward. Slope of pipe determined to be incorrect due to survey issues (i.e. elevations are programmed into survey equipment for four points along pipe but the points are spaced beyond the 20' distance each pipe spans. Interpolation between points is incorrect. Decision is made to connect multiple lengths of pipe to hit points with known elevations and adjust between points as needed).

15:15 Unexpected rock outcrop intercepted beneath road causes considerable delay in progress as well as hydraulic issues with excavator which are addressed.

17:00 Exploratory trench dug into drain field location to assess depth to bedrock (11+ feet). Myron continues to excavate trench through outcrop.

17:30 Shane Matolyak leaves site and checks-in with Mary Beth to update on progress. Surveyor will be on site tomorrow.

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NARRATIVE REPORT CONTINUED:

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Photos



Site at beginning of day.



Cutting into sloped portion of bottom liner.



Excavating trench westward from sliced liner.

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NARRATIVE REPORT CONTINUED:



Placing bedding gravel and geotextile into drain pipe trench.



First section of drain pipe in trench/sump.



Surveying trench through access road.

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NARRATIVE REPORT CONTINUED:



White rock exposed in trench is top of rock outcrop that delayed excavation progress.



Close up of rock outcrop/shallow bedrock along western edge of access road.

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NARRATIVE REPORT CONTINUED:

7:45 Shane Matolyak arrives on site. Work crew and surveyor are backfilling drain pipe trench with gravel to prepare for pipe installation beneath access road. Shane and Myron coordinate with supplier to obtain rock hammer for mini-excavator.

9:15 40 feet of pipe are installed in trench. Bedrock in trench floor necessitated placement of only 4 to 6 inches of gravel bedding in one location (about 30 feet from pipe inlet). Mike Hatten and Mary Beth are apprised of progress and grade adjustments made to drain pipe due to rock. Nick contacts his boss to plan for another surveyor to be on site tomorrow.

11:00 Bryan leaves site to pick up rock hammer in Billings, MT.

11:30 60 feet of drain pipe are in place, backfilled, and wrapped in geotextile. Myron uses excavator to backfill and compact access road area. Soil is damp (will form a ball when squeezed) and compaction with excavator bucket occurs about every 6 inches. Mike Hatten is contacted to verify that this is adequate and that no additional water is required for compaction.

Surveyor measures elevation where base of secondary access tube will be installed (8361.54).

14:00 compaction is complete. Crew cleans area around sump liner in preparation for patch installation.

15:00 Sump liner is found to be creased, folded, and with multiple tears. Change in geometry of pit further complicates efforts to "fold back" the liner as planned. Liner is flattened and trimmed as best as possible, and material excavated to expose non-damaged edges of liner. LDPE patch is placed over original liner and backfilled with clean gravel to elevation equal with top of original filter sand layer.

16:30 Crew departs site.

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NARRATIVE REPORT CONTINUED:

Photos



Surveying elevation of drain pipe to ensure correct grade.



Backfilling drain pipe / trench.



Placing another length of pipe.

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NARRATIVE REPORT CONTINUED:



Drainpipe being wrapped with geotextile.



Replacing original sump bottom liner.



LDPE patch in place over sump liner prior to backfilling.

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NARRATIVE REPORT CONTINUED:

7:00 Shane Matolyak arrives on site. Myron leaves to see if Bob Smith can begin hauling gravel to site with dump truck.

7:30 Bryan and Shawn do housekeeping around the site with mini-ex and loader to allow for dump truck access.

8:00 Rock hammer is installed on mini-ex and used to break rock in drain pipe trench. Hammer does not appear to operate properly.

Remainder of day is spent with Shawn loading dump truck, Bob Smith delivering gravel with dump truck, Bryan slowly breaking rock in trench, and Myron making calls to troubleshoot hammer and trying to schedule mechanic / reschedule surveyors. After calls with Mary Beth and Chris it is determined that work crew will continue to excavate trench this week with infiltration gallery excavation to occur on Monday. Shane will depart site for the week. No gravel will be placed until Shane returns on Monday and it's more likely that this will occur on Tuesday when the surveyor is back on site.

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PROJECT NAME
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NARRATIVE REPORT CONTINUED:

Photos



Partially backfilled sump liner patch.



Breaking rock with malfunctioning hammer.

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PROJECT NAME New World Mine Waste Repository	CONTRACT NO. AG-0355-C-17-0019	DATE
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NARRATIVE REPORT CONTINUED:

9:00 Shane Matolyak arrives on site. Myron and Shawn are using excavator and mini-ex to excavate trench and drain field. New excavator with properly functioning rock hammer is scheduled for delivery this Wednesday. Additional sump liner patch work occurred on Friday.

11:00 Mary Beth Marks and Chris Richardson arrive on site. Work stops to view solar eclipse.

12:00 Work resumes.

13:00 Hydraulic lines on excavator are severed. Appx 5 gallons of fluid are spilled and clean-up actions implemented. Damaged lines are removed from excavator.

15:00 Myron departs site for Bozeman to pick up replacement hydraulic lines. Shane, Chris, Mary Beth all depart site. Shawn is presumed to continue hammering rock in trench with malfunctioning hammer.

It appears that work likely run over schedule but, if all goes well, there is a chance that drain pipe can be installed and backfilled this week. Pre-packed filter screen for secondary sump access pipe is still not on site. Once screen arrives the access pipe can be installed and sump excavation backfilled.

29. SIGNATURE

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NARRATIVE REPORT CONTINUED:

Photos



Partially backfilled sump liner patch.



Breaking rock with malfunctioning hammer.

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PROJECT NAME New World Mine Waste Repository	CONTRACT NO. AG-0355-C-17-0019	DATE
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NARRATIVE REPORT CONTINUED:

8:00 Shane Matolyak arrives on site. Shaw is chipping away at rock with defective hammer and reports that he and Chris were on site until 18:00 yesterday doing the same. Replacement hydraulic hoses for excavator had to be sourced from Butte so Myron was going to stay overnight in Whitehall after picking up hoses and should return to site this morning to install them.

8:30 Mary Beth Marks visits site with two guests.

9:00 All but Shawn leave site for other non-project related work.

10:00 Myron returns with hydraulic lines and he and Shawn install.

11:30 Mary Beth and Shane visit site. Mary Beth reminds crew that silt fence is stored nearby and not to be left on site after work finishes.

11:45 Mary Beth and Shane leave site. Myron informs us that 90 degree coupler for drain field laterals was not present in materials shipment but is being Fed-Exed to hotel.

13:00 Myron reports all equipment and materials will be on site this week and we should be able to complete construction by Friday or Saturday. Shane leaves site with Mary Beth.

Mary Beth confirms that unused liner material should be returned to the site it was picked up at in Deer Lodge.

15:45 Return to site. No one is around and a small amount of additional excavation has occurred. Shawn reports that one of the hose fittings on replacement hoses was incorrect and continued to leak so Myron returned to Bozeman to find replacement. Shawn does minor site cleanup work.

29. SIGNATURE

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PROJECT NAME
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NARRATIVE REPORT CONTINUED:

Photos



Absorbent materials on ground to control hydraulic fluid spill.



Hydraulic fluid in excavator bucket.



Trench and infiltration gallery excavation at end of day.

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27. GOVERNMENT PROVIDED SERVICES ADEQUATELY AND TIMELY X YES <input type="checkbox"/> NO - Explain in narrative																																																
28. NARRATIVE REPORT: See Below																																																

PROJECT NAME New World Mine Waste Repository	CONTRACT NO. AG-0355-C-17-0019	DATE
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NARRATIVE REPORT CONTINUED:

7:00 Shane arrives on site and meets excavator delivery driver to inspect new excavator and rock hammer. Inspection is passed and excavator is unloaded. Mini-excavator is taken off site. Mary Beth Marks arrives on site to inspect work.

8:15 Shawn starts hammering rock in trench.

9:15 Shane takes Myron to Fisher Creek to assess accessibility for water tank fill-ups.

9:30 Garret is hammering rock in trench then goes with Myron to transfer tools and equipment to/from trailer.

10:30 Myron excavates broken rock.

11:00 Crew continues excavation of trench and gallery. Shane and Mary Beth leave site to tour reclamation areas across New World District.

14:00 Shane and Mary Beth return to site. Myron is excavating gallery. Mary Beth gives final instructions and punch list before leaving site for the week.

15:15 Pre-packed well screen arrives on site and installation commences. Well screen is 58" long which meets the specification of "3-feet or greater". Screen is installed with 6" of gravel elevating it above sump bottom liner. Screen extends 10.5" above gravel filtration layer. Washed gravel pack is placed from bottom of screen to 16" above top of screen. Waste material is replaced into sump above gravel/geotextile layer and compacted.

Inlet of drain pipe is wrapped in geotextile per Peter Werner's suggestion and Mike Hatten's concurrence. This will prevent gravel from falling into pipe.

Backfilled waste appears to be more compacted than originally encountered and will likely result in a depression that can be filled with some of the material excavated from the infiltration gallery.

Crew will work until 19:00. Upper liner will be repaired tomorrow.

18:30 Shane leaves site.

29. SIGNATURE	30. TITLE	31. ADDTL SPACE NEEDED <input type="checkbox"/>
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PROJECT NAME
New World Mine Waste Repository

CONTRACT NO.
AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:

Photos



Inspection of 316 excavator.



Underside of 316 excavator.



Side view of new excavator.

PROJECT NAME
New World Mine Waste Repository

CONTRACT NO.
AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:



Excavated site of hydraulic fluid spill.



Excavating drain pipe trench.



Excavated trench.

PROJECT NAME
New World Mine Waste Repository

CONTRACT NO.
AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:



Installing sump access tube. Buckets are used to protect tube during compaction of backfill.



Levelling sump gravel backfill.



Placing geotextile above sump gravel.

PROJECT NAME
New World Mine Waste Repository

CONTRACT NO.
AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:



Placing waste material above geotextile.



Placing non-slotted portion of sump access tube.



Compacting backfilled waste.

USDA - Forest Service CONTRACT DAILY DIARY <i>(reference FSH 6309.11)</i>					1. FOREST Custer Gallatin National Forest					
					2. CONTRACT NO. AG-0355-C-17-0019					
3. PROJECT New World Mine Waste Repository										
4. CONTRACTOR North Wind Construction Services					5. CONTRACTOR REPRESENTATIVE ON SITE Myron Belgarde					
6. GOVERNMENT OFFICIALS ON SITE:										
7. DATE		8. DAY OF WEEK		9. TIME ARRIVED		10. TIME DEPARTED		11. WEATHER		
8-24-17		Thursday		7:30		19:15		Sunny in AM then rain in PM		
12. TEMPERATURE °F.		13. GROUND CONDITION				14. CONTRACT TIME		15. DAYS USED	16. COMPLETION DATE <i>With MOD</i>	
50-60s F		Dry then wet and muddy				21 Days		18	8-25-17	
17. TIME USED (%)		18. WORK COMPLETED (%)		19. WORK ON SCHEDULE		20. CONTRACTOR'S WORK - (<i>X Appropriate Box</i>)				
86%		80%		Yes		<input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable - <i>Explain in narrative</i>				
21. CHANGE ORDERS/AMENDMENTS ISSUED					22. WORK ORDERS ISSUED (<i>Include SUSPEND/RESUME</i>)					
None					None					
23. MATERIALS FURNISHED TO JOB SITE (<i>Furnished By: G-Govt.; C-Cont.; S-Subcont.</i>)					24. LIST EQUIPMENT ON SITE (<i>Furnished by G-Govt.; C-Cont.; S-Subcont.</i>)					
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					204.02j	geotextile				
						Pre-packed well filter screen				
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							Garret Williams (Laborer)		x	
							Shane Matolyak (Inspector)			
							Rick Byrem (Surveyor)			
27. GOVERNMENT PROVIDED SERVICES ADEQUATELY AND TIMELY										
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO - Explain in narrative										
28. NARRATIVE REPORT: See Below										

PROJECT NAME New World Mine Waste Repository	CONTRACT NO. AG-0355-C-17-0019	DATE
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NARRATIVE REPORT CONTINUED:

29. SIGNATURE	30. TITLE	31. ADDTL SPACE NEEDED <input type="checkbox"/>
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7:30 Shane arrives on site. Myron is removing remainder of waste from stockpile and replacing in repository.

8:20 Original top liner (GCL and HDPE) are repositioned over waste.

9:30 Liner is back in place. Myron begins backfilling cover soil. Waste and cover soil appear to have fit back within pre-excitation contours. LDPE patch was not replaced in "shingle" configuration as suggested by Chris Richardson due to original liner damage and difficulty handling. Instead, a single piece of LDPE covering the entire excavation was placed above original liner (as per original spec).

10:00 Shane and Mary Beth discuss potential discrepancy with seed mix. Mary Beth follows up with seed supplier and learns that seed weights were adjusted based on Pure Live Seed and acreage.

11:00 Well protector (4" diam. 56" length) is installed with locking lid (combo is 2007). Surveyor is on site setting up electronic equipment.

11:30 Cover soil is replaced and tracked with excavator.

12:30 Surveyor realizes electronic equipment is malfunctioning and will need survey with transit and rod.

13:30 Myron begins excavating gallery to final grade.

15:00 Drain pipe installed to infiltration gallery. 19" of gravel base fill underlies pipe at upstream transition to 9 degree slope.

17:20 Gallery excavation is nearly complete. Added 16' of drainpipe to position gallery beyond extent of problematic bedrock. "T" of drain field pipe is underlain with 16" of gravel, rather than 24", to allow proper pipe elevation without excavating through more bedrock. About a 4' diameter of area has 16' of gravel while remainder of gallery has 22" to 26" of gravel base.

19:15 All drain field pipe, except center lateral, is installed and pipe ends and connections are surveyed. Center lateral will be installed tomorrow using laser level to match grade/elevation of outer laterals.

19:30 Crew departs site.

PROJECT NAME
New World Mine Waste Repository

CONTRACT NO.
AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:

Photos



Compacted waste prior to liner replacement.



Replacing north/uphill side of original liner.



Replacing downhill side of GCL.

PROJECT NAME
New World Mine Waste Repository

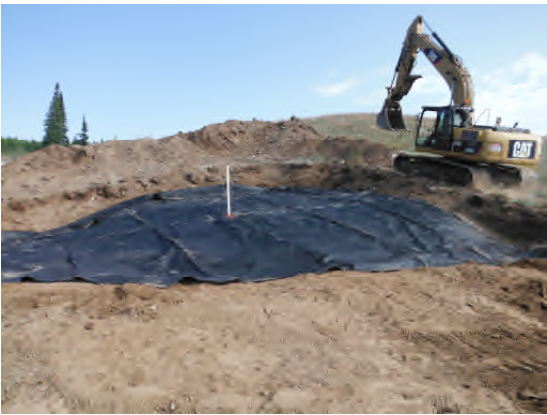
CONTRACT NO.
AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:



Pulling LDPE patch into place.



LDPE patch prior to cover soil placement.



Final cover soil replacement.

PROJECT NAME
New World Mine Waste Repository

CONTRACT NO.
AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:



Excavating gallery.



Installing drain line into gallery.



Final gallery excavation. Orange lines mark top of gravel subgrade and pipe junctions.

PROJECT NAME
New World Mine Waste Repository

CONTRACT NO.
AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:



Infiltration pipe installation in progress.

PROJECT NAME New World Mine Waste Repository	CONTRACT NO. AG-0355-C-17-0019	DATE
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NARRATIVE REPORT CONTINUED:

7:15 Shane arrives on site. Myron uses excavator to move refuse and materials in preparation for roll-off arrival. Garrett moves other excavator (with hammer) north of repository.

7:45 Roll-off arrives and is loaded with refuse.

8:10 Roll-off leaves site. Myron backfills gallery with base gravel fill in preparation for installation of third lateral. Shane and Garrett install third lateral and use laser equipment to ensure its elevation/grade matches that of other two laterals.

9:15 Myron begins backfilling gallery with gravel while Garrett uses loader to bring more gravel to site.

12:00 After 24" of gravel is placed above infiltration pipes, Shane and Myron install geotextile above gravel and cover soil backfilling begins.

12:30 Garrett parks loader and seeds repository with Scott brand seed spreader. Repository disturbed area measures approximately 73' x 100' (7,300 ft² or 0.16 acres). 4 to 5 pounds of seed applied to area along with about 15 pounds of 16-16-16 fertilizer. Only one 50 pound bag of fertilizer was delivered to site and based on manufacturer recommendations (12.5 lbs /1,000 ft² for groundcover), the repository should have been fertilized with 91 lbs of fertilizer.

Shane downloads original sump data logger. Sump contains about 6" inches of water.

14:15 Garrett and Shane install erosion mat over repository disturbance. Twelve 8x100 foot rolls of mat (0.22 acres) are on site. Eight rolls used to cover entirety of repository disturbance.

18:30 Myron is finished regrading gallery backfill and begins repairing road and rock buttress. Garrett goes to USFS office to retrieve job trailer to begin loading unused liner and other material.

19:00 Shane seeds gallery with 20 lbs of seed and remaining 35 lbs of fertilizer. Disturbed area measures 100' x 120' (12,000 ft² or 0.27 acres).

20:00 Garrett and Shane place remaining 4 rolls of erosion mat on gallery disturbance. Rolls are positioned in alternating "candy stripe" configuration leaving areas of bare soil between parallel sheets of erosion mat. This should allow better establishment of veg under erosion mat that will later help disperse additional seed to areas between the mats. Myron uses excavator to repair access road surface.

22:00 Trailer is loaded with unused materials. Shane shuttles crew to/from gravel stockpile / equipment staging area as they move rental equipment into location for pick-up by Cat rental company. Myron says that pick-up is scheduled for Monday.

Garrett drops trailer off at USFS office as parking in town is difficult. Myron is finishing road repairs and will move loader to pick-up area. Garrett returns to meet Myron, Shane leaves site.

PROJECT NAME
New World Mine Waste Repository

CONTRACT NO.
AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:

Photos



Roll-off arrives for garbage removal.



Middle lateral pipe is installed and surveyed.



Gallery being backfilled.

PROJECT NAME
New World Mine Waste Repository

CONTRACT NO.
AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:



Completed gallery gravel backfill.



Geotextile in place over gravel fill.



Seeding repository.

PROJECT NAME
New World Mine Waste Repository

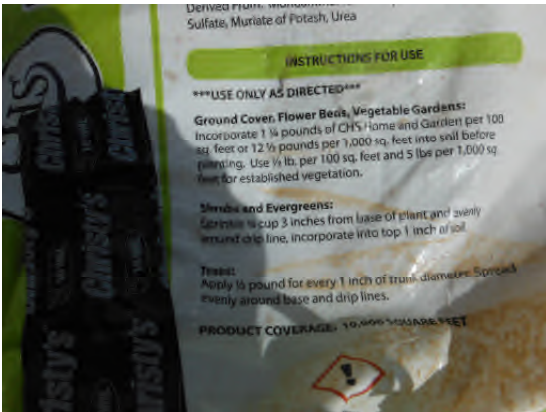
CONTRACT NO.
AG-0355-C-17-0019

DATE

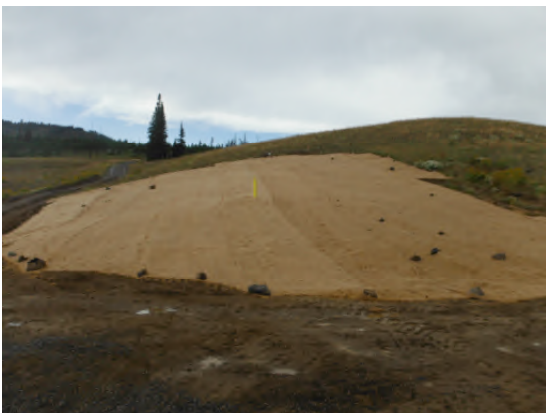
NARRATIVE REPORT CONTINUED:



Cover soil being backfilled into gallery.



Fertilizer label.



Erosion mat on repository.

PROJECT NAME
New World Mine Waste Repository

CONTRACT NO.
AG-0355-C-17-0019

DATE

NARRATIVE REPORT CONTINUED:



Final regraded gallery.



Repairing road.



Erosion mat on gallery.

PROJECT NAME

New World Mine Waste Repository

CONTRACT NO.

AG-0355-C-17-0019

DATE

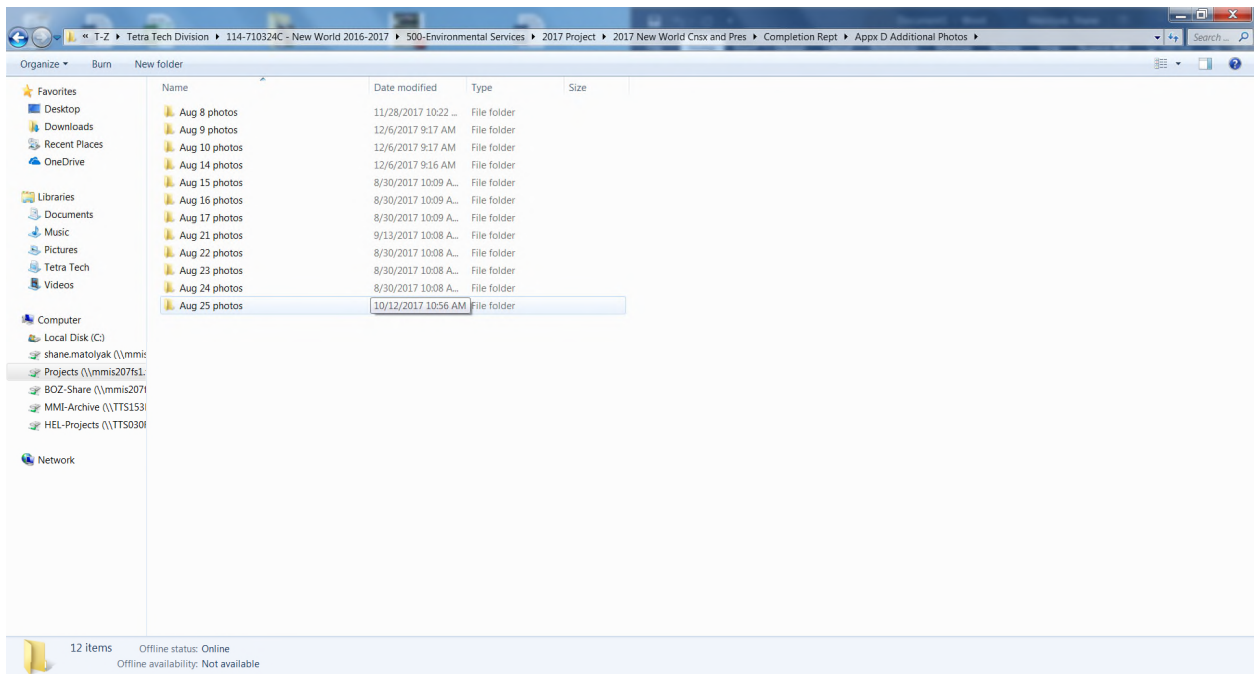
NARRATIVE REPORT CONTINUED:



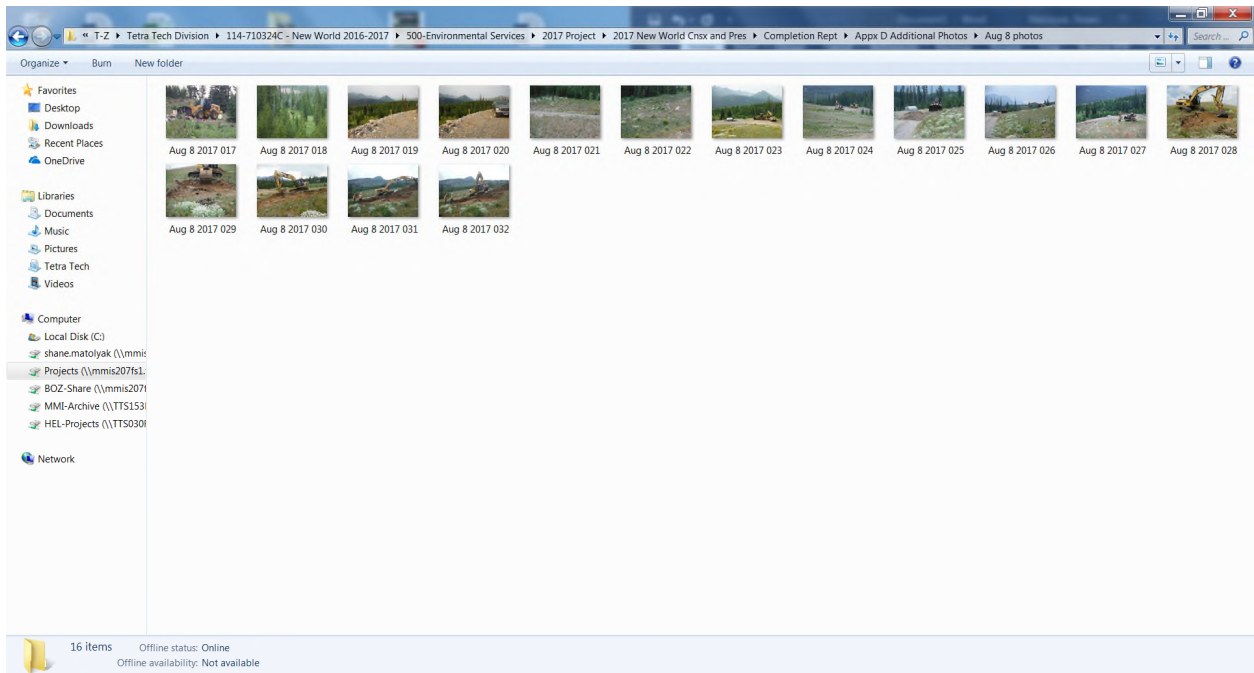
Spreading gravel on access road.

APPENDIX D – PHOTOS

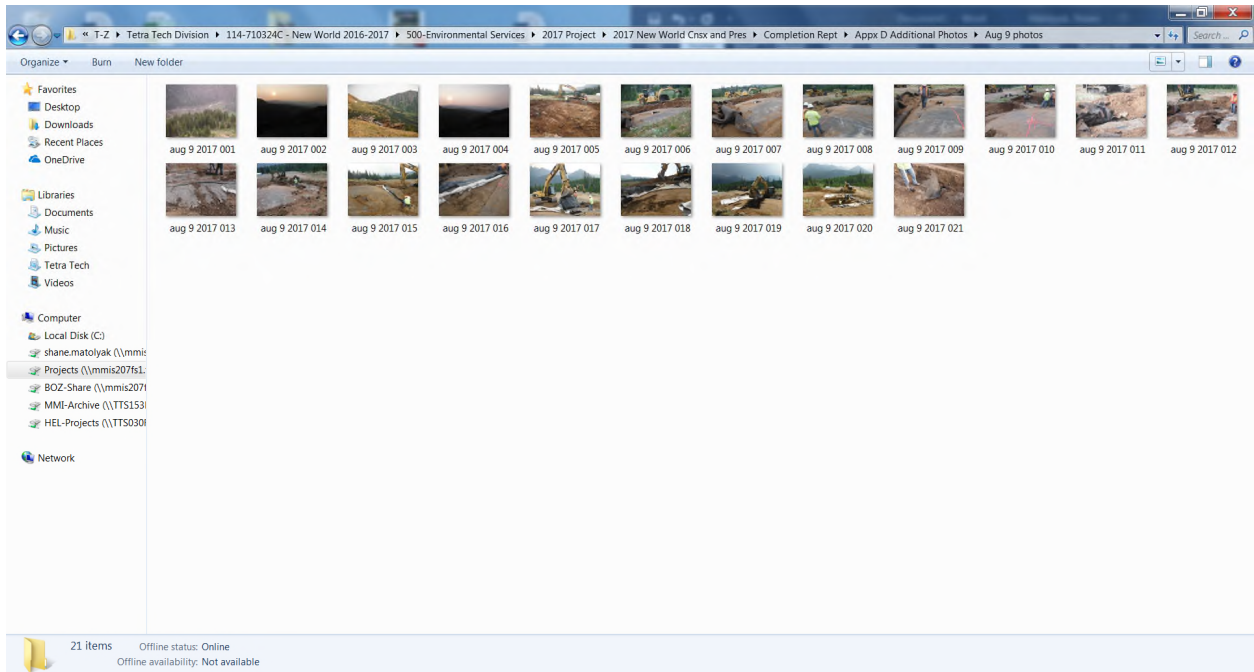
Photos are indexed in the attached screenshots. See attached USB drive for individual photos.



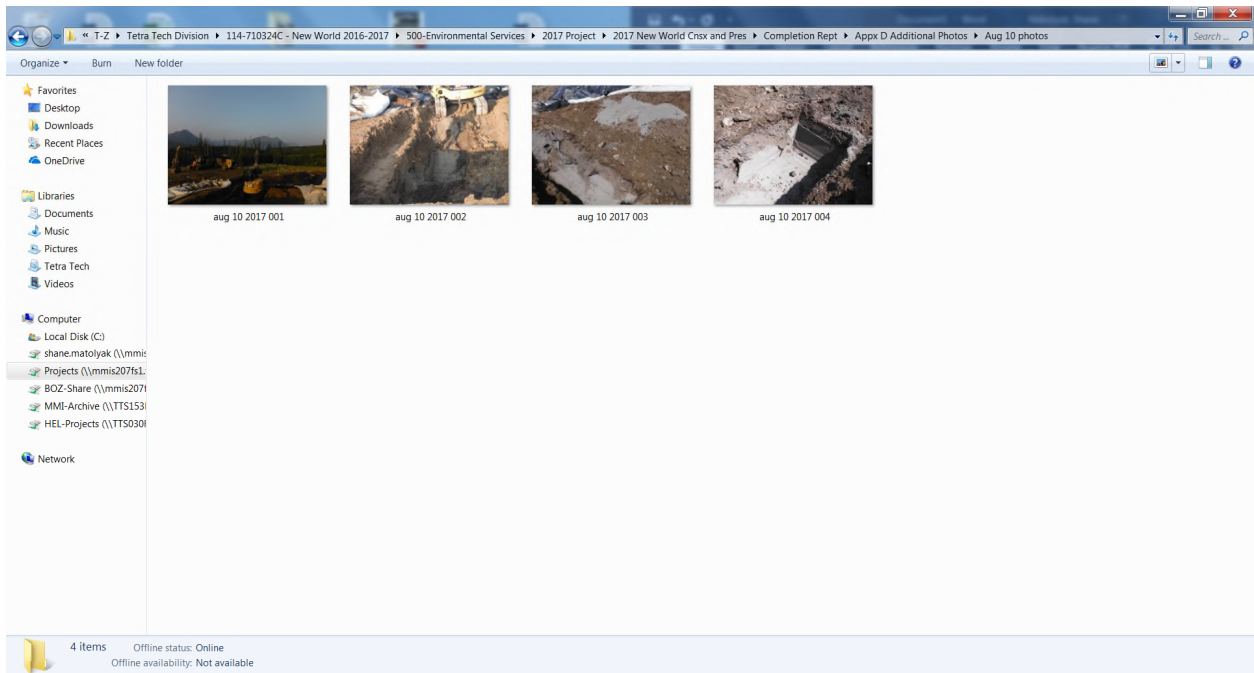
Index to Photo Folders.



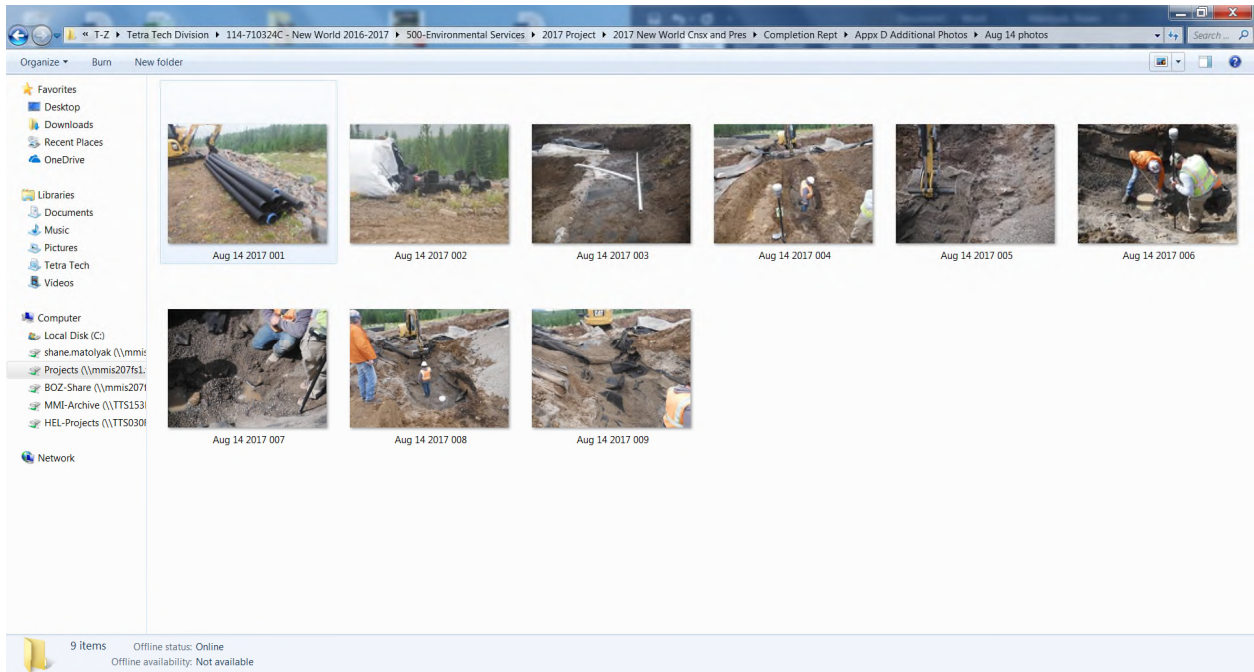
August 8 Photos.



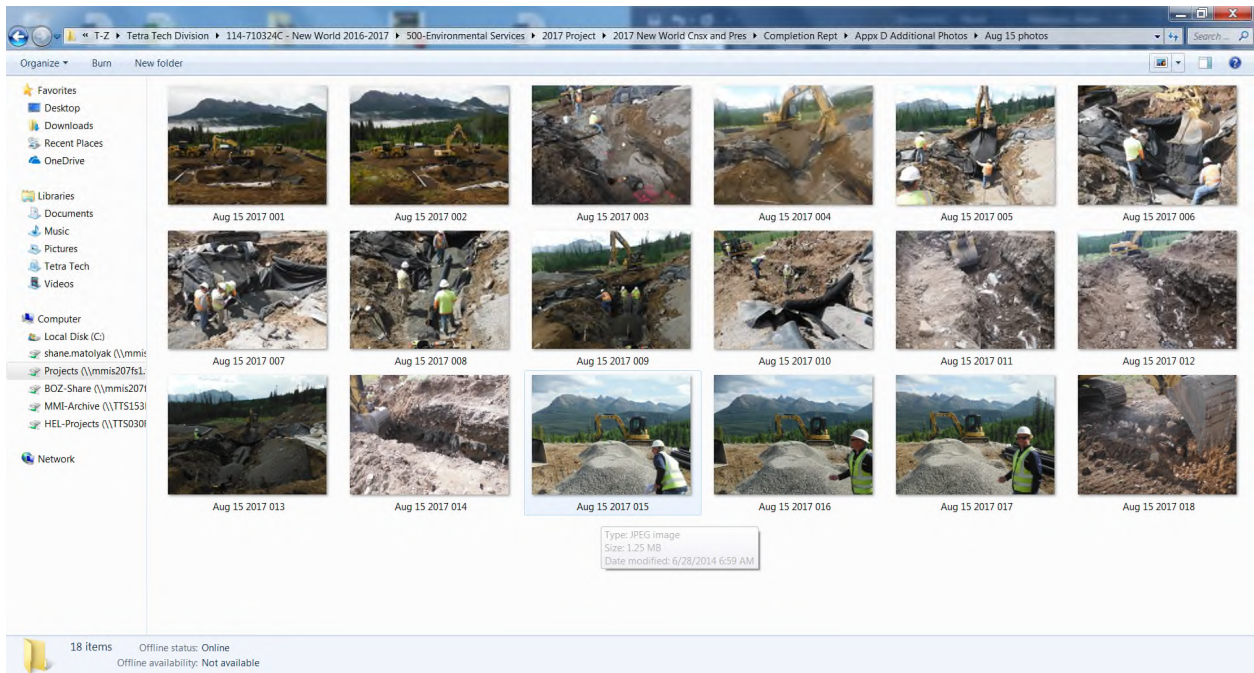
August 9 Photos.



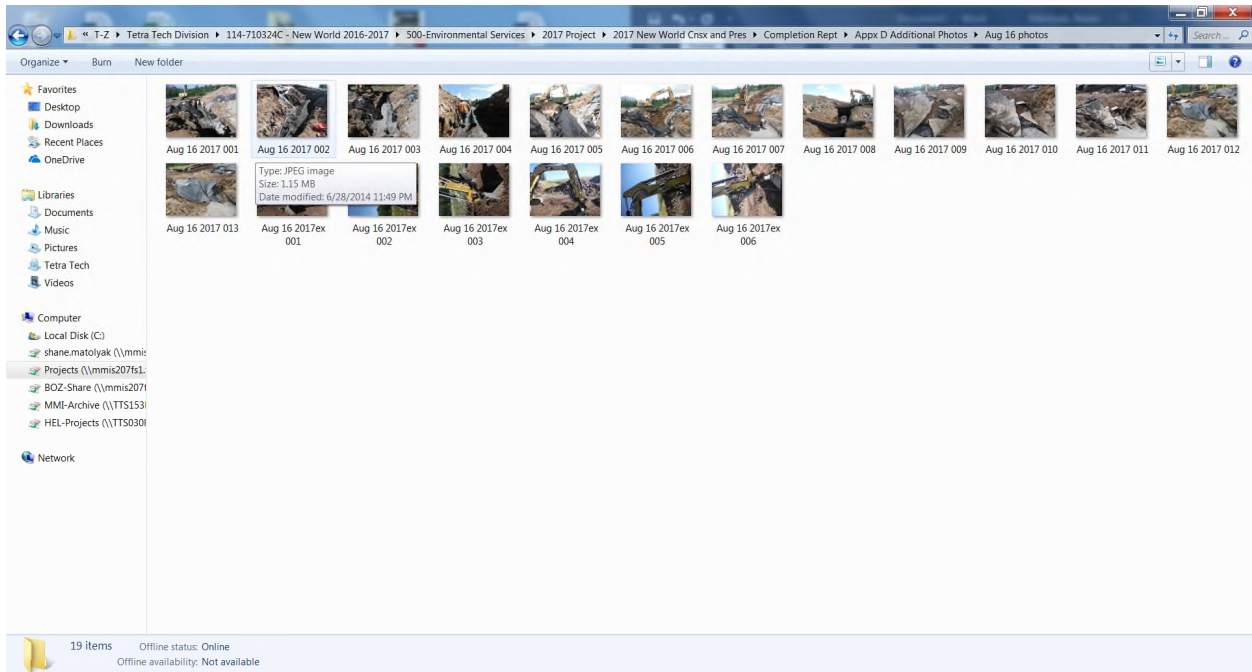
August 10 Photos.



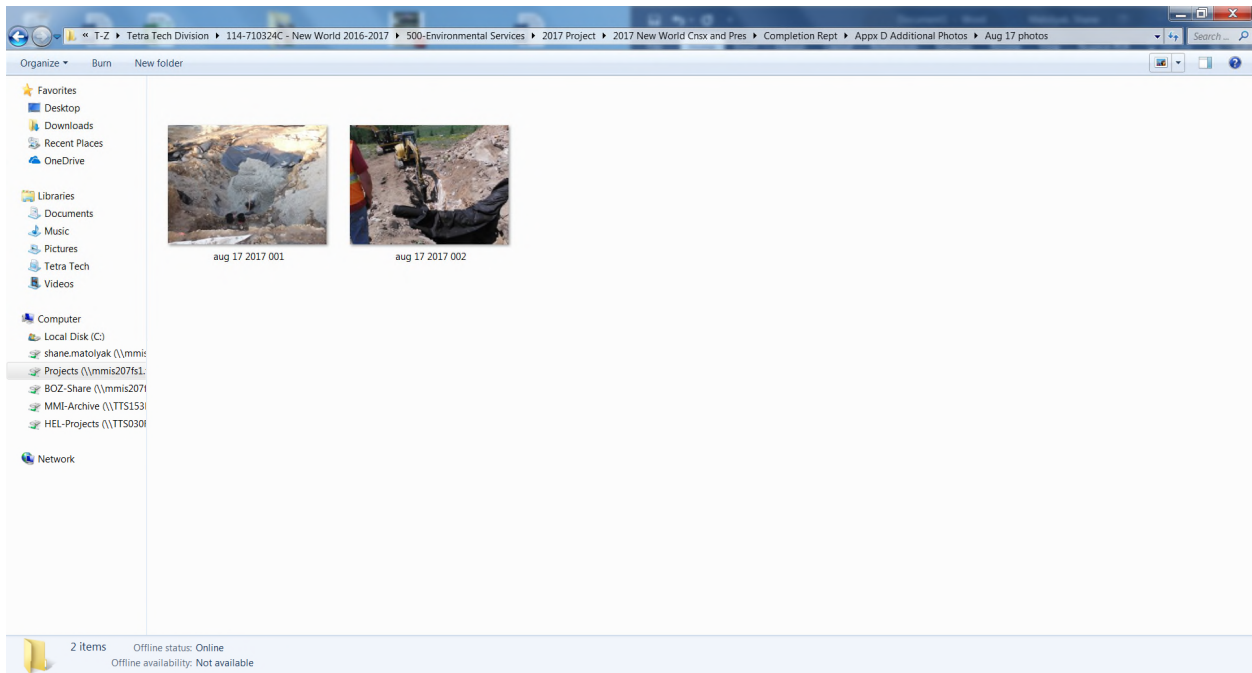
August 14 Photos.



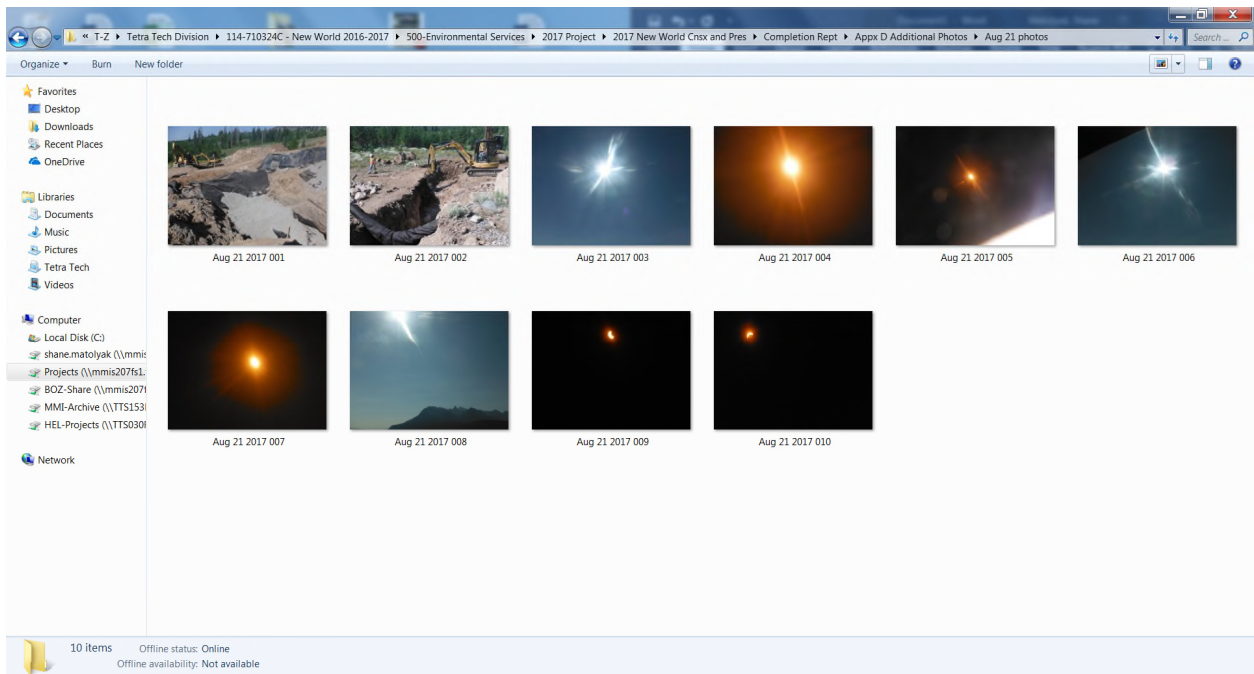
August 15 Photos.



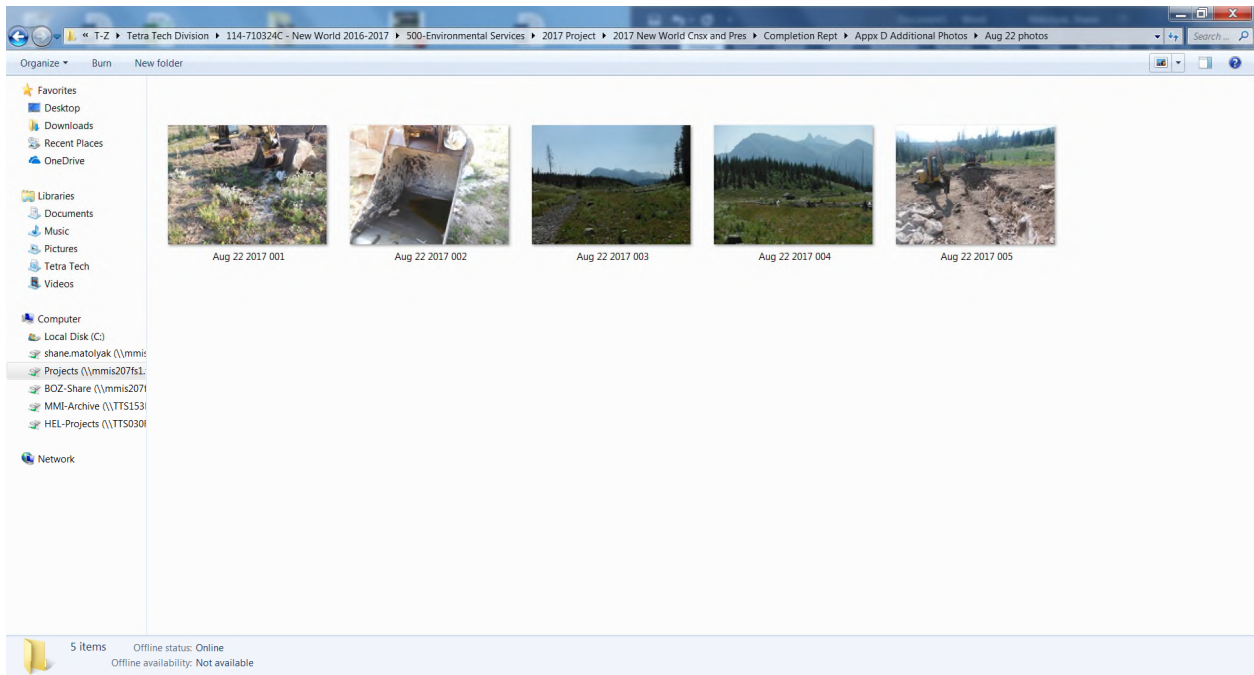
August 16 Photos.



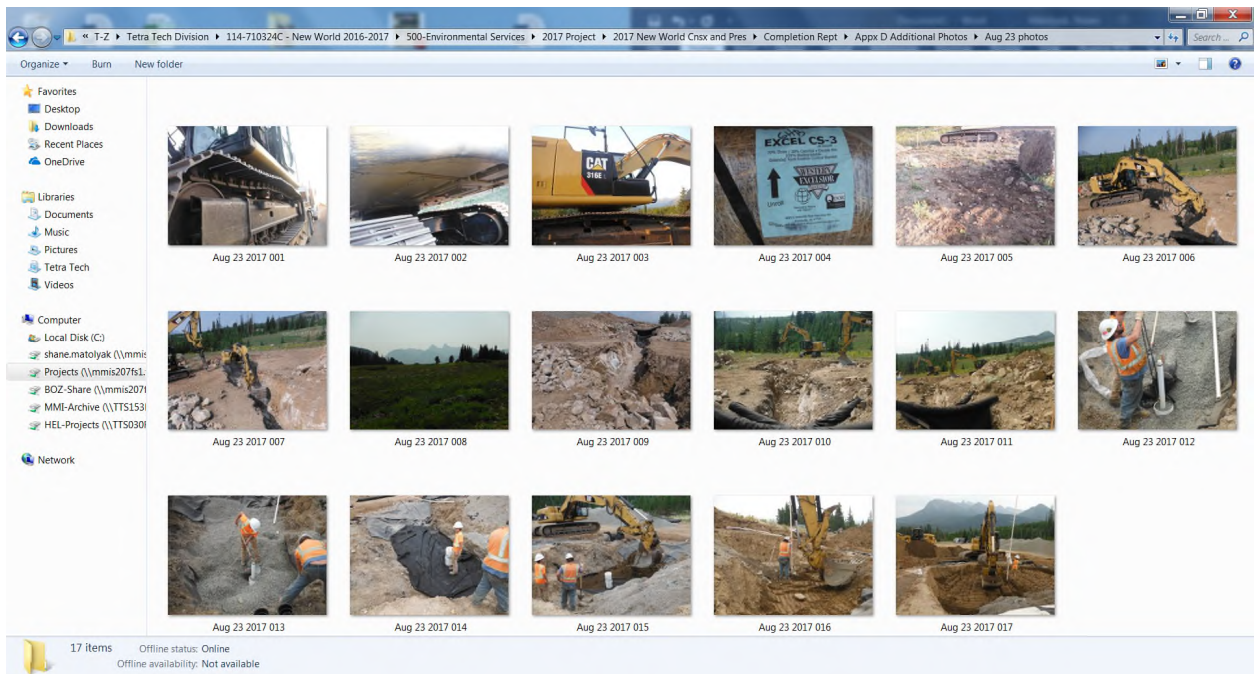
August 17 Photos.



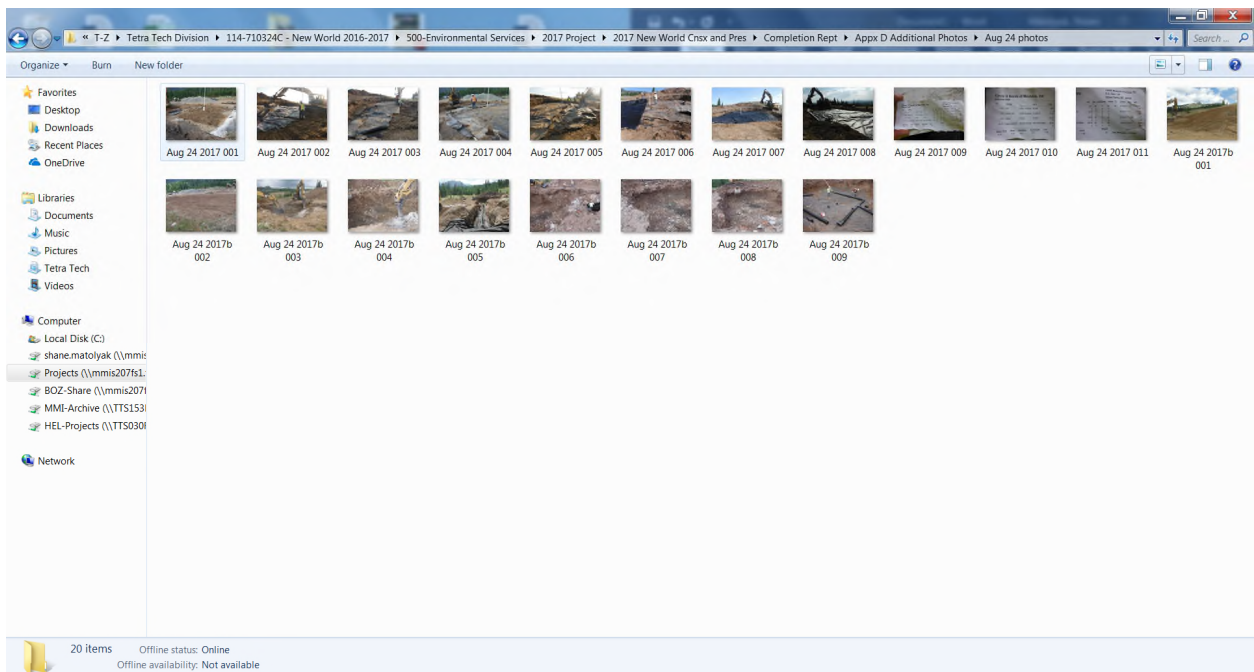
August 21 Photos.



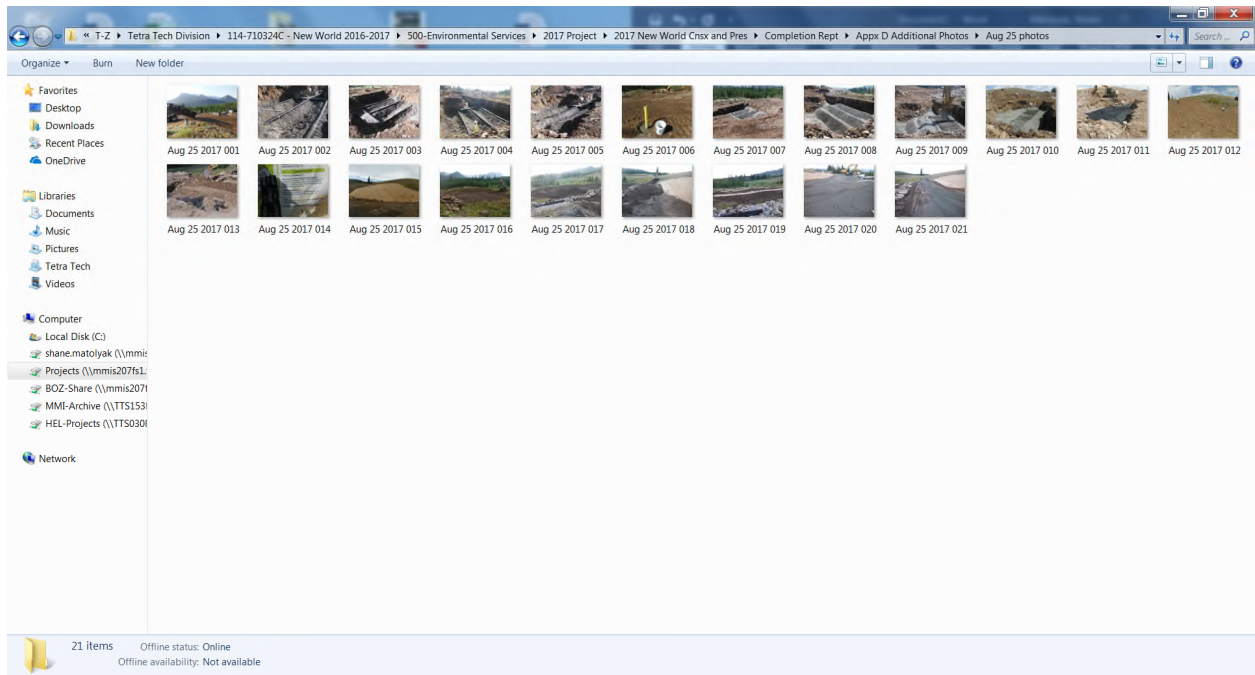
August 22 Photos.



August 23 Photos.



August 24 Photos.



August 25 Photos.

APPENDIX E – SUBMITTALS

LETTER OF SUBMITTAL



1176 Big Creek Road
Kellogg, ID 83837
Phone: 208-783-1069
Fax: 208-783-0671
www.northwindgrp.com

Date: 8/1/2017	Contract No:AG-0355-C-17-0019
Attention: Dale Reckley, Mary Beth Marks, Peter Werner	
Re: Baseline Schedule – New World Mine Waste Repository	
Transmittal No. 001	
Registry Line No. N/A	

To: Dale Reckley
Mary Beth Marks
Peter Werner

WE ARE SENDING YOU: Documents as listed below

Copies	Date	Description
(1) Electronic	8-1-17	Baseline Schedule – New World Mine Waste Repository

Message: _____

Copy to: _____

Signed: 

Project Manager, NWCS

New World Mine Sump Drainage Project

31-Jul-17 15:02

Activity ID	Activity Name	Orig Dur	Cal Start	Cal Finish	Aug 07							Aug 14							Aug 21							Aug 28						
					M	T	W	Thr	Fri	Sat	S	M	T	W	Thr	Fri	Sat	S	M	T	W	Thr	Fri	Sat	S	M	T	W	Thr	Fri		
New World Mine Sump Drainage Project																																
A001	Project Start	0.0	07-Aug-17	25-Aug-17																												
A100	Task 1: Mobilization / Liner Transport / Bonding / Demobilization	15.0	07-Aug-17	25-Aug-17																												
A110	Task 2: Excavate Overlying Materials	4.0	08-Aug-17	11-Aug-17																												
A120	Task 3: Install Sump and Infiltration Gallery	7.0	14-Aug-17	22-Aug-17																												
A130	Task 4: Replace Overlying Materials	2.0	15-Aug-17	16-Aug-17																												
A140	Task 5: Replace Top Cover	3.0	17-Aug-17	21-Aug-17																												
A150	Task 6: Revegetate	3.0	22-Aug-17	24-Aug-17																												
A160	Project Complete	0.0		25-Aug-17																												

Project Baseline Bar
 Remaining Work
 Actual Work
 Critical Remaining ...

LETTER OF SUBMITTAL



1176 Big Creek Road
Kellogg, ID 83837
Phone: 208-783-1069
Fax: 208-783-0671
www.northwindgrp.com

Date: 8/4/2017	Contract No:AG-0355-C-17-0019
Attention: Dale Reckley, Mary Beth Marks, Peter Werner, Shane Matolyak	
Re: Health and Safety Plan – New World Mine Waste Repository	
Transmittal No. 002	
Registry Line No. N/A	

To: Dale Reckley
Mary Beth Marks
Peter Werner
Shane Matolyak

WE ARE SENDING YOU: Documents as listed below

Copies	Date	Description
(1) Electronic	8-4-17	Health and Safety Plan – New World Mine Waste Repository

Message: _____

Copy to: _____

Signed: 

Project Manager, NWCS



Site-Specific Health and Safety Plan

NWCS-HSP- 40095-001

**New World Mine Repository Sump
Drainage Field Construction
Custer-Gallatin National Forest
Park County, Montana**

**Prepared by:
North Wind Construction Services
1176 Big Creek Road
Kellogg, Idaho**

August, 2017

**Site-Specific Health and Safety Plan
New World Mine Repository Sump
Drainage Field Construction
Custer-Gallatin National Forest
Park County, Montana**

Approved By

Original Signature on File

Chris Richardson, PMP
Project Manager

8/4/2017

Date

Original Signature on File

Marcus Johnshoy, CIH, CSP
Project Health & Safety Manager

8/4/2017

Date

Original Signature on File

Myron Belgarde
Site Health and Safety Officer

8/4/2017

Date

REVISION HISTORY

Revision No.	Effective Date	Sections Affected	Description
0	8-4-2017	All	Baseline document.

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1.3 Project Organization	1-2
1.3.1 Site Supervisor	1-2
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ACRONYMS

ACGIH	American Conference of Governmental Industrial Hygienists
ANSI	American National Standards Institute
AWS	American Welding Society
CFR	Code of Federal Regulations
CGA	Compressed Gas Association
CIH	certified industrial hygienist
CSP	certified safety professional
CPR	cardiopulmonary resuscitation
dBa	decibels A-weighted
EPA	U.S. Environmental Protection Agency
FM/UL	Factory Mutual/Underwriters Laboratories
GFCI	ground-fault circuit interrupter
HAZCOM	Hazard Communication
HAZWOPER	Hazardous Operations and Emergency Response
HSD	Health and Safety Director
HSM	Health and Safety Manager
IARC	International Agency for Research on Cancer
NFPA	National Fire Protection Association
NIOSH	National Institute of Occupational Safety and Health
NWCS	North Wind Construction Services
OSC	On Scene Coordinator
OSHA	Occupational Safety and Health Administration
PM	Project Manager
PPE	Personal Protective Equipment
SDS	Safety Data Sheet

SHM	Safety and Health Manager
SHSO	Site Health and Safety Officer
SS	Site Supervisor
SSHP	Site-Specific Health and Safety Plan
USFS	U.S. Forest Service
UV	ultraviolet

1. PROJECT BACKGROUND AND SCOPE

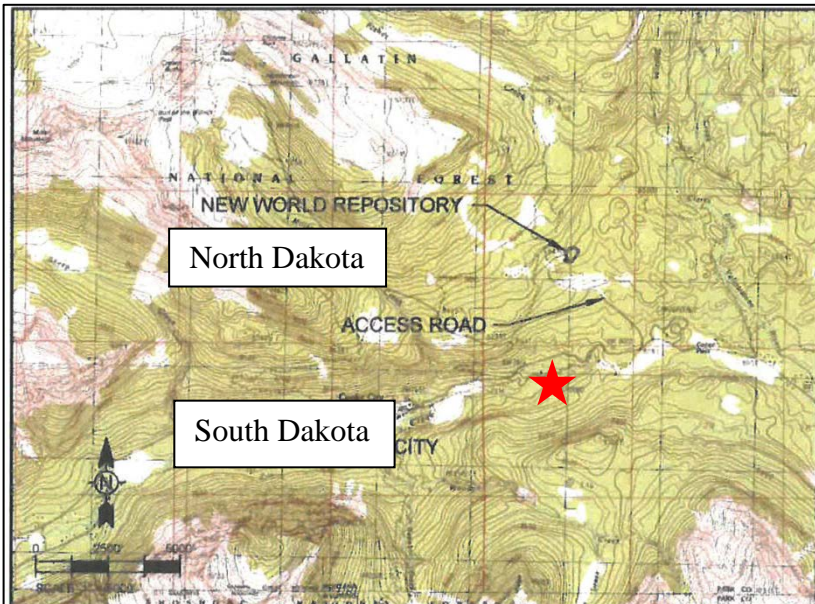
This North Wind Construction Services (NWCS) will maintain and ensure the Site-Specific Health and Safety Plan (SSHP) is adhered to, updated, and revised. The NWCS SSHP establishes the scope and procedures that will be used to identify and minimize health and safety hazards to persons performing work defined under Contract AG-0355-C-17-0019 providing construction services for the excavating, backfilling and performing sump drainage repairs. This document contains information about common work hazards and specific actions and equipment that may be used to protect workers. The intent of this document is to serve as an accident prevention plan for known hazards and a contingency plan if new hazards are encountered or emergencies arise.

Changes to the established personal protective equipment (PPE) levels required for tasks may be implemented by the Site Supervisor (SS) if new hazards are identified or existing hazards are eliminated, with concurrence from the North Wind Project Health and Safety Manager (HSM).

1.1 Project Location

The New World Mine Project is located in the New World Mining District near Cooke City, Montana, in the Beartooth Mountains. The District falls within the boundaries of the Gallatin and Custer National Forests and abuts Yellowstone National Park's northeast corner. The Absaroka-Beartooth Wilderness Area bounds the District to the north and east. The District lies entirely within Park County, Montana. The Work site lies at an elevation of approximately 8,360 feet above mean sea level. The project site can be reached from two access points off U.S. Highway 212 about 0.6 and 1.2 miles east of Cooke City. Cooke City is accessible by paved roads from the east over Highway 212 and from the west through Yellowstone National Park. The site location is provided in Figure 1-1.

Figure 1-1 Project Location



1.2 Scope of Work

North Wind Construction Services will provide the necessary equipment and personnel to perform the required tasks. The scope of work will consist of various activities associated with performing the required sump drainage repairs. Below is a brief description of the construction work.

1.2.1 New World Mine Site Sump and Drainfield Repair

- Stripping and stockpiling topsoil from disturbance area
- Excavating and stockpiling repository cover material, waste material, and sump drain rock
- Excavating and stockpiling native material for trench and infiltration gallery
- Installing infiltration gallery and sump drain pipe, drain rock/pipe bedding, and geotextile
- Providing and installing the secondary sampling sump
- Replacing repository materials and repairing repository liner
- Replacing native material, regrading infiltration gallery, and placing stockpiled topsoil
- Reseeding and fertilizing disturbed areas
- Providing and placing erosion control mat on disturbed areas

1.3 Project Organization

The NWCS Project Manager (PM) has overall responsibility to ensure the project meets all technical objectives in a safe manner. This includes ensuring that adequate staff and resources are available to implement the SSHP.

1.3.1 Site Supervisor

The Site Supervisor (SS) has responsibility for all field activities and enforces safe work practices by all field team members and subcontractors. The SS oversees the safety of any visitors who enter the site. The SS maintains regular communication with the NWCS PM. The SS will fill the Site Health and Safety Officer (SHSO) position.

1.3.2 Project Health and Safety Manager/ Site Health and Safety Officer

The HSM and SHSO are responsible for implementation of the SSHP. The HSM and SHSO are required to recognize safety and health hazards and take corrective actions to eliminate or mitigate them. The HSM/SHSO will implement and enforce the SSHP and NWCS Health and Safety Program requirements at the project site, give the initial safety briefing at the start of the project. The SHSO will conduct the daily safety meetings and will interface as required with the Project Health and Safety Manager and the NWCS PM. Additionally; the SHSO will conduct the following:

- Orders the immediate shut-down of site activities in the case of a medical emergency or imminent danger.

- Ensures protective clothing and equipment are properly used, stored and maintained.
- Enforces the site access requirements and restricts visitors from active work areas at the site unless the area is placed in a safe condition with no potential for exposure to safety or health hazards.
- Monitors field team members for signs and symptoms of exposure caused by heat stress, cold stress or chemical exposure

A safety log will be kept for all activities. This log will include daily safety meeting topics, training given, first aid administered, visits of all outside personnel and any incidents of a health and safety nature.

1.3.3 Construction Subcontractors

All subcontractors will comply with the requirements established in this SSHP. Subcontractors shall be fully contracted, licensed and insured and shall follow all applicable OSHA, EPA, and State of Montana regulatory requirements associated with their scope of services. Evidence of insurance and required licenses will be provided to the PM prior to starting subcontracted tasks. In addition, subcontractor workers and supervisors shall attend the required SSHP Training and tailgate safety briefings and meet all other applicable training requirements specified by the HSM/SHSO. Each subcontractor will designate a single representative with whom the SS will communicate. Each subcontractor has sole responsibility for their employees.

NWCS will observe subcontractors' safety performance to ensure compliance with this SSHP. Individual subcontractors are responsible for observation of hazards and unsafe practices of their personnel and taking the appropriate corrective action to eliminate or mitigate all hazards. All unsafe acts, conditions, or incidents will immediately be brought to the attention of the North Wind HSM/SHSO, PM, and North Wind HSD.

Where subcontractors fail to comply with SSHP or other contractual requirements, their contract may be terminated by North Wind.

1.3.4 Other Construction Personnel

All construction personnel, including equipment operators and subcontractor support personnel assigned to the project, will understand and comply with the requirements of this SSHP. The SS (or designee) will conduct a formal pre-job briefing and daily safety meetings. Once at the project site, construction personnel are responsible for identifying any potentially unsafe situations or conditions to the SS or HSM/SHSO for corrective action.

1.3.5 Worker and Visitor Safety Responsibility

Each trained worker has a personal responsibility for ensuring they recognize site hazards and take appropriate action to minimize exposure to these hazards. All personnel who enter the active work area will receive a site-specific SSHP briefing and shall wear all required PPE as directed by the HSM/SHSO. All personnel will follow the policies set forth in this SSHP as well as any other site specific documents that are developed.

All persons seeking admittance to the work area, including Montana Department of Environment and Natural Resources personnel, U.S. Forest Service (USFS) personnel, and other site visitors are subject to the provisions of this site-specific SSHP. Visitors are responsible for abiding by all signs and instructions from the SS while at the project site. Visitors will be restricted from entering controlled work areas unless

they meet all training requirements and wear appropriate PPE. Visitors with no official business at the project site will not be allowed to enter the active work areas.

1.3.6 Key Personnel

Table 1-1. Key Project Personnel.

Company/Title	Name	Phone Number
Project Manager	Mr. Chris Richardson, PMP	<u>W (208) 783-1069</u> <u>C (208) 755-8585</u>
NWCS Project Health and Safety Manager	Mr. Marcus Johnshoy, CIH, CSP	<u>W (720) 452-7378</u> <u>C (303) 887-7427</u>
NWCS Site Supervisor/Site Health and Safety Officer	<u>Mr. Myron Belgarde</u>	<u>W (208) 783-1069</u> <u>C (406) 490-9146</u>

2. HAZARD IDENTIFICATION AND MITIGATION

This section identifies existing and anticipated hazards based on the project scope of work and to provides controls to eliminate or mitigate these hazards. The hazard mitigation objective will be accomplished by the following:

- Evaluation of each major project task to determine the physical hazards and chemical and biological exposure potential to project personnel by all routes of entry.
- Determination of necessary engineering controls, isolation methods, administrative controls, and work practices. Where these measures will not adequately control hazards, PPE will be determined to further protect personnel from hazards.
- The risk, presented by these hazards to personnel entering established work zones, is dependent on both the nature of tasks being performed and the proximity of personnel to the hazards. Engineering controls will be implemented (whenever possible) along with administrative controls, work control practices, and wearing of PPE to further mitigate potential exposures to hazardous agents and physical hazards.

2.1 Safety and Physical Hazards and Mitigation

Industrial safety and physical hazards will present the greatest hazards while performing tasks at the project site. The following sections describe specific industrial safety hazards related to the construction activities and procedures to be followed to eliminate or minimize these hazards.

2.1.1 Overhead Objects and Hazards

All personnel who enter the active work area will wear a minimum of Level D PPE that includes head protection. No personnel will be allowed to position themselves or any body part under any suspended load at any time regardless of the height. Protective systems or administrative controls will be used during excavation operations to minimize the potential for falling material.

2.1.2 Material Handling and Back Strain

Material handling and maneuvering of various pieces of equipment may result in employee injury. Personnel will not physically lift objects weighing more than 50 lb or one-third their body weight (whichever is less), objects that are awkward or unbalanced alone, and will use the following manual lifting technique:

- Evenly distribute the load. Set feet solidly. Get as close to the load as possible. Bend legs about 90 degrees at the knees.
- Keep the back as straight as possible. Grip the object firmly. Straighten the legs to lift the object and at the same time, bring the back to a vertical position.
- Carry the object close to the body. Never carry a load that you cannot see over or around. Make sure the path of travel is clear. Never turn at the waist to change direction or to put the object down. Turn the whole body and crouch down to lower the object.

2.1.3 Repetitive Motion and Musculoskeletal Disorders

Tasks to be conducted may expose personnel to repetitive-motion hazards, vibration, undue physical stress, overexertion, awkward postures, or other ergonomic risk factors that may lead to musculoskeletal disorders. Musculoskeletal disorders can cause a number of conditions including pain, numbness, tingling, stiff joints, difficulty moving, muscle loss, and sometimes paralysis. The HSM/SHSO will evaluate project tasks and provide recommendations to reduce the potential for musculoskeletal disorders.

2.1.4 Fire and Flammable Materials Hazards

Fuel will be required for equipment used during construction activities. Flammable hazards exist during transfer of flammable or combustible liquids. Portable fire extinguishers with a minimum rating of 10A/20BC shall be strategically located at the site to combat the incipient stage of fires. Extinguishers will be located in all active work areas, on or near all facility equipment that have exhaust heat sources, and on or near all equipment capable of generating ignition or having the potential to spark.

2.1.4.1 Combustible Materials

The accumulation of combustible materials will be controlled. Disposal of combustible materials shall be assessed at the end of each day. Combustibles such as trash, cardboard, rags, wood, and plastic will be disposed in appropriate waste containers and removed from the site on a routine basis. All solvent waste, oily rags and flammable liquids shall be kept in fire resistant covered containers until removed from the project site. Vehicles will not be parked in areas of high grass.

2.1.4.2 Flammable and Combustible Liquids

The requirements of 29 CFR 1926.152, "Flammable and Combustible Liquids" will be followed at all times. Only Factory Mutual/Underwriters Laboratories, Inc. (FM/UL) -approved flammable liquid containers, labeled with the content, will be used to store fuel. It is anticipated that only vehicle mounted tanks will be used to fuel heavy equipment. If portable fuel containers (e.g., 5-gallon safety cans) are used, they will be stored at least 50 feet from any facilities and ignition sources or stored inside an approved flammable storage cabinet. Heavy equipment will be fueled at a work area that has been cleared of combustible materials.

2.1.5 Welding, Cutting or Grinding

Although not anticipated, all welding and cutting tasks will be conducted in accordance with 29 CFR 1926, Subpart J, "Welding and Cutting." A NWCS Hot Work Permit (HSF-022.01) will be completed and approved prior to any welding, cutting, or grinding activities at the site.

Personnel conducting the welding, cutting, or grinding tasks will wear the appropriate PPE based on the nature of the task. All eye and face protection will meet the requirements of American National Standards Institute (ANSI) standard Z87, "Occupational and Educational Eye and Face Protection Devices" (ANSI, 2003). Protective clothing will meet the requirements of ANSI/American Welding Society (AWS), "Safety in Welding and Cutting" (ANSI/AWS, 1994).

2.1.6 Compressed Gas Cylinders

Compressed gas cylinders may be used at project sites for cutting operations (if required). All cylinders will be stored and handled in accordance with Compressed Gas Association (CGA), "Safe Handling of Compressed Gases in Containers, P-1" (CGA, 2000) and 29 CFR 1926.350, "Gas Welding and Cutting." The following are some of the critical requirements from these standards:

- Cylinders being transported, moved, or stored shall be secured in the vertical position and shall have valve protection caps installed.
- Oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials by a minimum of 20 feet or by a noncombustible barrier at least 5 feet high having a fire resistant rating of at least one-half hour.
- Cylinder valves shall be closed when work is finished.

2.1.7 Hand and Powered Equipment and Tools

29 CFR 1926, Subpart I, "Tools - Hand and Power" will be followed for all work performed with powered equipment, including hand tools. All portable equipment and tools will be properly maintained

and used according to the manufacturer's specifications by qualified individuals. All tools will be inspected by the user prior to use to ensure they are in good working condition, guards are in place, and cords are in good condition. Any tool found to be damaged will be tagged and taken out of service. Electric power operated tools shall either be of the approved double-insulated type or grounded and all electric tools used outdoors will have a ground-fault circuit interrupter (GFCI) protection inline. Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.

2.1.8 Hoisting and Rigging of Materials

Hoisting and rigging of materials may be conducted using a boom truck or similar vehicle equipped with a boom hoist if a forklift is not used.

- All rigging and rigging practices shall meet the requirements of 29 CFR 1926.251, "Rigging Equipment for Material Handling."
- The operator shall comply with the manufacturer's specifications and limitations applicable to the operation of the equipment.
- Qualified signalpersons and riggers shall be used.
- The operator or designated person for mobile cranes or boom trucks will perform a documented inspection each day.
- The area around the lift (including the swing radius) will be limited to only the personnel required for the hoisting activity.
- The equipment operator shall ensure that that the crane is level and, where necessary, blocked; the load is well secured and balanced in the sling or lifting device before it is lifted more than a few inches; the lift and swing path is clear of obstructions and adequate clearance is maintained from electrical sources; and all personnel are clear of the swing radius of the boom and counterweight.

2.1.9 Heavy Equipment and Moving Machinery

Hazards associated with the operation of heavy equipment include injury to personnel (e.g., struck-by and caught-between hazards) and equipment and property damage. All heavy equipment will be operated in the manner in which it was intended and in accordance with manufacturer's instructions and limitations. Only authorized qualified personnel will be allowed to operate equipment. All heavy equipment will be inspected, operated, and maintained in accordance with 29 CFR 1926.601, "Motor Vehicles" and have rollover protection compliant with 29 CFR 1926.1000, "Rollover Protective Structures for Material Handling Equipment." Equipment will be inspected daily using the applicable NWCS Construction Safety Checklists. These checklists will be filed and made available at the site by the HSM/SHSO.

Additional safe work practices include the following:

- All heavy equipment will have a backup (reverse signal) alarm.
- Walking directly behind or to the side of heavy equipment without the operator's knowledge is prohibited. All precautions will be taken before moving heavy equipment.

- While operating heavy equipment in the work area, the equipment operator will maintain communication with a designated person who will be responsible for providing direct voice contact or approved standard hand signals. In addition, all personnel in the immediate work area will be made aware of the equipment operations.
- All equipment will be kept out of traffic lanes and access ways and will be stored so as not to endanger personnel at any time.
- All unattended equipment will have appropriate reflectors or be barricaded if left on roadways.
- All parked equipment will have the parking brake set.
- Heavy equipment designed for off-road use will not be operated on public highways.

2.1.10 Commercial Vehicle Movement and Highway Operations

Designated traffic lanes and routes will be established for all equipment when operating on the project site. Established vehicle traffic lanes and routes will be communicated to all personnel during the pre-job briefing and will be marked and delineated where feasible to prevent inadvertent entry or crossing by personnel or other equipment.

Entry to and exit from the project site is controlled by a Forest Service Gate. The Forest Service will issue a key to NWCS project personnel for use for the duration of work. NWCS is responsible for ensuring the gate is closed and locked when work activities are not occurring.

2.1.11 Excavations

Excavation tasks will be conducted and monitored in accordance with 29 CFR 1926, Subpart P, "Excavations".

If the site roadway runs adjacent to the excavation, then barricades shall be set up on the excavation side of the road to prevent vehicles from approaching the excavation edge.

2.1.12 Electrical Hazards and Energized Systems

Only authorized qualified electricians shall be allowed to install, modify, or work on electrical systems. This includes installation of a temporary electrical supply or modification of permanent electrical supply equipment. The following precautions shall be observed:

- Prior to use, all electrical equipment, power tools, and extension cords shall be inspected for damage. Damaged or defective electrical equipment shall be removed from service immediately.
- All temporary wiring, including all electrical power tools and extension cords, must have a GFCI installed or power tools must be double insulated and be FM/UL-approved.
- All electrical wiring or systems shall be considered energized unless under the protection of lockout/tagout.
- Safe clearance shall be maintained between overhead power lines and equipment.

- If work on electrical systems is necessary (by qualified electricians), these practices will conform to the requirements of 29 CFR 1926, Subpart K, “Electrical” and the most current version of NFPA 70 (National Electrical Code, 2017) and 70E (Standard for Electrical Safety in the Workplace, 2015).

2.1.13 Overhead Electrical Transmission Lines

All overhead wires are considered to be energized unless and until the person owning the line, or the electrical utility authorities, indicates that it is not an energized line or that it has been visibly grounded or insulated.

2.1.14 Chemical Exposure

Excavation, movement, stockpiling and placement of mine waste may result in exposure to heavy metals. The project will implement the following measures to control personnel exposure to site contaminants:

- Equipment will be operated with doors and windows closed.
- Cab filters will be checked and replaced as required by the equipment manufacturer or when excessive loading is observed.
- Ground personnel and equipment operators shall maintain an upwind location to the extent possible.

2.2 Environmental Hazards and Mitigation

Environmental hazards will present potential hazards to personnel during project tasks. These hazards will be identified and mitigated to the extent possible. This section describes these environmental hazards and states what procedures and work practices will be followed to mitigate them through engineering controls (where feasible), administrative controls, or through the use of PPE.

2.2.1 Noise

Noise levels at the equipment operator’s position and ground personnel close to the equipment will be monitored at the beginning of the project to determine which personnel and areas will require hearing protection (where noise levels exceed 85 dBA) in accordance with 29 CFR 1926.52, “Occupational Noise Exposure” and NWCS HSP-008, *Hearing Conservation Program*. New pieces of equipment brought on site or operations will be monitored to determine the need for hearing protection. Hearing protection devices will be selected and worn in accordance with HSP-008. NWCS personnel whose noise exposure routinely meet or exceed the allowable noise level (85dBA, as an 8-hr average) will be enrolled in a hearing conservation program.

2.2.2 Temperature and Sunburn Hazards

All project personnel must understand the hazards associated with heat and cold stress and take preventive measures to minimize the effects. American Conference of Governmental Industrial Hygienists (ACGIH) guidelines will be considered when determining work-rest schedules, warm-up breaks, or when to halt work activities because of temperature extremes.

2.2.2.1 Heat Stress

Personnel must inform the HSM/SHSO or construction manager when experiencing any signs or symptoms of heat stress or observing a fellow worker experiencing symptoms. Heat stress stay times or

work/rest regimens will be documented on the appropriate plan of the day briefing form by the HSM/SHSO (as required). Table 2-3 lists heat stress signs and symptoms of exposure.

Table 2-3. Heat Stress Signs and Symptoms of Exposure.

Heat-Related Illness	Signs and Symptoms	Emergency Care
<i>Heat rash</i>	Red skin rash and reduced sweating.	Keep the skin clean, change all clothing daily, and cover affected areas with powder containing cornstarch or with plain cornstarch.
<i>Heat cramps</i>	Severe muscle cramps and exhaustion, sometimes with dizziness or periods of faintness.	Move the patient to a nearby cool place; give the patient half-strength electrolytic fluids; if cramps persist, or if signs that are more serious develop, seek medical attention.
<i>Heat exhaustion</i>	Rapid, shallow breathing; weak pulse; cold, clammy skin; heavy perspiration; total body weakness; dizziness that sometimes leads to unconsciousness.	Move the patient to a nearby cool place, keep the patient at rest, give the patient half-strength electrolytic fluids, treat for shock, and seek medical attention. DO NOT TRY TO ADMINISTER FLUIDS TO AN UNCONSCIOUS PATIENT!
<i>Heat stroke</i>	Deep, then shallow, breathing; rapid, strong pulse, then rapid, weak pulse; dry, hot skin; dilated pupils; loss of consciousness (possible coma); seizures or muscular twitching.	Cool the patient rapidly. Treat for shock. If cold packs or ice bags are available, wrap them and place one bag or pack under each armpit, behind each knee, one in the groin, one on each wrist and ankle, and one on each side of the neck. Seek medical attention as rapidly as possible. Monitor the patient's vital signs constantly. DO NOT ADMINISTER FLUIDS OF ANY KIND!

The following monitoring procedures will be considered when the ambient air temperature exceeds 70 F), the relative humidity is high (greater than 50%), or when the workers exhibit symptoms of heat stress:

- The heart rate should be measured by the radial pulse for 30 seconds, as early as possible in the resting period. The heart rate at the beginning of the rest period should not exceed 110 beats per minute, or 20 beats per minute above resting pulse,
- If the heart rate is higher, the next work period should be shortened by 33%, while the length of the rest period stays the same. If the pulse rate still exceeds 110 beats per minute at the beginning of the next rest period, the following work cycle should be further shortened by 33%,
- Continue this procedure until the rate is maintained below 110 beats per minute, or 20 beats per minute above resting pulse,
- Alternately, the oral temperature can be measured before the workers have something to drink. If the oral temperature exceeds 99.6 degrees Fahrenheit (°F) at the beginning of the rest period, the following work cycle should be shortened by 33%, and
- Continue this procedure until the oral temperature is maintained below 99.6°F.

NOTE: Heat exhaustion and heat stroke are extremely serious conditions that can result in death and should be treated as such. The SS or designee should immediately request an ambulance (911), be dispatched, and the individual cooled (as described above) based on the nature of the heat stress illness.

2.2.2.2 Ultraviolet Light Exposure

Personnel will be exposed to ultraviolet light (UV) (i.e., sunlight) when conducting project tasks. Sunlight is the main source of UV known to damage the skin and to cause skin cancer. The amount of UV exposure depends on the strength of the light, the length of exposure, and whether the skin is protected. No UV rays or suntans are safe. The following are actions that may be taken to minimize UV exposure include:

- Wear long-sleeve shirt to protect arms
- Sunscreen will be available for use

2.2.3 Inclement Weather Conditions

When inclement or adverse weather conditions develop that may pose a threat to persons or property at the project site (e.g., sustained strong winds 25 miles per hour [mph] or greater, electrical storms, heavy precipitation, or extreme heat or cold), conditions will be evaluated and a decision made by the HSM/SHSO (with input from other personnel) to halt work, employ compensatory measures, or proceed.

2.2.3.1 Lightning Hazards and Protection

The building provides the greatest safety from a lightning strike. In general, vehicles (with windows rolled up), provide adequate safety if you do not touch the metal surfaces of the vehicle.

The SHSO will be responsible for checking the local forecast.

When lightning is within 6 to 12 miles, personnel will be warned by radio to be ready to evacuate the work area to a safe sheltered location (i.e., the field trailer or building). The HSM/SHSO will then contact the National Weather Service for an updated weather forecast. When lightning is detected at or less than six (6) miles from the (Strike Alert or “30-30” Rule), then all equipment will be placed in a safe configuration and personnel will shelter in the field trailer or building. The 30-30 Rule uses the following guidelines for determining the threat of lightning in a specified area:

- **30 Seconds:** Count the seconds between seeing lightning and hearing thunder. If this time is less than 30 seconds, lightning is still a potential threat. Seek shelter immediately.
- **30 minutes:** After the last lightning flash, wait 30 minutes before leaving shelter. Half of all lightning deaths occur after the storm passes. Stay in a safe area until you are sure the threat has passed.

2.2.4 Wildlife and Biological Hazards

The project is located in an area that provides habitat for various wild animals, rodents, ticks, mosquitoes, rattlesnakes, and poisonous/noxious plants. Hazard mitigation means include:

- Do not feed or approach any large animals. Do not leave food overnight at the site unless it is secured properly. Spray an insect repellent containing DEET on exposed skin areas.
- If a tick is found embedded in your skin, remove it and place it into a Ziploc bag. It will be analyzed if you become ill.

- Do not touch or handle known or questionable poisonous or noxious plants.
- Snakes, insects, and spiders may be encountered in staging areas, under existing structures, under boxes, and other areas that provide shelter. If potentially dangerous snakes or spiders are found or are suspected of being present, warn others, keep clear, and contact the SHSO for additional guidance.

2.2.5 **BEAR SAFETY**



The project is located in an area that provides habitat and is home to a large population of bears. Means of mitigating a bear encounter will include:

- Project personnel having bear spray readily accessible at all times.
- An initial training session on bear safety provided by USFS representative at the pre-work meeting.
- Strict and diligent adherence to all of the requirements provided in Occupancy and Use Order #01-14-11-00-02 – Food Storage Order (provided in its entirety and included in Appendix C).
- Frequent review, strict adherence and conspicuous posting of the following informational poster:



2.2.6 Confined Spaces

No confined spaces are anticipated to be encountered at the project site. The Project HSM/SHSO will be contacted if there are any questions of whether a space meets the regulatory definition of a “confined space.” If a space is classified as a confined space and entry is required (permit or non-permit required), the NWCS HSM/SHSO will be contacted for formal classification of the space in accordance with NWCS HSP-010, *Confined Space Entry*. All requirements of 29 CFR 1910.146, “Permit-required Confined Space” and HSP-010 will be followed.

2.3 Stop Work Authority

Task-site personnel should continually look for potential hazards and immediately inform the SS or HSM/SHSO of the hazards so that action can be taken to correct the condition. All personnel have the authority to initiate **STOP WORK** actions if it is perceived that an imminent safety or health hazard exists. Personnel working at the task site are responsible to use safe-work practices, report unsafe working conditions or acts, and exercise good housekeeping habits with respect to tools, equipment, and waste throughout the course of the project.

3. PERSONAL PROTECTIVE EQUIPMENT

PPE for this project has been selected based on the hazards analysis for tasks to be conducted and materials that are anticipated to be encountered. Based on this analysis, the HSM/SHSO has determined that Level D PPE will serve as the primary PPE for activities at the project sites. If additional hazards are encountered, action levels exceeded at the project site, or new tasks area added, the North Wind HSM/SHSO will be contacted and the hazards will be evaluated and control measures developed.

Under no circumstances will PPE be modified without express approval from the HSM/SHSO. If certain activities or conditions pose problems for workers using the assigned PPE, the HSM/SHSO will be contacted to help resolve the problem. This SSHP serves to meet 29 CFR 1910.132, “Personal Protective Equipment” hazard assessment requirements for general tasks.

3.1 Required Personal Protective Equipment

All personnel will be trained on the proper use, maintenance, and limitations of all PPE. Where specific OSHA standards govern required training, these will be required to be met. Level D PPE consists of:

- Appropriate work clothes
- ANSI approved hard hats, safety footwear, safety glasses, high visibility garments
- Work gloves – leather for all material handling tasks (cut resistant for debris handling)
- Other PPE as appropriate including chain saw chaps, face shields, hearing protection, coveralls.

If Level C PPE is required (i.e., respirator use), the Project HSM will be contacted and a workplace-specific Respiratory Protection Plan will be developed.

3.1.1 Inspection of PPE

All PPE components must be inspected prior to use and when in use within work areas. Once PPE is donned, self-inspection will serve as the principle forms of inspection. If at any time PPE should become damaged or unserviceable, an individual will inform others of the problem and proceed directly to the controlled work area exit point to doff and replace the equipment.

4. TRAINING

The SSHP is designed to provide information necessary to assure that personnel are aware of the hazards associated with the tasks to be performed and the materials that they will be working with. All workers will be required to provide objective evidence of having met required training requirements as applicable to their tasks. A copy of training records, certificates, or cards shall be provided to the North Wind PM prior to initiating project tasks or at the initial SSHP briefing. Site-Specific Work Scope and Health and Safety Training

All workers and subcontractors assigned to the project who enter NWCS controlled work areas shall attend initial SSHP training. Prior to entering the work areas, all personnel shall also participate in a daily safety briefing. Visitors will receive project training based on their access requirements to the specific work area. Visitors requesting access to NWCS controlled areas must have a demonstrated need to access the area and meet all other applicable SSHP required training requirements and have objective evidence (training certificates or cards) before entry to controlled areas will be allowed.

4.1 HAZWOPER Training

North Wind shall ensure that work is performed in accordance with 29 CFR 1910.120, "Hazardous Operations and Emergency Response (HAZWOPER)." All employees and subcontractors working onsite shall have current 40-hour (and annual refresher as required) OSHA HAZWOPER training including medical clearance. Documentation of training for site workers shall be readily accessible.

4.2 SSHP Briefing Content

The SSHP briefing shall include a review of the Site-Specific SSHP including site hazards and controls, project-specific hazard communication information, and review of applicable Safety Data Sheets (SDSs) for all chemical brought on site, and emergency actions. Additionally, personnel will review PPE requirements and the proper use and limitation of Level D PPE and any specialized equipment and applicable work control and safety procedures such as lockout/tagout.

Training will include a health and safety briefing on the following information:

- Names of personnel and alternates responsible for site safety and health.
- Hazards of the site and site work.
- Work practices by which the employee can minimize risks from hazards.
- Emergency response actions, contacts, and phone numbers.

Visitors will receive the same training that site personnel receive.

4.3 Attendance Documentation

All attendees of the site-specific SSHP training shall sign a training acknowledgment form (Appendix A) verifying their attendance and acknowledging the information that has been presented is understood and will be complied with. This briefing shall be held on or near the site during the mobilization phase of the

project and before any work is started. Specialty subcontractors will be briefed prior to the start of their work tasks.

4.4 Daily Safety Briefings

Daily tailgate safety briefings shall be used to augment the SSHP briefing and address site-specific concerns and any changes that arise during the course of the project. Prior to entering designated work areas, all personnel shall participate in a daily safety briefing. Where separate project activities prohibit all personnel from attending a single safety briefing, each work group will conduct a briefing. Documentation of attendance of the tailgate safety briefing shall be maintained in the SS logbook.

4.5 Equipment Operator Required Training and Qualifications

Documentation of the training and/or qualifications for equipment operators as required by 29 CFR 1926(b)(4) shall be provided to the North Wind SS or PM as requested. Anticipated training certification or qualifications will be required for:

- Heavy equipment operators
- Highway truck driver (commercial driver's license-CDL, appropriate DOT endorsements). All equipment will be inspected daily by the operator. Problems and deficiencies will be reported to the SS.

4.6 Hazard Communication

To ensure 29 CFR 1910.1200, Hazard Communication (HAZCOM) requirements are met, the following training and information will be provided. General hazard communication training will be provided as part of the SSHP briefing. The HSM/SHSO must approve all chemicals prior to bringing them on site. All NWCS employees and subcontractors must provide the NWCS SS or HSM/SHSO with a copy of SDSs for any chemical for HSM/SHSO review prior to bringing it on site. The chemical's intended use and potential to impact other project workers and activities, and PPE requirements for use of chemical products must be explained to the HSM/SHSO. Copies of all SDS sheets will be kept at a central location at the project site and managed by the HSM/SHSO. Subcontractors are responsible for providing HAZCOM training to their personnel and to provide the NWCS SS with copies of objective evidence of HAZCOM training.

4.7 Subcontractors and All Site Visitors

All subcontractor and Forest Service project personnel requiring unescorted access to NWCS controlled work areas shall be briefed on the SSHP and relevant daily safety briefing topics. Subcontractors will sign the appropriate training SSHP and other forms and wear a minimum of Level D PPE at all times.

Visitors will receive an abbreviated SSHP briefing on the general hazards, associated controls and site requirements, PPE requirements, and emergency actions. Visitors are required to wear hard hats, safety glasses, and safety footwear. Visitors who have not met the requirements for unescorted access will be escorted (line of site) by the SS or designee at all times.

4.8 Emergency Response Training

Emergency Response Training requirements will include review of this SSHP and all other required Project Work Plans.

5. ACCIDENT AND INCIDENT REPORTING

All accidents no matter how minor will be reported to the HSM/SHSO and SS immediately. Depending on the nature of the event, additional notifications and reporting will be required as described below. The SS is responsible for collecting all information related to an accident on site in accordance with North Wind Construction Services HSP-005, "Accident Reporting and Investigation" including completion of a North Wind Incident Report Form (HSF-005.01). The SS will take immediate actions to mitigate any accident or medical actions as described in Section 7. Except for rescue and emergency measures, the accident scene shall not be disturbed until it has been released by the investigating official.

The PM, Program Manager, and NWCS HSM/SHSO will also be notified within 1 hour of any accidents on site. Additionally, **any accidents that occur will be immediately reported to the USFS On Scene Coordinator (OSC)**. These accidents will be investigated in depth to identify all causes and to recommend hazard control measures and include:

- Fatal injury,
- Permanent totally disabling injury,
- Permanent partial disabling injury,
- One or more persons admitted to a hospital,
- Loss of an eye,
- Amputation,
- Property damage in an amount specified by EPA current accident reporting regulations, or
- Three or more employees become ill or have a medical condition which is suspected to be or related to the Site

If an accident, an explosion or fire, or release of toxic materials occurs during the course of the project, North Wind shall notify the the USFS OSC verbally or by telephone as soon as possible after emergency response agencies have been notified. Recording and reporting occupation injuries and illnesses shall be conducted in accordance with 29 CFR 1904. A written notification shall be provided within 24 hours. Within two (2) working days after an accident, a copy of the North Wind Incident Report (HSF-005.01) with all available information shall also be submitted to the USFS OSC.

6. SITE SAFETY AND HEALTH PLAN PROGRAMS

6.1 Fire Prevention and Protection

The potential for forest fires is a significant concern. Forest fires can be started by lightning strikes, sparks from friction, inappropriate hot work, discarded smoking materials, and arson. The following precautions will be taken to address this concern.

6.1.1 Fire Prevention

- Flammable liquids will be stored only in OSHA approved containers.
- If required, oxygen-acetylene units will be used and stored in a safe manner.
- Flameproof tarpaulins and enclosures will be provided for welding and burning operations when necessary. A Hot Work permit is required for all welding and burning operations.
- No vehicles will be parked off-road in areas of high grass. Vehicle travel off-road in high grass is prohibited except in the event of an emergency.
- Designated smoking areas will be established for the project. The smoking area will be demarcated within a protected area at least 35 feet from any combustible material with an approved receptacle.
- No burning for disposal will be permitted at the project site.
- Communication between NWCS and the USFS OSC to determine the posted fire danger implemented by the US Forest Service to determine whether some operations need to be shut down to minimize the chance of a fire occurrence due to sparks.

6.1.2 Fire Protection

- North Wind support vehicles will contain one of each of the following items:
 - One round point #0 lady or equal shovel; an ax weighing a minimum of 2lbs and no less than 26in. in length, or a Pulaski;
 - One 1-gal capacity water container;
 - One fire extinguisher with a minimum of 2-1/2lb, a length no less than 26in and a rating of at least 4BC, or a paluski.
- Portable fire extinguishers shall be provided and maintained in all heavy equipment. Each extinguisher will have, at a minimum, a 2-1/2 pound capacity and a 4 BC rating.
- The emergency phone number for the additional fire resources is 911.
- In the event an evacuation is ordered, the escape route is to **travel south on the New World Mine Access Road, and turn right onto Highway 212. If evacuation is impossible a safe zone will be established. The USFS defines a safe zone as an area that is 4 times greater than the length of**

your fuel. An example of this safe zone is if an 80 foot tree is burning and has a 20 foot flame, the safe zone needs to be an area of 400 feet away from the fire. Dependent upon fire location and available egress options, the safe zones for this project are identified as the cleared work area within the New World Repository or the Super 8 Hotel located in Cooke City, MT.

6.2 Site Housekeeping

All site personnel are expected to make good housekeeping a priority at the job site. The following are general safe work practices that shall be followed at the work sites to minimize potential exposure of personnel to hazardous situations.

- All debris shall be collected in appropriately marked containers and all work areas kept free of such material.
- A clean area for breaks, eating and smoking shall be established. Unless otherwise prohibited, smoking, fluid intake, and the use of rest room facilities shall be permitted in this area.
- Eating, drinking, chewing gum or tobacco, smoking, or any practice that presents the possibility of hand to mouth transfer and ingestion of chemical hazards is prohibited in NWCS controlled work areas.
- **Strict and diligent adherence to all of the requirements provided in Occupancy and Use Order #01-14-11-00-02 – Food Storage Order (provided in its entirety and included in Appendix C).**

6.3 Mechanical Equipment Inspection

Heavy equipment operators must perform daily operational safety inspections including brakes and braking mechanisms prior to use of all heavy equipment. The inspection checklist logbook must remain within the cab of all powered industrial trucks, haul trucks, and other heavy equipment. Do not operate any equipment that fails an inspection. Report all needed repairs to the site supervisor or personnel responsible for maintenance.

6.4 Sanitation

Potable water and soap (or sanitizing solution) will be available at the worksite to wash hands and face upon exiting the work area. Personnel shall wash their hands prior to eating or drinking, and/or prior to taking a smoke break. A portable toilet(s) will be provided at the project site.

6.5 Daily Safety Inspections

The HSM/SHSO will conduct frequent inspections of the work site to ensure compliance with SSHP requirements. A site inspection checklist will be used to document findings and corrective actions (as required). All inspection forms will be filed in the project trailer and a summary of the inspections will be communicated to the Construction Manager and the NWCS HSM/SHSO. Any newly identified job hazards (and associated controls) will be reviewed with the crew.

6.6 Communications

Satisfactory working two-way radios shall be used by personnel at the project site for communication. Additionally, cell phone use, when not operating equipment or trucks, will be utilized as service is available. The following project individuals at a minimum shall have a radio:

- All contractor's supervisors
- Contractor's SHSO and HSM
- Equipment operators, if necessary.

6.7 Construction Area

A Controlled Work Area (CWA) will be established where excavation/consolidation activities are occurring. The CWA locations will be designated by the SS and boundaries will be clearly communicated to the construction crew. These boundaries will be established at the main access points to the work location, and will not encompass the entire work area(s).

7. EMERGENCY PREPAREDNESS RESPONSE PLAN

7.1.1 Pre-Emergency Planning

Before starting site operations, the SS will implement emergency contingency planning actions that include:

- Identifying the location and route to emergency medical services,
- Establishing site communications,
- Designating emergency warning signal and evacuation routes,
- Inventorying emergency equipment, and
- Communicating emergency procedures to personnel.

7.1.2 Personnel Roles, Lines of Authority

The SS takes the lead during site emergencies until off-site emergency responders arrive on-site. In cases of major emergencies, personnel will evacuate the site, contact local emergency responders, and rely on them to handle the emergency. Minor emergencies that are controllable on-site with emergency equipment located at the site will be addressed by on-site personnel with the approval of the site supervisor.

7.1.3 Emergency Recognition and Prevention

The SS and subcontractor competent person will conduct an initial site safety briefing to review the requirements of the site safety plan with site personnel. This briefing will include discussions on the recognition, prevention and control of emergencies anticipated on-site. Daily safety meetings will be held to emphasize emergency prevention and control measures.

7.1.4 Site Security and Control

Access to the site will be controlled by the SS until local emergency responders arrive. The SS will then relinquish site security/control to the authorized emergency response organization.

7.1.5 Site Communications

Site communications will provide means for both on-site and off-site communications. On-site communications will consist of verbal communications and line of sight observations. Off-site communications will be established to summon off-site emergency services and will consist of cellular telephones. When reporting an emergency situation to off-site emergency responders, the following information must be provided:

- Name of person making the call
- Telephone number and location of person making the call
- Name of person(s) exposed or injured

- Description of exposure and emergency
- Actions taken
- Name and location of site contact for emergency, if other than caller.

7.2 Medical Facility

In the event of a known or suspected injury or illness, the worker(s) shall be evaluated by a cardiopulmonary resuscitation (CPR) first-aid trained worker and stabilized for transportation to a medical facility as required.

In the event of an employee injury or illness requiring emergency medical care beyond the capabilities of on-site CPR and first-aid trained personnel, the closest, capable medical facility shall be notified as defined below and the appropriate actions taken.

All personnel must be provided with concise, clear directions and transportation to local emergency medical treatment services. The name, location and directions to the nearest hospital and directions to non-critical first-aid treatment are available below:

Beartooth Hospital & Health
600 21st Street W
Red Lodge, MT 59068
(406) 446-2345

Driving Directions from the New World Mine Project Site to Beartooth Hospital & Health are as follows:

1. Head south until reaching the intersection of Highway 212
1. Turn left onto Highway 212 East for 61.9 Miles
2. Turn left onto West Fork Road for 112 Feet
3. Turn right onto White Avenue South for 0.4 Miles
4. Turn right onto 21st Street West for 272 feet. Beartooth Hospital & Health will be on the left.

Figure 7-1 Driving route from New World Mine Project Site to Beartooth Hospital & Health



Table 7-1 Emergency Contacts.

Contact	Phone
Emergency Services - Fire, Local Police, Ambulance	911
Beartooth Hospital & Health	(406) 446-2345
Silver Gate Volunteer Fire Department	(406) 838-2244
Park County Sheriff's Office	(406) 222-2050
USFS On-Scene Coordinator – Mary Beth Marks	(406) 579-3730
NWCS Project Manager – Chris Richardson, PMP	(208) 755-8585
NWCS Site Superintendent – Myron Belgarde	(406) 490-9146

7.2.1 Emergency Equipment

The following emergency equipment will be located in the support area and will be immediately available for site emergencies:

- Portable fire extinguishers (minimum 20 lb.-A/B/C);
- Industrial first aid kit;
- Spill kit; and
- Portable Eyewash station meeting ANSI Z-358.1- 2014 requirements, including the 15-minute flushing requirement.

8. RECORDS

8.1 Field Logbook and Site Attendance Record

The SS will keep a record of daily site events in the field logbook and will maintain accurate records of all personnel who are onsite each day in a site sign-in or attendance logbook. The SS is responsible for maintaining the site attendance record and for ensuring that all personnel on the project site sign in. The SS will generate a daily report from the log.

9. MEDICAL SURVEILLANCE

Project site personnel shall participate in the medical surveillance program as required in 29 CFR 1926.65. Medical surveillance examinations will be provided before assignment, annually (biannually given consent from medical provider), and after termination of hazardous waste site duties or employment.

The Occupational Health Provider will evaluate all information provided, including medical questionnaires, physical exam findings, blood chemistry and urinalysis results, preexisting medical conditions, nature of work to be performed, actual and potential hazards and exposures, and other factors deemed appropriate by the physician for determining the following for each employee:

- Ability to perform relevant occupational tasks,
- Ability to work in other PPE and heat/cold stress environments, and
- Requirement for entry into substance-specific medical surveillance programs.

If an employee suspects exposure, additional medical monitoring will be available and the employee must complete an employee exposure/injury incident report and NW HSP-005.1, "Incident Report Form."

10. NORTH WIND DOCUMENT CONTROL

All documents related to the project will be organized, maintained, and controlled, as electronic and/or hard copy documents in accordance with NW policy QAP-061, "Document Control."

11. REFERENCES

- 29 CFR 1910 Subpart I, “Personal Protective Equipment,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1910 Subpart Q, “Welding, Cutting, and Brazing” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1910.120, “Hazardous Waste Operations and Emergency Response,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1910.144, “Safety Color Code for Marking Physical Hazards,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1910.145, “Specifications for Accident Prevention Signs and Tags,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1910.178(l), “Powered Industrial Trucks,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1910.1000, “Air Contaminants,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1926 Subpart E, “Personal Protective and Lifesaving Equipment,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1926 Subpart I, “Tools - Hand and Power,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1926 Subpart J, “Welding and Cutting,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1926 Subpart K, “Electrical,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1926.20, “General Safety and Health Provisions,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1926.25, “Housekeeping,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1926.52, “Occupational Noise Exposure,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1926.152, “Flammable and Combustible Liquids,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1926.200, “Accident Prevention Signs and Tags,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.

- 29 CFR 1926.251, “Rigging Equipment for Material Handling,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1926.350, “Gas Welding and Cutting,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1926.550, “Cranes and Derricks,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1926.601, “Motor Vehicles,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1926.650, “Scope, Application, and Definitions Applicable to this Subpart,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- 29 CFR 1926.1000, “Rollover Protective Structures (ROPS) for Material Handling Equipment,” *Code of Federal Regulations*, U.S. Government Printing Office, Washington, D.C.
- ACGIH, 2017. “Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs),” American Conference of Governmental Industrial Hygienists, Cincinnati, Ohio.
- ANSI, 1958. “Safety Code for Mechanical Power Transmission Apparatus,” American National Standards Institute publication B 15.1-1958, American National Standards Institute, Washington, D.C.
- ANSI, 2003. ANSI Standard Z87, “Occupational and Educational Personal Eye and Face Protection Devices,” American National Standards Institute, Washington, D.C.
- ANSI/AWS, 1994. “Safety in Welding and Cutting,” joint publication of the American National Standards Institute and the American Welding Society, American National Standards Institute/American Welding Society, Washington, D.C.
- CGA, 2000. “Safe Handling of Compressed Gases in Containers, P-1,” Compressed Gas Association, Chantilly, Virginia, March 3, 2000.
- DOT, 2012. “Manual on Uniform Traffic Control Devices,” U.S. Government Printing Office, U.S. Department of Transportation, Washington, D.C.
- NFPA, 2017, NFPA 70 “National Electric Code®”, National Fire Protection Association, Quincy, Massachusetts.
- NFPA, 2000a, “Standard for Tank Vehicles for Flammable and Combustible Liquids,” National Fire Protection Association No. 385-1966, National Fire Protection Association, Quincy, Massachusetts.
- NFPA, 2000b, Parts I through III of NFPA 70 E “Electrical Safety Requirements for Employee Work Places,” National Fire Protection Association, Quincy, Massachusetts.

The following are NWCS quality documents that are controlled in accordance with QAP-10-171, “Records Control” (the latest revision applies):

- HSP-001, Project Hazard Analysis;
- HSP-002, Hazard Communication;
- HSP-003, Personal Protective Equipment;
- HSP-004, Accident Prevention;
- HSP-006, Medical Surveillance;
- HSP-007, Respiratory Protection;
- HSP-007-SUP-001, Voluntary Respirator Usage;
- HSP-008, Hearing Conservation Program;
- HSP-010, Confined Space Entry;
- HSP-011, Excavations;
- HSP-012, Control of Hazardous Energy (Lockout/Tagout);
- HSP-013, Motor Vehicle and All-Terrain Vehicle Safety;
- HSP-014, Fall Protection; and
- HSP-015, Step Back, Stop Work.

APPENDIX A, Safety Briefing Sign-Off Form

APPENDIX B, HSP-005 Incident Report

Section 1: TIME AND PLACE OF INJURY/ILLNESS

[To be completed by Employee's Line Manager or Supervisor]

Preparer's Name/Title (person at location): Click here to enter text.		Preparer's Direct Phone Number: Click here to enter text.	
Where Accident Occurred (Address/Physical Location): Click here to enter text.		Did Accident Occur on: Worksite? Government Property? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date of Injury or Illness: (MM/DD/YYYY)	Time of Injury or Illness: _____ <input type="checkbox"/> AM <input type="checkbox"/> PM	Date of Incapacity: (MM/DD/YYYY)	Time of Incapacity: _____ <input type="checkbox"/> AM <input type="checkbox"/> PM
Was Employee Paid in Full for Day of Injury/Illness? <input type="checkbox"/> Yes <input type="checkbox"/> No		Was Employee Paid in Full for Day of Incapacity? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date Injury/Illness Reported: (MM/DD/YYYY)	Reported To: Click here to enter text.	Supervisor's Name: Click here to enter text.	If Fatal, Give Date of Death: (MM/DD/YYYY)
Name of Witness (es) Click here to enter text.	Address	City	State Zip Phone #

Section 2: EMPLOYEE INFORMATION

[To be completed by Employee's Line Manager or Supervisor]

Name of Employee (Last, First, Middle): Click here to enter text.	Home Phone Number: Click here to enter text.	Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female
Employee's Complete Home Mailing Address (No PO Box #): Click here to enter text.	Work Phone Number: Click here to enter text.	Date of Birth: Click here to enter text.
Occupation/Job Title at Time of Injury or Illness: Click here to enter text.	Length of time in Current Position: Click here to enter text.	Social Security Number: Click here to enter text.
Project/Department: Click here to enter text.	Employment Status: <input type="checkbox"/> Full time <input type="checkbox"/> Part time <input type="checkbox"/> Regular Employee <input type="checkbox"/> Seasonal	Marital Status: <input type="checkbox"/> Married <input type="checkbox"/> Single/Divorced <input type="checkbox"/> Widowed <input type="checkbox"/> Unknown
Hours Worked Per Day: Click here to enter text.	Regular Shift Hours: From: AM/PM To: AM/PM	Was Employee Paid Per Piece? <input type="checkbox"/> Yes <input type="checkbox"/> No Hourly Basis? <input type="checkbox"/> Yes <input type="checkbox"/> No
Days Worked Per Week: Click here to enter text.		

Section 3: NATURE OR CAUSE OF INJURY/ILLNESS [To be completed by Employee's Line Manager or Supervisor]			
Machine, Tool, or Object Causing Injury/Illness: Enter N/A if not applicable	Specific Part of Machine, Etc. 34T	Were Safeguards or Safety Equipment Provided? <input type="checkbox"/> Yes <input type="checkbox"/> No Utilized? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Describe Fully How Injury or Illness Occurred (Must answer, what, where, when, and how): Attach Additional Sheet of Paper if Necessary 34T Body Part(s) Injured: 34T Left or Right Side (if applicable): 34T			
Physician/Health Care Provider (Name, Address & Phone) 34T	Hospital or Offsite Treatment: (Name, Address & Phone) 34T	Initial Treatment: No Medical Treatment <input type="checkbox"/> Minor by Employer <input type="checkbox"/> Minor Clinic/Hosp <input type="checkbox"/> Emergency Care <input type="checkbox"/> Hospitalized >24 hrs <input type="checkbox"/> Other <input type="checkbox"/> _____	
Section 4: REPORTING INJURY OR ILLNESS TO CIRI [To be completed by Risk Manager and HR Representative prior to submittal]			
Date CIRI Risk Management Notified: (MM/DD/YYYY)	Date Prepared: (MM/DD/YYYY)	Preparer's Name/Title (person at location): 34T	Preparer's Direct Phone Number: 34T
Probable Length of Disability (if known): 34T	Has Employee Returned to Work: Yes <input type="checkbox"/> No <input type="checkbox"/>	If Yes, on What Date? (MM/DD/YYYY)	If yes, at What Wage? \$ _____
Employee Wages at Time of Injury/Accident: \$ _____ <input type="checkbox"/> per hour \$ _____ <input type="checkbox"/> per week \$ _____ <input type="checkbox"/> other Please specify employer: <input type="checkbox"/> NWG <input type="checkbox"/> NWCS <input type="checkbox"/> Other: _____ <input type="checkbox"/> NWI <input type="checkbox"/> NW Sol <input type="checkbox"/> NWS <input type="checkbox"/> NWRC	Date Hired: (MM/DD/YYYY) State: _____	NCCI Class Code (if known) 34T	

ATTENTION SEDGWICK:
Please direct all inquiries, requests for information, and employer correspondence to:

CIRI Risk Management Attn: Michelle Bisnar – Risk Management Specialist

Direct line: (907) 263-5126 or Email: mbisnar@ciri.com

Attorney-Client Privileged Incident Report

APPENDIX C, Occupancy and Use Order # 01-14-11-00-02
FOOD STORAGE ORDER

Occupancy and Use Order # 01-14-11-00-02

**United States Department of Agriculture
Forest Service**

Custer Gallatin National Forest

Beartooth, Bozeman, Gardiner, Hebgen Lake, and Yellowstone Ranger Districts

OCCUPANCY AND USE RESTRICTIONS

Pursuant to Title 36 Code of Federal Regulations (CFR), 261.50 (a) and (b), the following acts are prohibited on the Beartooth, Bozeman, Gardiner, Hebgen Lake, and Yellowstone Ranger Districts of the Custer Gallatin National Forest. Definitions of terms used in support of the restrictions are also included as (Attachment A). The area affected is depicted on the attached map. (Attachment B) This Order is effective **March 1 through December 1**, annually, until rescinded.

1. Possessing or storing any food, refuse or other attractant, as specified in the Order (36 CFR 261.58 (cc)).
2. Possessing, storing, or transporting any bird, fish, or other animal, or parts thereof, as specified in the Order (36 CFR 261.58 (s)).
3. Camping as specified in the Order (36 CFR 261.58 (e)).

UNDER THIS ORDER IT IS REQUIRED THAT

1. All food, refuse or other attractants must be acceptably stored or acceptably possessed during daytime hours.
2. All food, refuse or other attractants must be acceptably stored during nighttime hours, unless it is being prepared for eating, being eaten, being transported, or being prepared for acceptable storage.
3. Any harvested animal carcass must be acceptably stored, unless the carcass is being field dressed, transported, being prepared for eating, or being prepared for acceptable storage.
4. Camping or sleeping areas must be established at least ½ mile from a known animal carcass or at least 100 yards from a known acceptably stored animal carcass.
5. The responsible party shall report the death and location of livestock to a Forest Service official within 24 hours of discovery. Any Forest user finding dead livestock should contact the Forest Service.
6. Burnable attractants that cannot be completely consumed by fire (i.e., no post burning residue) must be packed out.

Occupancy and Use Order # 01-14-11-00-02

EXEMPTIONS

Pursuant to 36 CFR 261.50 (e) the following persons are exempt from this Order:

1. Persons with a permit issued by the Forest Supervisor specifically exempting them from this Order.
2. Any Federal or State officer placing baits to capture animals for research or management purposes as part of their official duties.

These restrictions are in addition to the general prohibitions in 36 CFR Part 261, Subpart A. This Order supersedes any previous Order prohibiting or restricting the same, or similar, acts in the above-described areas.

Done this day 19th of September, 2014.



MARY C. ERICKSON
Forest Supervisor
Custer Gallatin National Forests

Any violation of these prohibitions is punishable by a fine of not more than \$5,000.00 for an individual or \$10,000.00 for an organization, and/or imprisonment for not more than six (6) months, or both (Title 16 USC 551, Title 18 USC 3571 (b)(6), Title 18 USC 3581 (b)(7)).

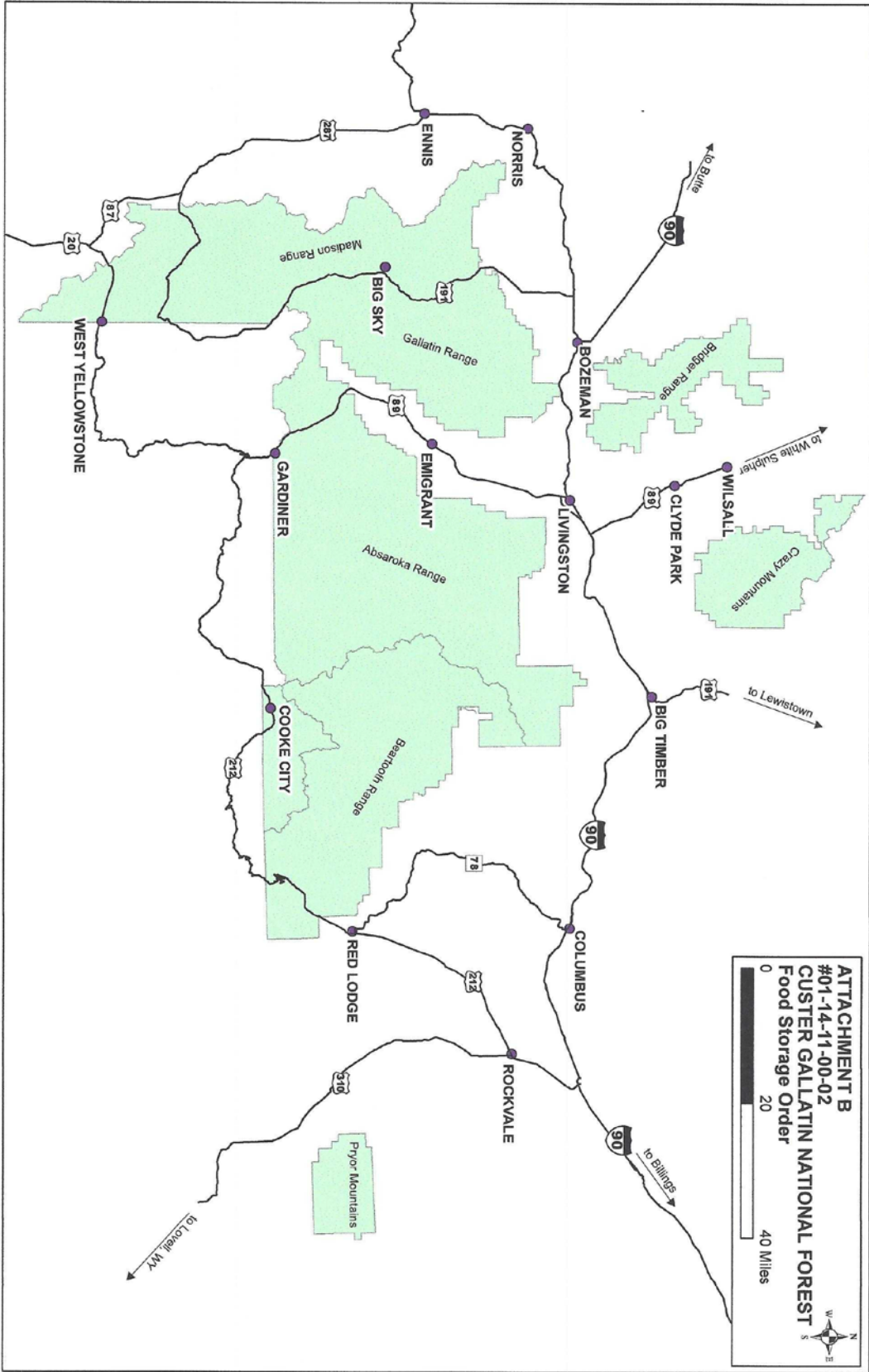
Occupancy and Use Order # 01-14-11-00-02

Attachment A
Special Order—Food Storage and Sanitation
Definitions

1. “Food, refuse and other attractants” means any substance, solid or liquid or refuse (excluding water, baled hay, or hay cubes without additives), which is or may be eaten or otherwise taken into the body to sustain health or life, provide energy, or promote growth of any person or animal. Also includes items such as soft drinks, alcoholic beverages, canned foods, pet foods, processed livestock feed and grains, personal hygiene products, and empty food and beverage containers.
2. “Animal carcass” means the dead body or parts thereof, of any harvested mammal, bird, or fish, including the head or skull plate with antlers or horns and hide or cape of big game animals and any domestic livestock that may be found in the restricted area. Packaged or prepared animal carcass products transported into the restricted area for consumption, game birds, small mammals, or fish harvested for consumption in the restricted area are considered food under the previous definition.
3. “Burnable attractants” include items such as food leftovers, waste products, food grease or residue, food saturated containers or other substances that will not be completely consumed by fire. To be completely consumed, there must be no residual attractant on the surface or in the soil. These items shall not be buried, discarded or burned in an open campfire, unless placed in a suitable container (i.e. tin can or fire pan) to prevent leaching into the ground, and burned over an open campfire. Any remaining attractants unconsumed by burning shall be placed with other garbage, acceptably stored and packed out.
4. “Acceptably stored” means:
 - a. Stored in bear-resistant container and/or utilizing a method listed on the most recent Interagency Grizzly Bear Committee Certified Bear Resistant Products List.
 - b. Stored in a closed vehicle, trailer or container where the storage compartment is constructed of solid, non-pliable material that, when secured, will have no openings, hinges, lids, or coverings that would allow a bear to gain entry by breaking, bending, tearing, biting, or pulling with its claws (any windows in the vehicle must be closed),
or
 - c. Suspended at least 10 feet clear of the ground at all points and 4 feet horizontally from any supporting tree or pole, or
 - d. Stored within a hard-sided residence, building, or storage container subject to the terms and conditions of a special-use authorization or operating plan, or
 - e. Stored by other methods approved in a permit issued by the Forest Supervisor responsible for the area where the method is proposed for use.
 - f. Animal carcasses must be acceptably stored (a. through e. above) when located 100 yards to ½ mile of a camping or sleeping area or within 200 yards of a Forest Road or Trail.
 - g. Animal carcasses more that ½ mile from a camping area and more than 200 yards from a Forest Road or Trail may be left on the ground.

Occupancy and Use Order # 01-14-11-00-02

- h. Animal carcasses killed or harvested (and parts thereof) within ½ mile of any established camping area or sleeping area must be acceptably stored, possessed, or moved to a distance beyond ½ mile from any such camp or sleeping area by the party(-ies) responsible for killing or harvesting such animal.
5. “Acceptably possessed” means:
 - a. Possessed or attended during daytime by a person(s) that is physically present within 100 feet and direct sight of the accessible food, refuse or attractant or
 - b. Possessed or attended by such a person(s) for the purpose of field dressing lawfully taken animal carcasses, transporting any food or animal carcass, preparing any animal carcass or food for eating, or eating any food.
 6. “Camping/sleeping area” means National Forest System Lands temporarily used for the purpose of overnight occupancy without a permanently fixed structure or lands temporarily occupied by unattended camping equipment.
 7. “Daytime” means ½ hour before sunrise to ½ hour after sunset, Mountain Time.
 8. “Night time” means ½ hour after sunset to ½ hour before sunrise, Mountain Time.
 9. “Forest Road or Trail” means a road or trail wholly or partly within, or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources.



Attorney-Client Privileged Incident Report

Information provided in this report is a confidential attorney-client communication given to Company counsel for use in litigation that is reasonably expected to arise out of this incident. As a result, the information is privileged. Copies should not be provided outside the Company control group, on the grounds that such reports are privileged information.

LETTER OF SUBMITTAL



1176 Big Creek Road
Kellogg, ID 83837
Phone: 208-783-1069
Fax: 208-783-0671
www.northwindgrp.com

Date: 8/4/2017	Contract No:AG-0355-C-17-0019
Attention: Dale Reckley, Mary Beth Marks, Peter Werner, Shane Matolyak	
Re: Erosion Control Plan – New World Mine Waste Repository	
Transmittal No. 003	
Registry Line No. N/A	

To: Dale Reckley
Mary Beth Marks
Peter Werner
Shane Matolyak

WE ARE SENDING YOU: Documents as listed below

Copies	Date	Description
(1) Electronic	8-4-17	Erosion Control Plan – New World Mine Waste Repository

Message: _____

Copy to: _____

Signed: 

Project Manager, NWCS

***Erosion Control Plan for
New World Mine Repository Sump
Drainage Field Construction
Custer – Gallatin National Forest
Park County, MT***

Prepared for:
USDA Custer Gallatin National Forest



Prepared by:
North Wind Construction Services, LLC



Erosion Control Plan for New World Mine Repository Sump Drainage Field Construction

August, 2017

Prepared for:

**U.S. Department of Agriculture, Custer Gallatin National Forest
Sioux Ranger District, Northern Region**

Prepared by:

**North Wind Construction Services, LLC
1176 Big Creek Road
Kellogg, Idaho 83837**

**Erosion Control Plan for New World Mine
Repository Sump Drainage Field Construction
Park County, Montana**

August 2017 – Revision 0

Approved by

Original Signature on File

Chris Richardson, PMP
Project Manager

8/2/2017

Date

Original Signature on File

Phil Meehan, P.E., PMP, LEED
NWCS Project Engineer

8/2/2017

Date

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ACRONYMS

BMP	best management practice
CO	Contracting Officer
DOT	Department of Transportation
ECB	erosion control blanket
ECP	Erosion Control Plan
EPA	Environmental Protection Agency
FSR	Forest Service Road
GPS	Global Positioning System
NWCS	North Wind Construction Services
USFS	United States Forest Service

Erosion Control Plan

New World Mine Repository Sump Drainage Field Construction, Sioux Ranger District Custer-Gallatin National Forest

1. PURPOSE

The purpose of this Erosion Control Plan (ECP) is to present the means in which North Wind Construction Services (NWCS) plans to eliminate or reduce the volume of sediment and sediment laden water from being discharged from disturbed areas within the construction site. This ECP will present a brief description of the proposed work and then indicate the temporary and permanent best management practices (BMPs) selected for sediment capture, stormwater interaction reduction, and water quality treatment during construction of this project. In addition to this ECP, erosion control on the site will be in accordance with the Montana Department of Transportation (DOT) *Construction Field Manual, Construction Site Management and Erosion and Sediment Control* (DOT, 2004) and the U.S. Environmental Protection Agency (EPA) *Storm Water Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practices* (EPA, 1992).

2. EXISTING CONDITIONS

2.1 Location

The project is located in the New World Mining District near Cooke City, Montana, in the Beartooth Mountains. The District falls within the boundaries of the Gallatin and Custer National Forests and abuts Yellowstone National Park's northeast corner. The Absaroka-Beartooth Wilderness Area bounds the District to the north and east. The District lies entirely within Park County, Montana. The project site can be reached from two access points off U.S. Highway 212 about 0.6 and 1.2 miles east of Cooke City.

2.2 Rainfall Conditions

Average annual precipitation for the region is approximately 24.7 inches, with the majority of the precipitation occurring in late spring and winter. May has the historic highest average rainfall with approximately 3.05 inches falling during the month.

2.3 Existing Drainage Features

The overall site is sloped so that water would run from north to south or south east across the construction area. One potential drainage feature exists within the extents of the construction area. Drainage from this feature originates on the north side, runs south across repository access road and the proposed 8" HDPE drain pipe area.

3. PROPOSED WORK

3.1 Excavate Overlying Materials

The excavation of overlying materials will be primarily performed with an excavator, which will excavate and stockpile the various layers of material.. Layers include the cover material, repository waste, the

sump drain gravel, and native material. A loader may be used to tram the materials into separate stockpiles.

3.2 Install Sump & Infiltration Gallery

The drain gravel/bedding gravel will be placed using the loader and the crew will install a geotextile fabric on top. With the help of an excavator with the thumb attachment, the crew will install the 8" HDPE drain pipe and the 8" HDPE perforated pipe. The crew will repair the bottom liner, place a LLDPE liner strip over the seam and seal it with GFE liner and install the secondary sampling pump.

3.3 Replace Overlying Materials

Stockpiled sump drain gravel will be replaced using the loader. The crew will install a sump separation geotextile and replace both the repository waste and the native material and regrade per the drawings.

3.4 Replace Top Cover

The top liner system will be repaired by the crew and a strip of GFE, LLDPE liner will be placed over the seam. Following repairs, equipment will be used to place the stockpiled repository cover material back over the liner to replicate existing grades prior to the performance of the repair activities. Final grading will be performed with the excavator and front end loader.

3.5 Revegetation

Once all cover soil placement and final grading has been completed throughout the site, crews will apply the recommended seed mix, fertilizer, mulch and tackifier at the appropriate rates defined by the specifications. Crews will then install a biodegradable erosion control mat over the entire affected area to minimize potential corrosion.

4. EROSION CONTROL

4.1 Proposed BMPs

A BMP is a physical, structural, and/or managerial practice that prevents or reduces the pollution of water. The objective of this ECP is to implement these BMPs to minimize erosion and sedimentation from rainfall at the construction site, and to identify, reduce, eliminate, or prevent the pollution of stormwater. Should field conditions during construction require additional BMPs, or if a change in placement of BMPs is needed, this plan will be modified and approved by the USFS. During active work, the Contractor will keep the ECP and BMP inspection reports on site. The site checklists and inspection report forms are included in Appendix A. Appendix B contains a Drawing indicating specified materials, post spacing and general instructions for the correct installation of wire-backed silt fence.

The following sections identify potential site erosional issues and present the BMPs that will be implemented to address these situations.

4.1.1 Protection of Natural Features and Soil

Protection of natural features and soil include the phasing and sequencing of construction activities and the use of methods such as temporary and/or strategic grading, creation of sediment traps, or other features to protect areas that may be vulnerable to erosion during storm events.

BMPs to be implemented to aid in protection of natural features and soils include the following:

- Construction phasing for minimization of exposed surfaces,
- Installation of silt fence around the downstream portion of the excavation and consolidation areas at the request of the USFS,
- Construction staking to delineate proposed areas of disturbance,
- Planning of laydown and decontamination areas to minimize stormwater impacts,
- Strategic grading (as described above).

4.1.2 Control Surface Run-on

Control of stormwater run-on BMPs includes structural practices such as diversions, berms, ditches, and storage basins. These BMPs may also include employing techniques to divert flows from exposed soils, retain or detain flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. To the extent possible, stormwater run-on will be controlled such that it will not be allowed to flow onto excavation or regraded areas.

BMPs during the control surface run-on include the following:

- Diversion ditches and berming to route flows around excavated surfaces, and
- Construction phasing.

4.1.3 Stabilize Soils and Slopes

Stabilization of slopes will include controls such as dozer tracking to encourage the stabilization exposed soils and slopes where construction activities have temporarily ceased. Also included in this BMP are measures to control dust generation.

BMPs used during soil stabilization include the following:

- Slope roughening will occur as the area is compacted. An excavator or other treaded heavy equipment will track across the site along the general slope to form grooves perpendicular to the slope. This will roughen the surface of the soil and reduce runoff by increasing infiltration and evaporation of water held in the tracks.
- Application of dust control measures.

4.1.4 Establish Perimeter Controls

Establishing perimeter controls includes implementing structural practices (i.e., silt fence) at the site boundary to filter and trap sediment before it leaves the construction site.

BMPs used during establishment of perimeter controls include the following:

- Installing a silt fence around the downstream portion of the excavation and stockpiling areas as requested by the USFS,

- Posting of signage.

4.1.5 Establish Construction Exit Controls

Establishing construction exit controls includes implementing controls to remove accumulated sediment off-site.

4.2 Maintenance and Inspection

At a minimum, BMP inspections shall occur at least once every 7 calendar days and within 24 hours after any rainfall event of 0.5 inches or greater, or as requested by the Contracting Officer (CO). The inspections should include:

- Disturbed areas of the construction site that have not been finally stabilized,
- Area used for storage of materials,
- Structural control measures, and
- Locations of vehicle entrances and exits.

These areas shall be inspected for evidence, or the potential for, pollutants entering the drainage system, and erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly and sediment is not tracked offsite. Any deficient areas will be immediately addressed and recorded on the BMP Inspection Form (see Appendix A). Any accumulated sediment will also be removed during the routine site inspections.

All temporary erosion and sediment control BMPs shall be removed within 30 days after final site stabilization is achieved or when the CO determines that the temporary BMP is no longer needed. The BMP will be removed and the disturbed area will then be cleaned, restored, and permanently stabilized to the CO's satisfaction. Trapped sediment shall be removed or stabilized on site.

5. PROJECT PERSONNEL ROLES

NWCS intends to self-perform all of the construction activities included in this project with few exceptions. A listing of the project roles, along with the individual within NWCS who will be performing each particular role, is included in Table 1. The CO will be notified of any revisions to the project roles indicated in this table.

Table 1. Project Personnel Roles

Project Role	Name	Phone Number
Project Manager	Chris Richardson, PMP	208-755-8585
Site Supervisor	Myron Belgarde	406-490-9146
Project Engineer	Phil Meehan, P.E., PMP, LEED	208-557-0821

5.1 REFERENCES

DOT, 2004. South Dakota Department of Transportation, Construction Field Manual, Construction Site Management and Erosion and Sediment Control, 2004.

EPA, 1992. U.S. Environmental Protection Agency, Storm Water Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practices, September, 1992.

Appendix A

Erosion Control Checklists

Construction Field Manual for Construction Site Management and Erosion/Sediment Control
SWPPP CHECKLIST

Chk	Permit Citation	Action/SWPPP Requirement	SWPPP Page
Site Description (4.2.1)			
	4.2.1.a	Plan Notes Sheet D-1 cites the appropriate cover sheet for the project.	
	4.2.1.b	The total area of the site is recorded and correct.	
	4.2.1.c	All soil disturbing activities to be performed are noted.	
	4.2.1.d	Soil characteristics are noted in the space provided (D-1).	
	4.2.1.e	All surface bodies are noted that may receive runoff from the site.	
Site Maps (4.2.1.f)			
	4.2.1.f.(1)	Cover sheet and attached plan sheets show sufficient detail of drainage patterns and approximate slopes after major grading has taken place.	
	4.2.1.f.(2)	Plan sheets show areas of soil disturbance.	
	4.2.1.f.(3)	Plan sheets show the location of major structural and nonstructural erosion and sediment controls (temporary and permanent).	
	4.2.1.f.(4)	Areas where stabilization activities will occur are shown on the plan sheets.	
	4.2.1.f.(5)	The area map of the cover sheet shows surface waters including the extent of wetland acreage (if no an additional area map should be included with the Section D Plan notes).	
	4.2.1.f.(6)	Map and/or plan sheets show points where storm water is discharged into surface waters or conveyances that will discharge into an adjacent water body.	
Erosion and Sediment Controls (4.2.2)¹			
	4.2.2.a (1)	For each disturbed area and construction activity of the site approved erosion and sediment controls have been shown. <i>NOTE: In the event that these controls impact on flood plains or wetlands, Section 404 may apply.</i>	
		Slopes and all exposed surfaces show appropriate temporary controls and the permanent controls to be used.	
		Long, steep slopes have diversions or some means of preventing run-on and reducing velocity.	
		Suitable perimeter protection is provided in all areas where sheet flow leaves the site and will impact adjacent land or waterway(s).	
		Culverts (inlets and outlets) and drain inlets have appropriate temporary controls to prevent sediment from entering or leaving the site.	
		Ditches have proper velocity controls where concentrated flows enter and have appropriate surface protection.	
		Channels and creek banks have appropriate temporary cover and permanent controls are specified.	
		Appropriate in-channel protection has been provided in and around perennial streams.	
	4.2.2.c(1)	Appropriate construction entrances/exits have been at all points of access to the project site to prevent tracking of sediment onto adjacent roads.	
	4.2.2.d	The design capacity of all sediment traps and silt basins is shown on the plan sheets.	

¹ In so far as possible, the terms used to describe the stabilization, structural, storm water management, and housekeeping BMPs should use the terms as defined in the "General Permit for Storm Water Discharges Associated with Construction Activities."

Construction Field Manual for Construction Site Management and Erosion/Sediment Control
SWPPP CHECKLIST (cont.)

Chk	Permit Citation	Action/SWPPP Requirement	SWPPP Page
	4.2.2.f	Notes are provided on the plan sheets to indicate the contractor's responsibility for locating and providing appropriate erosion and sediment controls for material storage and staging areas.	
	4.3.3.(3)(a)	In common drainage locations, provisions have been made to store at least 3,600cf of sediment per acre drained by some approved means. <i>Note: Small traps are only used where the right-of-way will not accommodate larger, single structures.</i>	
Storm Water Management (4.2.2.b)			
	4.22.(3)b(1)	Plan sheets describe permanent structures for storm water management after construction. Provisions may include the following:	
		Grassed medians or improved vegetated ditches and swales	
<input type="checkbox"/>		Storm water ponds and basins	
		Velocity dissipation devices at discharge points	
<input type="checkbox"/>		Sand or media filters	
		Underground vaults and structures	
<input type="checkbox"/>	4.2.2(3)b(1) 4.2.2(3)b(2)	Plan and/or notes pages provide a technical explanation of the controls used in 4.2.2. (b) (1) and (2).	
Stabilization Practices (4.2.2.2)			
	4.2.2.2	Section D notes pages provide a schedule and description of interim and permanent stabilization practices to be included.	
	4.2.2.2	Estimated/actual dates provided for when disturbance will occur.	
<input type="checkbox"/>	4.2.2.2	Estimated/actual date of when construction activities are suspended temporarily or permanently on an area of the site.	
	4.2.2.2	Estimated/actual dates when temporary or permanent stabilization measures are initiated.	
Other Controls (4.2.2.(3)c)			
	4.2.2.(3).c (1)	Plan provides narrative of procedures to maintain vegetation, erosion and sediment control measures (see Section D notes).	
	4.2.2.(3).c (2)	Plan provides narrative of how waste and construction materials are to be stored on the site, along with the means to prevent spills and or clean them up should they occur (see Section D notes).	
	4.2.2.(3).d	Plan cites any applicable local controls or plans that are in addition to the general permit requirements.	
Maintenance (4.2.3)			
	4.2.3	Plan provides a description of maintenance provisions and requirements for all BMP types (See Section D notes).	

Construction Field Manual for Construction Site Management and Erosion/Sediment Control
SWPPP CHECKLIST (cont.)

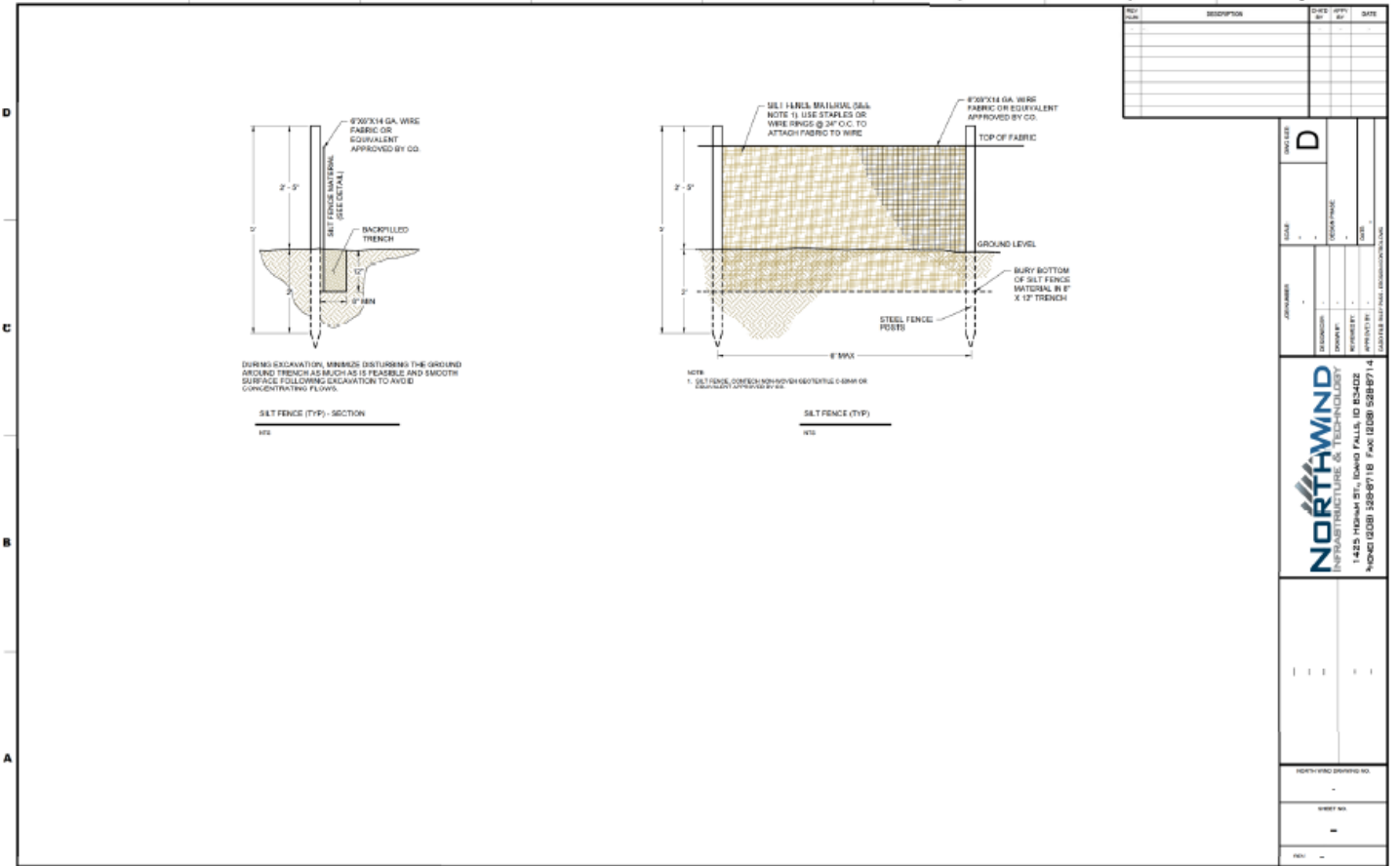
2.

Inspections (4.2.4)			
<i>Note: Regular inspections ensure the project remains in compliance with the general permit. Therefore, inspections are the focus of the construction period maintenance program.</i>			
	4.2.4	The narrative addresses the inspection schedule and reporting requirements (see Section D notes).	
	4.2.4	The narrative stipulates the basic requirements that inspections occur once every 7 calendar days and within 24 hours of the end of any event or snow melt of 0.5 in (12mm) (see Section D notes).	
	4.2.4	The plan includes a copy of the required inspection forms to be used.	
<input type="checkbox"/>	4.2.4	Plan requires implementation of needed corrections within 7 days of the inspection (see Section D Notes).	
Signature and Plan Review			
	4.3.1, 6.7.1.c and 6.7.3	Signatures have been executed properly by individuals with proper authority to sign.	

² Stabilization must be initiated within 14 days of the suspension of construction activities unless earth-disturbing activities will be resumed within 21 days. Any other exceptions must be approved by the secretary. ³ It is recommended that maintenance be addressed by BMP type. The specification sheets and templates can carry standard maintenance requirements and be cited in the narrative.

Appendix B

Silt Fence Installation Drawing



REV. NO.	DESCRIPTION	DATE

DATE	
SCALE	
DESIGNED BY	
CHECKED BY	
DATE	
PROJECT NO.	
PROJECT NAME	
PROJECT LOCATION	
PROJECT DRAWING NO.	
PROJECT SHEET NO.	
PROJECT	

D

NORTHWIND
 INFRASTRUCTURE & TECHNOLOGY
 1425 HOWAN ST., EDWARDS FALLS, ID 83402
 PHONE (208) 328-8718 FAX (208) 528-8714

T032017 1:35 PM By: Nathan Froegner
 C:\Users\Nfroegner\Desktop\FILEY P435 - EROSION CONTROL.dwg

LETTER OF SUBMITTAL



1176 Big Creek Road
Kellogg, ID 83837
Phone: 208-783-1069
Fax: 208-783-0671
www.northwindgrp.com

Date: 8/4/2017	Contract No:AG-0355-C-17-0019
Attention: Dale Reckley, Mary Beth Marks, Peter Werner, Shane Matolyak	
Re: Emergency Response & Spill Prevention Plan – New World Mine Waste Repository	
Transmittal No. 004	
Registry Line No. N/A	

To: Dale Reckley
Mary Beth Marks
Peter Werner
Shane Matolyak

WE ARE SENDING YOU: Documents as listed below

Copies	Date	Description
(1) Electronic	8-4-17	Emergency Response & Spill Prevention Plan – New World Mine Waste Repository

Message: _____

Copy to: _____

Signed: 

Project Manager, NWCS



Emergency Response and Spill Prevention Plan

NWCS-ERSPP-40095

**New World Mine Repository Sump
Drainage Field Construction
Custer-Gallatin National Forest
Park County, Montana**

**Prepared by:
North Wind Construction Services
1176 Big Creek Road
Kellogg, Idaho**

August 4, 2017

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PROJECT BACKGROUND AND SCOPE

North Wind Construction Services (NWCS) has prepared this Emergency Response and Spill Prevention Plan to guide NWCS personnel and subcontractors who are working at a job site where fuel products and/or other hazardous substances may be present. These procedures cover spills from minor drips up to large spills.

Responsibilities

The NWCS Site Supervisor is responsible for ensuring that site activities are carried out in accordance with this plan. This individual will conduct pre-work briefings to ensure personnel are aware of the hazardous materials that are present, spill preventive measures, and response action should a spill occur. Operations that involve the use and/or transfer of petroleum products or other hazardous substances will be designed to minimize spill potential and health risks to personnel and the environment. Spill control equipment and personal protective equipment (PPE) necessary to handle both minor and major spills will be in place prior to commencement of work activities that involve the use or transfer of oil, fuel, solvents, or other hazardous materials or substances.

The NWCS Site Supervisor will document the release of any hazardous substance. The Superintendent will immediately notify the U.S. Forest Service (USFS) on-site representative and the local fire department in addition to the legally required federal, state, and local reporting channels (including the National Response Center 1-800-424-8802) if a reportable quantity is released to the environment. The Superintendent will be in charge of implementing and supervising the containment and cleanup of any spills. The following is a list of emergency contacts:

Table 1-1. Emergency Contacts.

Company/Title	Name	Phone Number
NWCS Project Manager	Chris Richardson, PMP	W (208) 783-1069 C (208) 755-8585
NWCS Site Superintendent	Myron Belgarde	C (406) 490-9146
Cooke City – Silver Gate Volunteer Fire Department		(406) 838-2244
Montana Department of Environment Quality		800-457-0568 (406) 324-4777 (24hr line)
National Response Center		(800) 424-8802

SPILL CONTROL AND CONTAINMENT

Spill control and containment procedures will be instituted prior to and throughout construction activities. Those activities will be performed in such a manner to prevent the occurrence of spills through proper planning (e.g., identification of storage facilities) and the training of personnel in material handling.

Spill Potential

The construction activities at the site involve standard construction activities involved in a soil excavation and repair project. Some light to medium-sized construction equipment will be used that include a loader, excavators, and 4WD support vehicles. The work will involve the use of equipment that contains fuels, hydraulic fluids, coolants, and lubricants. It is possible that normal operation of equipment will result in minor leaks of these fluids.

The construction equipment may require minor repairs or maintenance while onsite. This work may involve the use of a minor amount of cleaning solvents that could spill during the course of this work. During refueling or maintenance activities on all equipment, there is also a potential for spills of fuel or fluids.

Spill Prevention

Equipment used will be maintained in good working order and will be inspected for leaks at the beginning of each day and recorded on an inspection checklist. All vehicle and equipment fueling will be closely supervised by the operator or service technician to prevent overflows. Drip pans or pads will be used as required.

NWCS personnel, with close supervision of the Site Supervisor, will conduct the majority of fueling and maintenance operations for equipment. The refueling of all equipment will be performed with onsite slip tanks. The slip-tanks are located in support vehicles and do not require a secondary containment.

Spill Control Equipment and Materials

On projects or tasks where the potential for chemical spills exists, spill control equipment and materials will be stored at the site. These equipment and materials will be used in the event of a spill resulting from material handling or liquid transfers performed during site operations. The following equipment and materials, assembled as spill kits, will be available at the New World Mine Site during active operations:

Shovels

Broom

6-mil polyurethane (1 roll)

Spill absorbent media

Containers for holding spilled substances and contaminated materials

PPE, as specified in the Site Safety and Health Plan (SSHP).

Small Container Spill Response

Should a small container spill occur during handling, spill control equipment (absorbent material, etc.) will be used to contain and clean up the spillage. Personnel are required to retrieve overturned containers immediately to minimize spillage and take immediate action to contain the spill.

Miscellaneous Small Spills

Oil is used as a lubricant for material handling equipment that will be located onsite during construction activities. The possibility exists that spilled oil or diesel fuel could contaminate soil or water. This potential is lessened by training operators and technicians in good housekeeping, providing constant oversight of refueling activities; providing spill control materials; and limiting the amount of oil present in the work area. Should oil, fuel, etc., be spilled on the ground in a quantity that presents a visible stain, personnel will shovel the stained soil into a properly labeled waste container for proper disposal.

Spill Response and Reporting

Employees will take necessary corrective actions to stop spills and will notify their immediate supervisor and USFS on-site personnel as soon as possible. The Site Supervisor is responsible for notifying government agencies and/or response organizations, if necessary. Spills or leaks will be recorded on a Spill Notification Form (attached to this plan) and submitted to the USFS with 48-hours.

Discovery of a Spill. Upon discovery of a spill of a hazardous substance, employees will take prompt corrective action to stop the spill (if ongoing) and control the spread of the spilled substance. The Site Supervisor will be notified immediately prior to any corrective action. PPE will be donned as necessary prior taking any corrective action. No employee will undertake corrective action to stop a spill unless adequately trained regarding the proper handling of the particular substance and the dangers associated with that substance. The employee will request assistance as necessary.

EMERGENCY SPILL RESPONSE PROCEDURE

If the spill causes an immediate threat to human life, health, or the environment, or exceeds 25 gallons, it is classified as an emergency. The 24-hour reporting number is 800-457-0568 (work hours) or (406) 324-4777 (after hours). Reportable quantities of hazardous material or waste are not anticipated for this project.

The following steps should be followed for emergency spills only:

Evacuate and deny entry to all personnel in the immediate area

Call the Site Supervisor and the USFS on-site representative, and provide the following information:

Your name and call back number
Exact location of spill
Injuries involved
Type of substance involved
Amount of substance involved
Stay on line and answer all questions asked by the dispatcher.

Assign someone to direct emergency personnel to the spill site.

Do not attempt to rescue downed personnel unless you are trained to do so.

Applicable Standards and Regulations

Following is a list of applicable standards and regulations for this spill prevention plan:

40 CFR Part 110, *Discharge of Oil*

40 CFR Part 302, *Reportable Quantity Listings*

40 CFR Part 370, *Hazardous Chemical Release Reporting: Community Right to Know*

40 CFR Part 372, *Toxic Chemical Release Reporting: Community Right to Know*

Spill Notification Form

North Wind Construction Services

Project Location:

Personnel on Site:

Date:

Time of Spill:

Time of Spill:

Type of Spill:

Source of Spill:

Contents of Spills:

Quantity of Spill:

**List of those
Contacted
about Spill:**

Name

Agency

**Injuries
Sustained as a
result of the
spill:**

**Waterways
affected by
spill:**

**Cleanup
Method:**

**Disposal
Location:**

LETTER OF SUBMITTAL



1176 Big Creek Road
Kellogg, ID 83837
Phone: 208-783-1069
Fax: 208-783-0671
www.northwindgrp.com

Date: 8/4/2017	Contract No:AG-0355-C-17-0019
Attention: Dale Reckley, Mary Beth Marks, Peter Werner, Shane Matolyak	
Re: HAZWOPER Documentation – New World Mine Waste Repository	
Transmittal No. 005	
Registry Line No. N/A	

To: Dale Reckley
Mary Beth Marks
Peter Werner
Shane Matolyak

WE ARE SENDING YOU: Documents as listed below

Copies	Date	Description
(1) Electronic	8-4-17	HAZWOPER Documentation – New World Mine Waste Repository

Message: _____

Copy to: _____

Signed: 

Project Manager, NWCS

McGillivray Environmental

PO Box 1041
Osburn Id, 83849


This Certifies That
William Bryan Teeters

Has Successfully Completed
40 Hour Hazardous Waste and Operations Course
in compliance with OSHA 29 CFR 1910.120

Certificate# ME052316-01

Level of Protection Donned ABCD

05-23-16
Date issued


Instructor Kip R. McGillivray

McGillivray Environmental

PO BOX 1041 OSBURN, ID 83849

THIS CERTIFIES THAT

Bryan Teeters

HAS SUCCESSFULLY COMPLETED
8 HOUR REFRESHER COURSE
IN COMPLIANCE WITH OSHA 29 CFR 1910.120

Certificate # **ME 042817-07**

04/28/2017

Date Issued

[Handwritten Signature]
Instructor

**HAZWOPER/ HAZARDOUS WASTE
WORKER TRAINING 40 HOUR**

Shawn Martin

SSN XXX-XX-4443

Certificate Number:444341510316

Completed Initial Course:03/22-25/16

Refresher Due By: 03/25/17

Instructor: Warren Smeltzer



**The bearer of this certificate has successfully completed requisite training to comply with
OSHA Reg. CFR1910 120 and is certified for one(1) year from completion of training.**

**HAZARDOUS WASTE WORKER
3 Hour Refresher Training**

Shawn Martin

SSN XXX-XX-4443

Class Date: 02/25/17

Refresher required by: 05/25/18

Certificate Number: 04321678917

This portion of this certificate is not valid unless accompanied by the original certificate of completion with
OSHA Reg. CFR 1910.120 and OSHA 309 training materials.



Certificate of Achievement

awarded to:

Myron Belgarde

Hazardous Waste Operations & Emergency Response
HAZWOPER Training IAW 29 CFR 1910.120 (40 Hrs.)

April 16th 1997

Date

INSTRUCTOR

HAZMAT Plans & Programs, Inc. 30 S. Havana St. Suite 304F Aurora, Colorado 80012 (303) 360-9801
"Safety Plans, Programs and Training Tailored To The Needs Of Your Business"

This certifies that

Myron Belgarde

Completed 8 hour HAZWOPER Refresher Training
In accordance with OSHA 29 CFR 1910.120(e)(8),
and CalOSHA 8CCR 1592(e)(8),

“Hazardous Waste Operations and Emergency Response”

ISSUE #172524

Completed on

May 1, 2017

By

Technical Safety Institute

1195 Via Encinos Drive, Fallbrook CA 92028



Stephen Waide CIH, CSP
Training Director





Edwards & Associates, Inc.

P.O. Box 2699

Missoula, Montana 59806-2699

THIS CERTIFIES THAT

CHRIS RICHARDSON

HAS SUCCESSFULLY COMPLETED THE

**40 HOUR HAZARDOUS WASTE OPERATION
& EMERGENCY RESPONSE COURSE**

IN COMPLIANCE WITH OSHA 29 CFR 1910.120

LEVEL OF P.P.E.

STUDENT DONNED AND DOFFED A B C D

CERTIFICATE # **518R15A1199**

4/11/96

DATE

Steve Edwards
INSTRUCTOR



REFRESHER

this certifies that

Chris Richardson

completed 8 hour HAZWOPER
Refresher Training in accordance
with 29 CFR 1910.120(e)(8)
Hazardous Waste Operations
and Emergency Response

ISSUE: 172493

by Technical Safety Institute

MAR 21, 2017

www.teksafety.com

LETTER OF SUBMITTAL



1176 Big Creek Road
Kellogg, ID 83837
Phone: 208-783-1069
Fax: 208-783-0671
www.northwindgrp.com

Date: 8/9/2017	Contract No:AG-0355-C-17-0019
Attention: Dale Reckley, Mary Beth Marks, Peter Werner, Mike Hatten, Shane Matolyak	
Re: Erosion Control Mat – Product Information – New World Mine Waste Repository	
Transmittal No. 006	
Registry Line No. N/A	

To: Dale Reckley
Mary Beth Marks
Peter Werner
Mike Hattern
Shane Matolyak

WE ARE SENDING YOU: Documents as listed below

Copies	Date	Description
(1) Electronic	8-9-17	Product Information – Erosion Control Mat – New World Mine Waste Repository

Message: _____

Copy to: _____

Signed: 

Project Manager, NWCS



Chad Lipscomb, PE, CPESC
Director, Technical Services
Western Excelsior Corporation
PO Box 270308
Fort Collins, CO 80527-0308
970-631-8366 office
chad@westernexcelsior.com

“Blanketing Nature With Nature”

Effective: 2/15/09

RE: Certificate of Conformance: *Excel CS-3 All Natural*[™]

To Whom it May Concern:

This letter is to certify that Western Excelsior manufactures the Rolled Erosion Control Product (RECP) marketed as EXCEL CS-3 All Natural. Each blanket is subjected to Western Excelsior’s Quality Assurance Program and is manufactured to the specifications listed in document number WE_EXCEL_CS3AN_SPEC. Further, Western Excelsior utilizes industry standardized test procedures to develop performance references for Excel CS-3 All Natural. Document number WE_EXCEL_CS3AN_PERF presents the industry standardized testing and results. Installation instructions are provided in document numbers WE_EXCEL_CS3AN_SII and WE_EXCEL_CS3AN_CII for hill slope and channel installations, respectively. A copy of document number WE_EXCEL_CS3AN_SPEC is attached; all other documentation may be obtained by calling Western Excelsior Technical Services at 1-800-967-4009, at www.westernexcelsior.com or by email at wexcotech@westernexcelsior.com.

Regards,

A handwritten signature in dark ink, appearing to read "Chad M. Lipscomb". The signature is fluid and cursive, with the first letters of each name being capitalized and prominent.

Chad M. Lipscomb, PE, CPESC
Director, Technical Services
Western Excelsior Corporation



Material Properties and Dimensions



Description

Western Excelsior manufactures a full line of Rolled Erosion Control Products (RECPs). The Coconut/Straw Excel CS-3 All Natural Extended Term Erosion Control Blanket consists of 30% coconut fibers and 70% certified noxious weed free agricultural straw manufactured into a continuous matrix. The coconut/straw matrix is confined by a biodegradable, jute/scrim net on top and bottom, mechanically (stitch) bound on two inch centers with a biodegradable, cotton thread. Excel CS-3 All Natural is intended for slope or channel erosion control applications requiring up to twenty-four months of functional longevity. Actual field longevity is dependent on soil and climatic conditions.

Specifications

Each roll of EXCEL CS-3 All Natural is manufactured under Western Excelsior's Quality Assurance Program to ensure a continuous distribution of fibers and consistent thickness. Verifiable values are provided in Table 1 and product characteristics are provided in Tables 2 and 3. Values provided in Tables 1, 2 and 3 represent expected values at the time of manufacture. Installation instructions and performance data are available from Western Excelsior's Technical Support Division.

Tested Property	Test Method	Value	Units
Tensile Strength	ASTM D6818	16.0 (MD), 11.0 (TD)	lb/in
Elongation	ASTM D6818	20.0 (MD), 20.0 (TD)	%
Mass per Unit Area	ASTM D6475	8.9	oz/yd ²
Thickness	ASTM D6525	8.5	mm
Light Penetration	ASTM D6567	10	% open
Water Absorption	ASTM D1117	325	%

Top Net	Biodegradable Jute/Scrim (Leno Weave)
Bottom Net	Biodegradable Jute/Scrim (Leno Weave)
Top Net Opening	0.50 in x 0.50 in (Nominal)
Bottom Net Opening	0.50 in x 0.50 in (Nominal)

Style	Narrow	Wide
Roll Width	8.0 ft	N/A
Roll Length	112.5 ft	N/A
Coverage	100 yd ²	N/A
Roll Weight	62 lbs	N/A

Document # WE_EXCEL_CS3AN_SPEC. This document has been developed to provide the characteristic properties of the product described. For questions, to request performance data or installation recommendations, contact Western Excelsior at 800-967-4009 or wexcotech@westernexcelsior.com. Updated 2/09.



Product Evaluation Data and Test Results



Test Methods

A variety of test methods are utilized to determine performance and conformance values for Rolled Erosion Control Products (RECPs). Information within this document is presented to provide conformance values and recommended design values. Test results obtained for the Excel CS-3 All Natural Extended Term Erosion Control Blanket (ECB) and general design values are presented in Tables 1-4. For specific information detailing testing protocols, results and application of design values, refer to document number WE_EXCEL_PERF_GEN.

Test Results

Table 1 - Bench Scale Testing (NTPEP)

Test Method	Test Condition	Results	Units
ECTC Test Method 2 - Rainfall	2 in. per hour	14.41	Soil Loss Ratio
	4 in. per hour	17.38	
	6 in. per hour	20.95	
ECTC Test Method 3 - Shear Resistance	2.36 psf	0.5	Soil Loss (in.)
ECTC Test Method 4 - Germination	Top Soil, Fescue, 21 day Incubation	693	% Improvement

Table 2 - Texas Transportation Institute (TTI)

Rainfall Testing				Channelized Testing		
Class	Slope Gradient	Soil Type	Result	Class	90 Day Partially Vegetated Shear Stress Threshold	Result
A	< 3H : 1V	Clay	Approved	E	2.0 lb/ft ²	Approved
B	< 3H : 1V	Sand	Approved	F	4.0 lb/ft ²	N/A
C	> 3H : 1V	Clay	Approved	G	6.0 lb/ft ²	N/A
D	> 3H : 1V	Sand	Approved	H	8.0 lb/ft ²	N/A
				I	10.0 lb/ft ²	N/A
				J	12.0 lb/ft ²	N/A

Recommended Design Values

Table 3 - Unvegetated Design Values

Maximum Permissible Velocity*	Soil Loss
6.0 ft/s	0.5 inches
Maximum Permissible Shear Stress*	Soil Loss
1.6 lb/ft ²	0.5 inches
Resistance to Flow*	
HEC 15 Shear Relationship	Manning's n
0.4 lb/ft ² (Tau _{lower})	0.045
0.8 lb/ft ² (Tau _{mid})	0.036
1.6 lb/ft ² (Tau _{upper})	0.031
RUSLE Cover Factor*	Slope Gradient*
0.05	3 H : 1V

Table 4 - Vegetated Design Values

Maximum Permissible Velocity*
N/A
Maximum Permissible Shear Stress*
N/A

*Recommended Design Values provided herein are based on results of standardized industry testing and may not be applicable for all field conditions. Values provided herein are intended for use with the state of the practice design procedures.

Document # WE_EXCEL_CS3AN_PERF. This document has been developed to provide information regarding the bench scale and/or performance testing conducted on the Excel CS-3 All Natural ECB. For questions or installation recommendations, contact Western Excelsior Technical Services Division at 800-967-4009 or wexcotech@westernexcelsior.com. Updated 02/09.



Slope Installation
 Instructions EXCEL CS-3™
 All Natural

Step 1 - Site Preparation

Prepare site to design profile and grade. Remove debris, rocks, clods, etc.. Ground surface should be smooth prior to installation to ensure blanket remains in contact with slope.

Step 2 - Seeding

Seeding of site should be conducted to design requirements or to follow local or state seeding requirements as necessary.

Step 3 - Staple Selection

At a minimum, 6" long by 1" crown, 11 gauge staples are to be used to secure the blanket to the ground surface. Installation in rocky, sandy or other loose soil may require longer staples.

Step 4 - Excavate Anchor Trench and Secure Blanket

Excavate a trench along the top of the slope to secure the upstream end of the blanket. The trench should run along the length of the installation, be 6" wide and 6" deep. Staple blanket along bottom of trench, fill with compacted soil, overlap blanket towards toe of slope and secure with row of staples (shown in Figures A, E and F).

Step 5 - Secure Body of Blanket

Roll blanket down slope from anchor trench. Staple body of blanket following the pattern shown in Figure D. Leave end of blanket unstapled to allow for overlap shown in Figure B. Place downstream blanket underneath upstream blanket to form shingle pattern. Staple seam as shown in Figure E. Secure downstream blanket with stapling pattern shown in Figure D. Stapling pattern shown in Figure D reflects minimum staples to be used. More staples may be required to ensure blanket is sufficiently secured to resist mowers and foot traffic and to ensure blanket is in contact with soil surface over the entire area of blanket. Further, critical points require additional staples. Critical points are identified in Figure G.

Step 6 - Continue Along Slope - Complete Installation

Overlap adjacent blankets as shown in Figure C and repeat Step 5. Secure toe of slope using stapling pattern shown in Figure E. Secure edges of installation by stapling at 1.0' intervals along the terminal edge.

Document # WE_EXCEL_CS3AN_SII

*Approximately 200 Staples per 8.0' Roll
 Drawings Not to Scale 8.0' Wide Blanket
 Shown

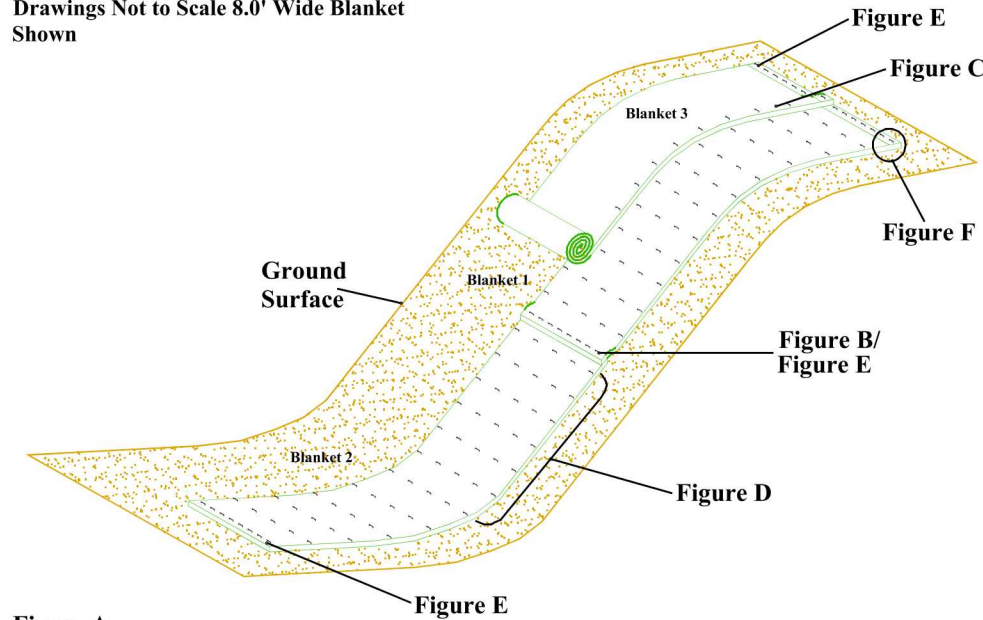


Figure A

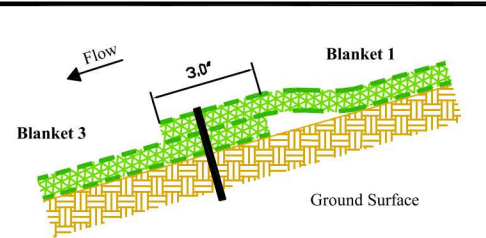


Figure B - Profile View

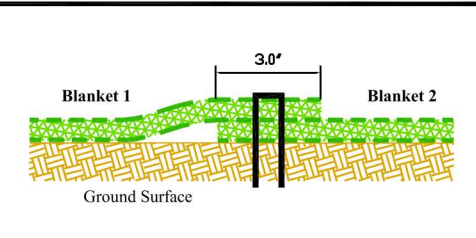
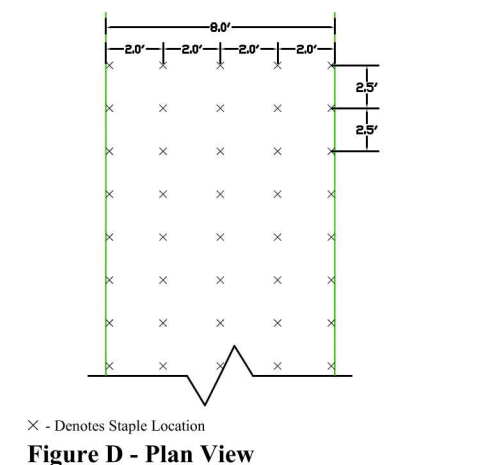


Figure C - Cross Section View

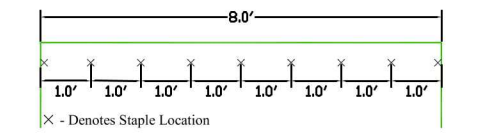
Product Application/Equivalency Specifications

Excel CS-3 All Natural is produced by Western Excelsior and consists of an extended term Rolled Erosion Control Product (RECP) comprised of a coconut/straw blend matrix mechanically (stitch) bound between two, biodegradable jute/scrim nets (top and bottom). The expected longevity of Excel CS-3 All Natural is approximately 24 months (actual longevity dependent on field and climatic conditions). Excel CS-3 All Natural is manufactured to include physical properties sufficient to provide the intended longevity and performance. Product specifications may be found on document WE_EXCEL_CS3AN_SPEC and performance information may be found on document WE_EXCEL_CS3AN_PERF. All documents are available from Western Excelsior Technical Support or www.westernexcelsior.com. Additional to above, equivalent products to Excel CS-3 All Natural must meet identical criteria as Excel CS-3 All Natural as follows:

1. Consist of a coconut/straw blend matrix mechanically (stitch) bound between two, biodegradable jute/scrim nets.
2. Sufficient tensile strength, thickness and coverage to maintain integrity during installation and ensure material performance.
3. Listing within AASHTO NTPEP database.



× - Denotes Staple Location
 Figure D - Plan View



× - Denotes Staple Location
 Figure E - Plan View

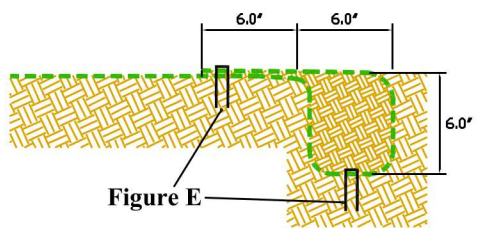


Figure F - Profile View

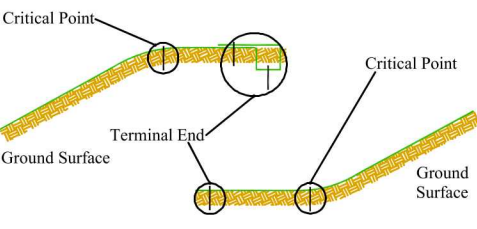


Figure G - Critical Point Securing



Channel Installation
Instructions EXCEL CS-3™
All Natural

*Approximately 360 Staples per 8.0' Roll
Drawings Not to Scale 8.0' Wide Blanket
Shown

Step 1 - Site Preparation

Prepare site to design profile and grade. Remove debris, rocks, clods, etc.. Ground surface should be smooth prior to installation to ensure blanket remains in contact with slope.

Step 2 - Seeding

Seeding of site should be conducted to design requirements or to follow local or state seeding requirements as necessary.

Step 3 - Staple Selection

At a minimum, 6" long by 1" crown, 11 gauge staples are to be used to secure the blanket to the ground surface. Installation in rocky, sandy or other loose soil may require longer staples.

Step 4 - Excavate Anchor Trench and Secure Blanket

Excavate a trench along the top of the channel side slopes and the upstream terminal end of the channel to secure the edges of the blanket. The trench should run along the length and width of the installation, be 6" wide and 6" deep. Staple blanket along bottom of trench, fill with compacted soil, overlap blanket towards toe of slope and secure with row of staples (shown in Figures A, E and F).

Step 5 - Secure Body of Blanket

Roll blanket down slope from anchor trench. Staple body of blanket following the pattern shown in Figure D. Leave end of blanket unstapled to allow for overlap shown in Figure B. Place downstream blanket underneath upstream blanket to form shingle pattern. Staple seam as shown in Figure E. Secure downstream blanket with stapling pattern shown in Figure D. Stapling pattern shown in Figure D reflects minimum staples to be used. More staples may be required to ensure blanket is sufficiently secured to resist mowers and foot traffic and to ensure blanket is in contact with soil surface over the entire area of blanket. Further, critical points require additional staples. Critical points are identified in Figure G.

Step 6 - Continue Along Slope - Complete Installation

Overlap adjacent blankets as shown in Figure C and repeat Step 5. Secure toe of slope using stapling pattern shown in Figure E. Secure edges of installation by stapling at 1.0' intervals along the terminal edge.

Document # WE_EXCEL_CS3AN_CII

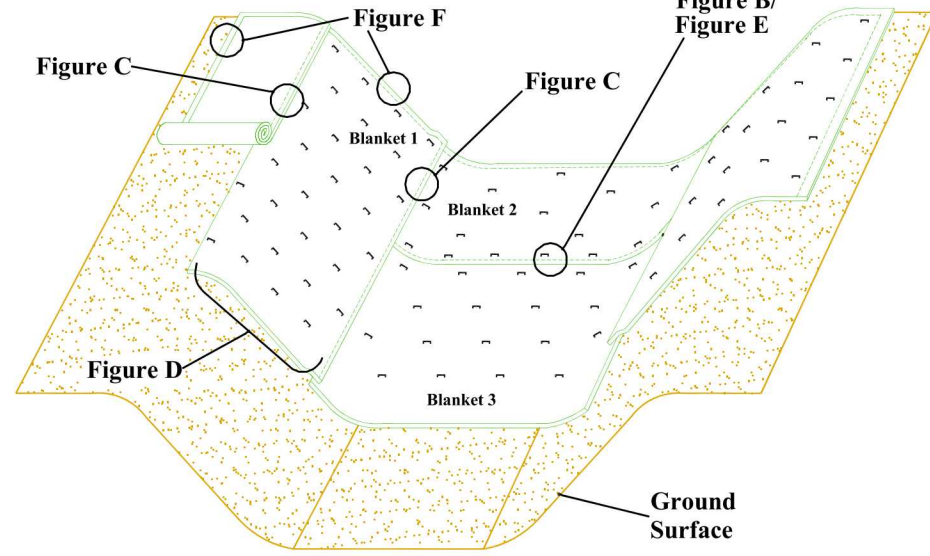


Figure A

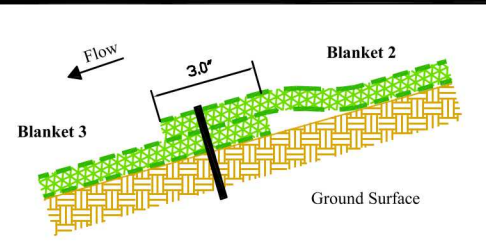


Figure B - Profile View

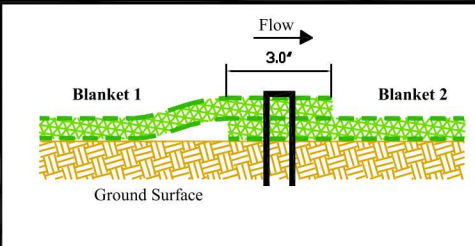
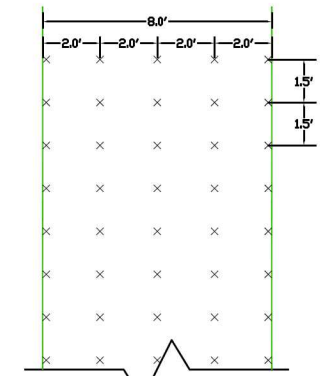


Figure C - Cross Section View

Product Application/Equivalency Specifications

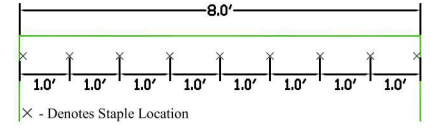
Excel CS-3 All Natural is produced by Western Excelsior and consists of an extended term Rolled Erosion Control Product (RECP) comprised of a coconut/straw blend matrix mechanically (stitch) bound between two, biodegradable jute/scrim nets (top and bottom). The expected longevity of Excel CS-3 All Natural is approximately 24 months (actual longevity dependent on field and climatic conditions). Excel CS-3 All Natural is manufactured to include physical properties sufficient to provide the intended longevity and performance. Product specifications may be found on document WE_EXCEL_CS3AN_SPEC and performance information may be found on document WE_EXCEL_CS3AN_PERF. All documents are available from Western Excelsior Technical Support or www.westernexcelsior.com. Additional to above, equivalent products to Excel CS-3 All Natural must meet identical criteria as Excel CS-3 All Natural as follows:

1. Consist of a coconut/straw blend matrix mechanically (stitch) bound between two, biodegradable jute/scrim nets.
2. Sufficient tensile strength, thickness and coverage to maintain integrity during installation and ensure material performance.
3. Listing within AASHTO NTPEP database.



× - Denotes Staple Location

Figure D - Plan View



× - Denotes Staple Location

Figure E - Plan View

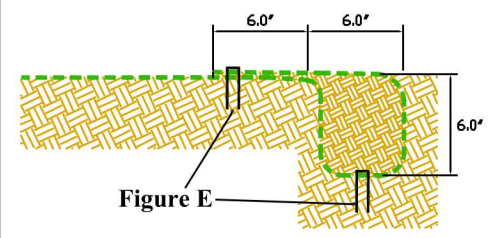


Figure F - Profile View

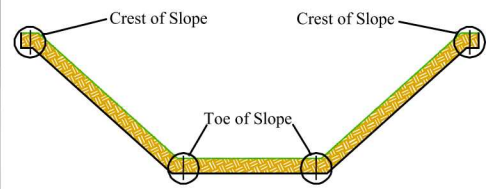


Figure G - Critical Points



Instalación en Pendiente

Instrucciones EXCEL CS-3™ All Natural

Paso 1 - Preparación del Lugar

Prepare el lugar según el perfil del diseño y de la pendiente. Remueva el escombros, piedras, y terrones, etc. La superficie de la tierra debe estar lisa antes de la instalación para asegurar que el cojín permanezca en contacto con la pendiente.

Paso 2 - Semilla

El sembrado de la semilla en el lugar se debe hacer de acuerdo a los requisitos del diseño o a los requisitos locales y estatales, según sea necesario.

Paso 3 - Selección de Grapas

Lo mínimo que se debe usar son grapas de calibre 11, de 6" de largo y 1" de corona para sujetar el cojín a la superficie de la tierra. La instalación en tierra rocosa, arenosa o suelta puede requerir grapas más largas.

Paso 4 - Excave Zanja para Anclaje y Sujete el Cojín

Excave una zanja a lo largo de la parte superior de las pendientes de los lados del canal y la orilla de arriba del canal para sujetar las orillas del cojín. La zanja debe correr a lo largo y ancho de la instalación, tener 6" de ancho y 6" de profundidad. Engrape el cojín a lo largo del fondo de la zanja; llénela con tierra compactada, empalme el cojín hacia la parte inferior de la pendiente y sujételo con una hilera de grapas (Vea las Figuras A, E y F).

Paso 5 - Sujete el Cuerpo del Cojín

Desenrolle el cojín hacia abajo desde la zanja de anclaje. Engrape el cuerpo del cojín siguiendo el patrón que se muestra en la Figura D. Deje la punta del cojín sin engrapar para que lo pueda empalmar como se muestra en la Figura B. Coloque el cojín que baja por debajo del de arriba para formar un patrón como de tejas. Engrape las uniones como se muestra en la figura E. Sujete el cojín de bajada con el patrón de engrapado que se muestra en la Figura D. El patrón de engrapado de la Figura D refleja el mínimo de grapas que se debe usar. Se pueden requerir más grapas para asegurar que el cojín quede sujetado suficientemente para resistir podadoras y tráfico a pie y para asegurar que el cojín permanezca en contacto con la superficie de la tierra en toda el área. Además, los puntos críticos requieren grapas adicionales. Los puntos críticos están identificados en la Figura G.

Paso 6 - Continúe a lo largo de la Pendiente - Termine la Instalación

Empalme los cojines adyacentes como se muestra en la Figura C y repita el Paso 5. Sujete la parte inferior de la pendiente usando el patrón de grapas que se muestra en la Figura E. Sujete las orillas de la instalación engrapando a intervalos de 1.0' a lo largo de la orilla.

Document # WE_EXCEL_CS3AN_SII

* Se Requieren Aproximadamente 200 Grapas por Rollo de 8' - El Dibujo No Está a Escala Se. Muestra el Cojín de 8' de Ancho

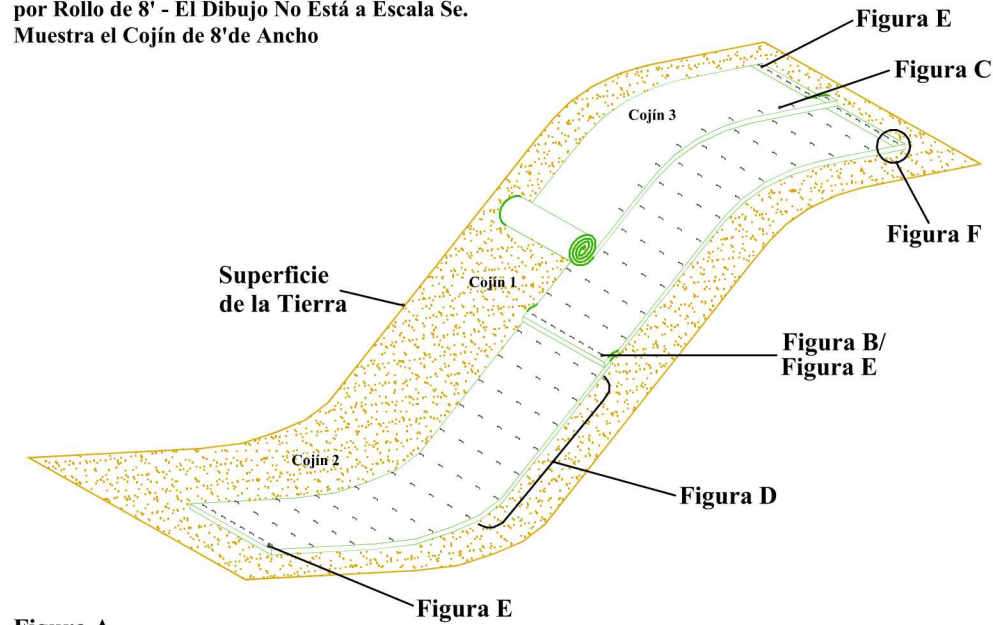


Figura A

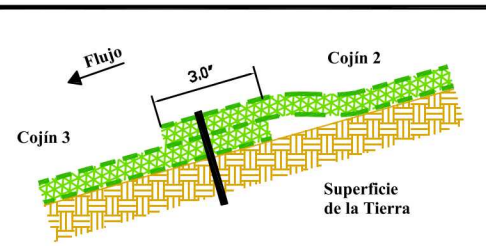


Figura B - Vista de Perfil

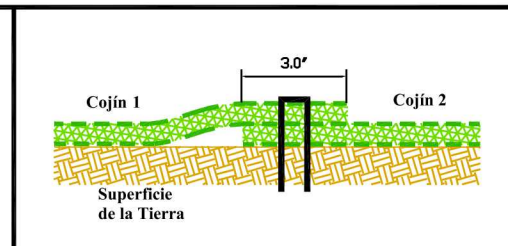
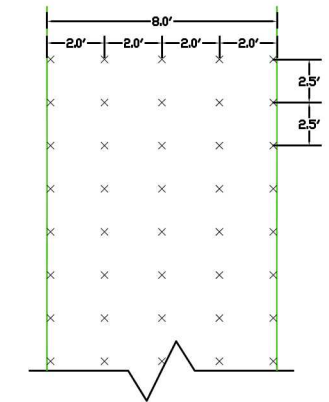


Figura C - Corte de Vista Transversal

Product Application/Equivalency Specifications

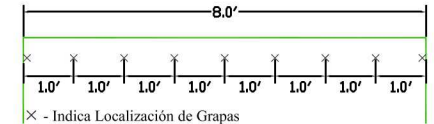
Excel CS-3 All Natural is produced by Western Excelsior and consists of an extended term Rolled Erosion Control Product (RECP) comprised of a coconut/straw blend matrix mechanically (stitch) bound between two, biodegradable jute/scrim nets (top and bottom). The expected longevity of Excel CS-3 All Natural is approximately 24 months (actual longevity dependent on field and climatic conditions). Excel CS-3 All Natural is manufactured to include physical properties sufficient to provide the intended longevity and performance. Product specifications may be found on document WE_EXCEL_CS3AN_SPEC and performance information may be found on document WE_EXCEL_CS3AN_PERF. All documents are available from Western Excelsior Technical Support or www.westernexcelsior.com. Additional to above, equivalent products to Excel CS-3 All Natural must meet identical criteria as Excel CS-3 All Natural as follows:

1. Consist of a coconut/straw blend matrix mechanically (stitch) bound between two, biodegradable jute/scrim nets.
2. Sufficient tensile strength, thickness and coverage to maintain integrity during installation and ensure material performance.
3. Listing within AASHTO NTPEP database.



× - Indica Localización de Grapas

Figura D - Vista del Plano



× - Indica Localización de Grapas

Figura E - Vista del Plano

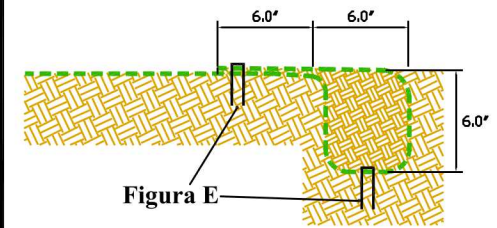


Figura F - Vista de Perfil

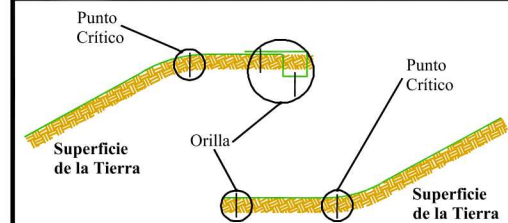


Figura G - Sujeción de Puntos Críticos



Instalación en Canal

Instrucciones EXCEL CS-3™
All Natural

Paso 1 - Preparación del Lugar

Prepare el lugar según el perfil del diseño y de la pendiente. Remueva el escombros, piedras, y terrones, etc. La superficie de la tierra debe estar lisa antes de la instalación para asegurar que el cojín permanezca en contacto con la pendiente.

Paso 2 - Semilla

El sembrado de la semilla en el lugar se debe hacer de acuerdo a los requisitos del diseño o a los requisitos locales y estatales, según sea necesario.

Paso 3 - Selección de Grapas

Lo mínimo que se debe usar son grapas de calibre 11, de 6" de largo y 1" de corona para sujetar el cojín a la superficie de la tierra. La instalación en tierra rocosa, arenosa o suelta puede requerir grapas más largas.

Paso 4 - Excave Zanja para Anclaje y Sujete el Cojín

Excave una zanja a lo largo de la parte superior de las pendientes de los lados del canal y la orilla de arriba del canal para sujetar las orillas del cojín. La zanja debe correr a lo largo y ancho de la instalación, tener 6" de ancho y 6" de profundidad. Engrape el cojín a lo largo del fondo de la zanja; llénela con tierra compactada, empalme el cojín hacia la parte inferior de la pendiente y sujételo con una hilera de grapas (Vea las Figuras A, E y F).

Paso 5 - Sujete el Cuerpo del Cojín

Desenrolle el cojín hacia abajo desde la zanja de anclaje. Engrape el cuerpo del cojín siguiendo el patrón que se muestra en la Figura D. Deje la punta del cojín sin engrapar para que lo pueda empalmar como se muestra en la Figura B. Coloque el cojín que baja por debajo del de arriba para formar un patrón como de tejas. Engrape las uniones como se muestra en la figura E. Sujete el cojín de bajada con el patrón de engrapado que se muestra en la Figura D. El patrón de engrapado de la Figura D refleja el mínimo de grapas que se debe usar. Se pueden requerir más grapas para asegurar que el cojín quede sujetado suficientemente para resistir podadoras y tráfico a pie y para asegurar que el cojín permanezca en contacto con la superficie de la tierra en toda el área. Además, los puntos críticos requieren grapas adicionales. Los puntos críticos están identificados en la Figura G.

Paso 6 - Continúe a lo largo de la Pendiente - Termine la Instalación

Empalme los cojines adyacentes como se muestra en la Figura C y repita el Paso 5. Sujete la parte inferior de la pendiente usando el patrón de grapas que se muestra en la Figura E. Sujete las orillas de la instalación engrapando a intervalos de 1.0' a lo largo de la orilla.

Document # WE_EXCEL_CS3AN_CII

* Se Requieren Aproximadamente 360 Grapas por Rollo de 8' - El Dibujo No Está a Escala Se. Muestra el Cojín de 8' de Ancho

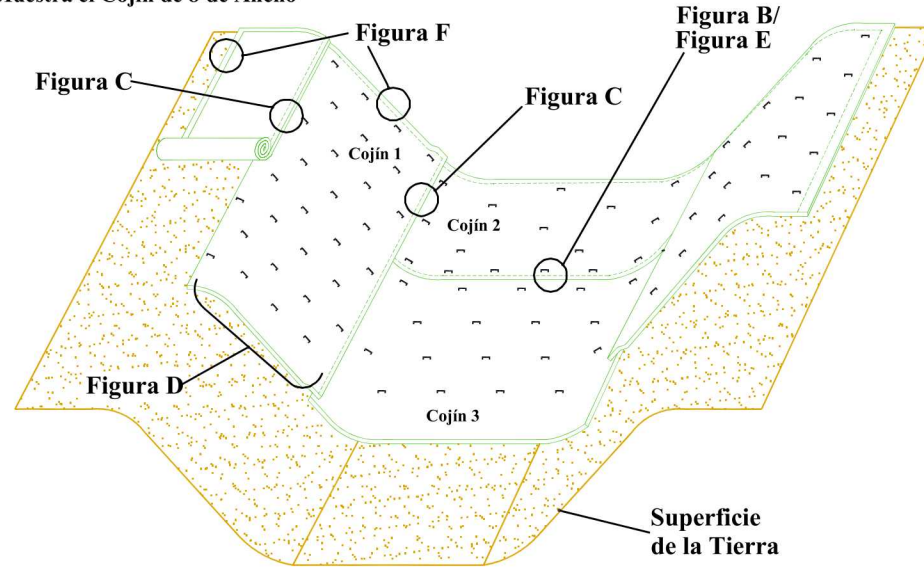


Figura A

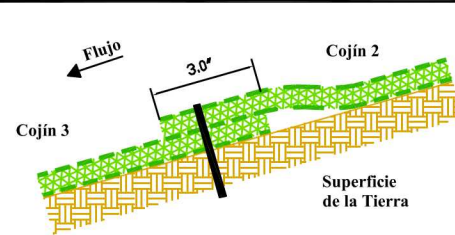


Figura B - Vista de Perfil

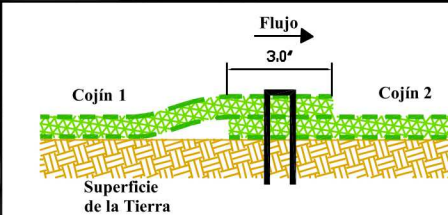
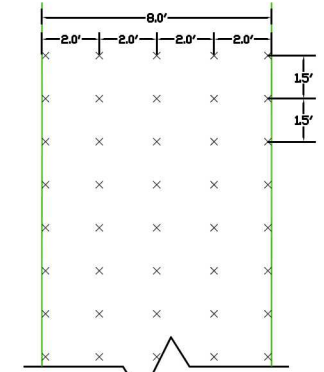


Figura C - Corte de Vista Transversal

Product Application/Equivalency Specifications

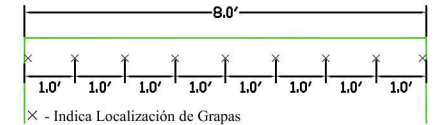
Excel CS-3 All Natural is produced by Western Excelsior and consists of an extended term Rolled Erosion Control Product (RECP) comprised of a coconut/straw blend matrix mechanically (stitch) bound between two, biodegradable jute/scrim nets (top and bottom). The expected longevity of Excel CS-3 All Natural is approximately 24 months (actual longevity dependent on field and climatic conditions). Excel CS-3 All Natural is manufactured to include physical properties sufficient to provide the intended longevity and performance. Product specifications may be found on document WE_EXCEL_CS3AN_SPEC and performance information may be found on document WE_EXCEL_CS3AN_PERF. All documents are available from Western Excelsior Technical Support or www.westernexcelsior.com. Additional to above, equivalent products to Excel CS-3 All Natural must meet identical criteria as Excel CS-3 All Natural as follows:

1. Consist of a coconut/straw blend matrix mechanically (stitch) bound between two, biodegradable jute/scrim nets.
2. Sufficient tensile strength, thickness and coverage to maintain integrity during installation and ensure material performance.
3. Listing within AASHTO NTPEP database.



× - Indica Localización de Grapas

Figura D - Vista del Plano



× - Indica Localización de Grapas

Figura E - Vista del Plano

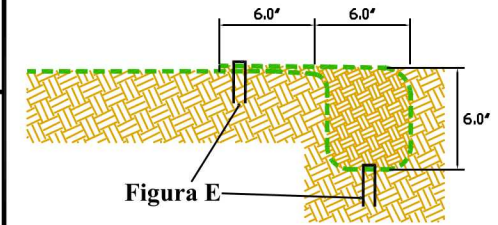


Figura F - Vista de Perfil

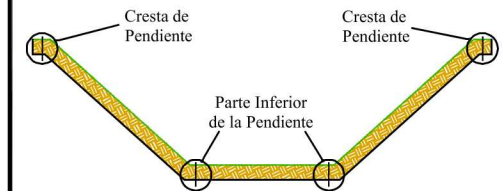


Figura G - Puntos Críticos



**NORTHWEST LININGS &
GEOTEXTILE PRODUCTS, Inc.**

"Helping to Protect the Environment"

21000 77th Avenue South

Kent, WA 98032

(253) 872-0244 • (800) 729-6954

FAX: (253) 872-0245

www.northwestlinings.com

PermeaTex Sod Staples, Erosion Blanket Type

These erosion blanket staples are designed to oxidize in contact with soil (enhancing pullout) and eventually disappear. Please follow all manufacturers' recommendations regarding trenching and staple patterns.

PROPERTY	UNITS
Size	6" x 1" x 6"
Style	U-Style, 1" width, square or round head
Thickness	11 Gauge Wire
Material	Black, annealed (non-galvanized) steel wire

PermeaTex™ is a trade name of Northwest Linings and any use of this name without the express written consent of Northwest Linings is strictly prohibited.

The information and data contained herein are believed to be accurate and reliable. Northwest Linings makes no warranty of any kind. Northwest Linings accepts no responsibility or liability for the results obtained through application of this information.

"Helping to Protect the Environment"

LETTER OF SUBMITTAL



1176 Big Creek Road
Kellogg, ID 83837
Phone: 208-783-1069
Fax: 208-783-0671
www.northwindgrp.com

Date: 8/9/2017	Contract No:AG-0355-C-17-0019
Attention: Dale Reckley, Mary Beth Marks, Peter Werner, Mike Hatten, Shane Matolyak	
Re: Type IV-A Geotextile – Product Information – New World Mine Waste Repository	
Transmittal No. 007	
Registry Line No. N/A	

To: Dale Reckley
Mary Beth Marks
Peter Werner
Mike Hattern
Shane Matolyak

WE ARE SENDING YOU: Documents as listed below

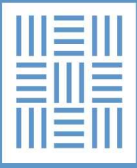
Copies	Date	Description
(1) Electronic	8-9-17	Product Information – Type IV-A Geotextile – New World Mine Waste Repository

Message: _____

Copy to: _____

Signed: 

Project Manager, NWCS



GEOTEX[®] 801 is a polypropylene, staple fiber, needlepunched nonwoven geotextile produced by Propex, and will meet the following Minimum Average Roll Values (MARV) when tested in accordance with the methods listed below. The fibers are needed to form a stable network that retains dimensional stability relative to each other. The geotextile is resistant to ultraviolet degradation and to biological and chemical environments normally found in soils.

GEOTEX 801 conforms to the property values listed below¹. Propex performs internal Manufacturing Quality Control (MQC) tests that have been accredited by the Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP). This product is NTPEP approved for AASHTO standards.

		MARV ²	
PROPERTY	TEST METHOD	ENGLISH	METRIC
ORIGIN OF MATERIALS			
% U.S. Manufactured Inputs		100%	100%
% U.S. Manufactured		100%	100%
MECHANICAL			
Tensile Strength (Grab)	ASTM D-4632	205 lbs	912 N
Elongation	ASTM D-4632	50%	50%
CBR Puncture	ASTM D-6241	525 lbs	2336 N
Trapezoidal Tear	ASTM D-4533	80 lbs	356 N
ENDURANCE			
UV Resistance % Retained at 500 hrs	ASTM D-4355	70%	70%
HYDRAULIC			
Apparent Opening Size (AOS) ³	ASTM D-4751	80 US Std. Sieve	0.180 mm
Permittivity	ASTM D-4491	1.5 sec ⁻¹	1.5 sec ⁻¹
Water Flow Rate	ASTM D-4491	110 gpm/ft ²	4482 l/min/m ²
ROLL SIZES		12.5 ft x 360 ft 15 ft x 300 ft	3.81 m x 109.8 m 4.57 m x 91.5 m

NOTES:

1. The property values listed above are effective 04/2011 and are subject to change without notice.
2. Values shown are in weaker principal direction. Minimum average roll values (MARV) are calculated as the typical minus two standard deviations. Statistically, it yields a 97.7% degree of confidence that any samples taken from quality assurance testing will exceed the value reported.
3. Maximum average roll value.



TESTED. PROVEN. TRUSTED.
www.geotextile.com

Propex Operating Company, LLC · 6025 Lee Highway, Suite 425 · PO Box 22788 · Chattanooga, TN 37422

ph 423 899 0444 · ph 800 621 1273 · fax 423 899 7619

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LETTER OF SUBMITTAL



1176 Big Creek Road
Kellogg, ID 83837
Phone: 208-783-1069
Fax: 208-783-0671
www.northwindgrp.com

Date: 8/9/2017	Contract No:AG-0355-C-17-0019
Attention: Dale Reckley, Mary Beth Marks, Peter Werner, Mike Hatten, Shane Matolyak	
Re: Seed Mix (Substitution) – Product Information – New World Mine Waste Repository	
Transmittal No. 008	
Registry Line No. N/A	

To: Dale Reckley
Mary Beth Marks
Peter Werner
Mike Hattern
Shane Matolyak

WE ARE SENDING YOU: Documents as listed below

Copies	Date	Description
(1) Electronic	8-9-17	Product Information – Seed Mix Substitution – New World Mine Waste Repository

Message: _____

Copy to: _____

Signed: 

Project Manager, NWCS

PROJECT SEED MIX				
Common Name	Scientific Name	Cultivar	Seeds/lb	Seed Rate (lb PLS/ac) ¹
Tufted hairgrass	<i>Deschampsia caespitosa</i>	Nortran	2,500,000	1.6
Alpine bluegrass	<i>Poa alpina</i> - Not Available - Sub: Sandberg?		1,000,000	4.0
Alpine timothy	<i>Phleum alpinum</i> Not avail Molas Pass, CO Sub: <i>Phleum pratense</i>		1,300,000	3.1
Slender wheatgrass	<i>Elymus trachycaulus</i>	San Luis	159,000	25.5

68.4 Acres
PLS #

#540/PLS
34.2

As a result of the *Poa alpina* not being available, NWCS would like to propose the use of Sandberg as a substitution. Similarly, as a result of the *Phleum alpinum* not being available, NWCS would like to propose the use of *Phleum pratense* as a substitution.

LETTER OF SUBMITTAL



1176 Big Creek Road
 Kellogg, ID 83837
 Phone: 208-783-1069
 Fax: 208-783-0671
 www.northwindgrp.com

Date: 8/9/2017	Contract No:AG-0355-C-17-0019
Attention: Dale Reckley, Mary Beth Marks, Peter Werner, Mike Hatten, Shane Matolyak	
Re: HDPE Pipe (Perforated and Solid) – Product Information – New World Mine Waste Repository	
Transmittal No. 009	
Registry Line No. N/A	

To: Dale Reckley
Mary Beth Marks
Peter Werner
Mike Hattern
Shane Matolyak

WE ARE SENDING YOU: Documents as listed below

Copies	Date	Description
(1) Electronic	8-9-17	Product Information – HDPE Pipe (Perforated and Solid) – New World Mine Waste Repository

Message: _____

Copy to: _____

Signed: 

Project Manager, NWCS

ADS N-12[®] WT IB PIPE (per AASHTO) SPECIFICATION WATER TIGHT - SOLID WALL

Scope

This specification describes 4- through 60-inch (100 to 1500 mm) ADS N-12 WT IB pipe (per AASHTO) for use in gravity-flow applications.

Pipe Requirements

N-12 WT IB pipe (per AASHTO) shall have a smooth interior and annular exterior corrugations.

- 4- through 10-inch (100 to 250 mm) shall meet AASHTO M252, Type S.
- 12- through 60-inch (300 to 1500 mm) shall meet AASHTO M294, Type S or ASTM F2306.
- Manning's "n" value for use in design shall be 0.012.

Joint Performance

Pipe shall be joined with the N-12 WT IB joint meeting the requirements of AASHTO M252, AASHTO M294, or ASTM F2306.

4- through 60-inch (100 to 1500 mm) shall be watertight according to the requirements of ASTM D3212. Gaskets shall meet the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable, protective wrap to ensure the gasket is free from debris. A joint lubricant available from the manufacturer shall be used on the gasket and bell during assembly.

12- through 60-inch (300 to 1500 mm) diameters shall have a reinforced bell with a polymer composite band. The bell tolerance device shall be installed by the manufacturer.

Fittings

Fittings shall conform to AASHTO M252, AASHTO M294, or ASTM F2306. Bell and spigot connections shall utilize a spun-on or welded bell and valley or saddle gasket meeting the watertight joint performance requirements of AASHTO M252, AASHTO M294 or ASTM F2306.

Field Pipe and Joint Performance

To assure watertightness, field performance verification may be accomplished by testing in accordance with ASTM F2487. Appropriate safety precautions must be used when field-testing any pipe material. Contact the manufacturer for recommended leakage rates.

Material Properties

Virgin material for pipe and fitting production shall be high-density polyethylene conforming with the minimum requirements of cell classification 424420C for 4- through 10-inch (100 to 250 mm) diameters, and 435400C for 12- through 60-inch (300 to 1500 mm) diameters, as defined and described in the latest version of ASTM D3350, except that carbon black content should not exceed 4%. The 12- through 60-inch (300 to 1500 mm) virgin pipe material shall comply with the notched constant ligament-stress (NCLS) test as specified in Sections 9.5 and 5.1 of AASHTO M294 and ASTM F2306 respectively.

Installation

Installation shall be in accordance with ASTM D2321 and ADS recommended installation guidelines, with the exception that minimum cover in trafficked areas for 4- through 48-inch (100 to 1200 mm) diameters shall be one foot. (0.3 m) and for 54- and 60-inch (1350 and 1500 mm) diameters, the minimum cover shall be 2 ft. (0.6 m) in single run applications. Backfill for minimum cover situations shall consist of Class 1, Class 2 (minimum 90% SPD) or Class 3 (minimum 90%) material. Maximum fill heights depend on embedment material and compaction level; please refer to Technical Note 2.01. Contact your local ADS representative or visit our website at www.ads-pipe.com for a copy of the latest installation guidelines.

Pipe Dimensions

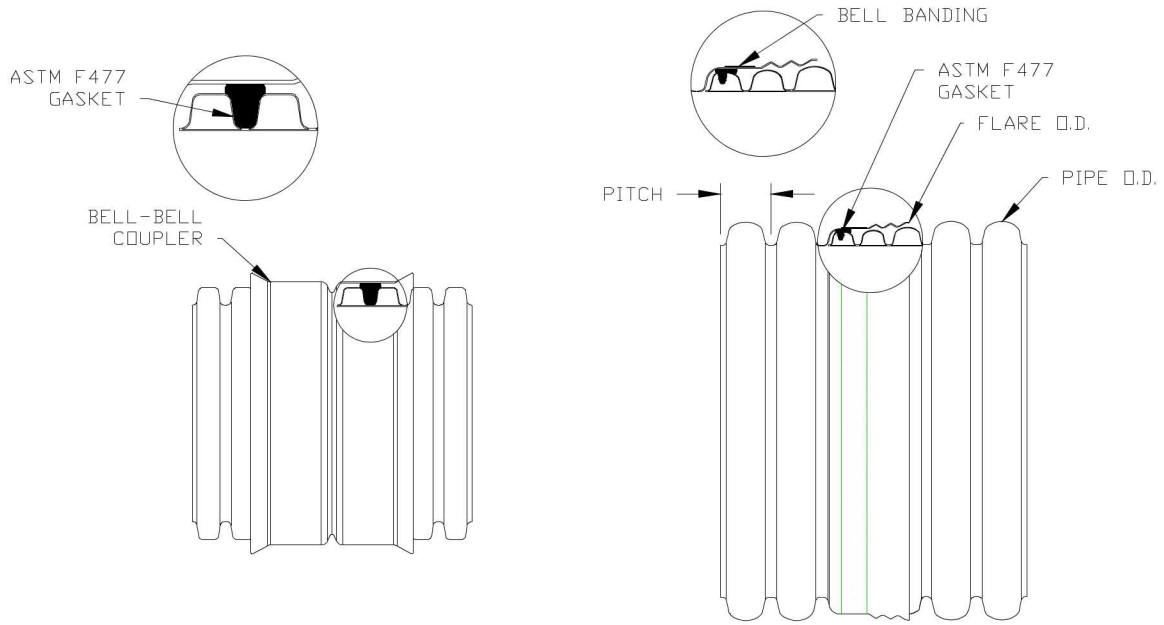
		Nominal Diameter, in (mm)													
Pipe I.D.		4	6	8	10	12	15	18	24	30	36	42	48	54*	60
in (mm)		(100)	(150)	(200)	(250)	(300)	(375)	(450)	(600)	(750)	(900)	(1050)	(1200)	(1350)	(1500)
Pipe O.D.**		4.8	6.9	9.1	11.4	14.5	18	22	28	36	42	48	54	61	67
in (mm)		(122)	(175)	(231)	(290)	(368)	(457)	(559)	(711)	(914)	(1067)	(1219)	(1372)	(1549)	(1702)
Perforations		All diameters available with or without perforations													

*Check with sales representative for availability by region.

**Pipe O.D. values are provided for reference purposes only, values stated for 12- through 60-inch are ± 1 inch. Contact a sales representative for exact values.

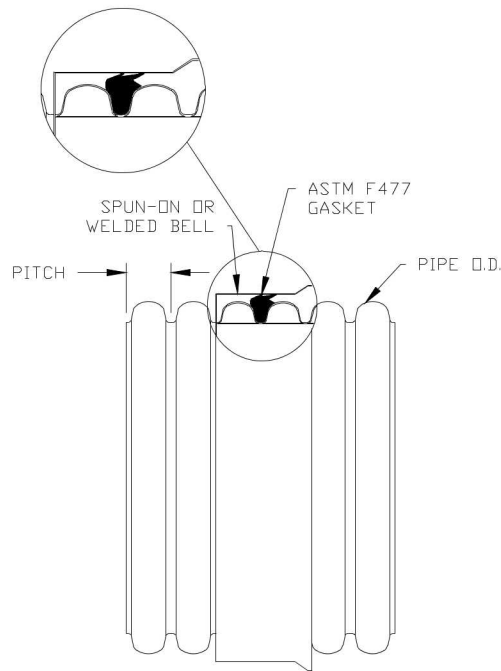
N-12[®] WT IB (per AASHTO) JOINT SYSTEM

(Joint configuration & availability subject to change without notice. Product detail may differ slightly from actual product appearance.)



4" - 10"
(100-250 MM)

12" - 60"
(300-1500 MM)



12" - 60"
(300-1500 MM)

ADS N-12[®] ST IB PIPE (per AASHTO) SPECIFICATION SOIL TIGHT - PERFORATED

Scope

This specification describes 4- through 60-inch (100 to 1500 mm) ADS N-12 ST IB pipe (per AASHTO) for use in gravity-flow drainage applications.

Pipe Requirements

ADS N-12 ST IB pipe (per AASHTO) shall have a smooth interior and annular exterior corrugations.

- 4- through 10-inch (100 to 250 mm) shall meet AASHTO M252, Type S or SP.
- 12- through 60-inch (300 to 1500 mm) shall meet AASHTO M294, Type S or SP or ASTM F2306.
- Manning's "n" value for use in design shall be 0.012.

Joint Performance

Pipe shall be joined using a bell & spigot joint meeting AASHTO M252, AASHTO M294 or ASTM F2306. The joint shall be soil-tight and gaskets, when applicable, shall meet the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable wrap to ensure the gasket is free from debris. A joint lubricant supplied by the manufacturer shall be used on the gasket and bell during assembly.

Fittings

Fittings shall conform to AASHTO M252, AASHTO M294, or ASTM F2306. Bell and spigot connections shall utilize a spun-on or welded bell and valley or saddle gasket meeting the soil-tight joint performance requirements of AASHTO M252, AASHTO M294 or ASTM F2306.

Material Properties

Virgin material for pipe and fitting production shall be high density polyethylene conforming with the minimum requirements of cell classification 424420C for 4- through 10-inch (100 to 250 mm) diameters, or 435400C for 12- through 60-inch (300 to 1500 mm) diameters, as defined and described in the latest version of ASTM D3350, except that carbon black content should not exceed 4%. The 12- through 60-inch (300 to 1500 mm) virgin pipe material shall comply with the notched constant ligament-stress (NCLS) test as specified in Sections 9.5 and 5.1 of AASHTO M294 and ASTM F2306, respectively.

Installation

Installation shall be in accordance with ASTM D2321 and ADS recommended installation guidelines, with the exception that minimum cover in trafficked areas for 4- through 48-inch (100 to 1200 mm) diameters shall be one foot. (0.3 m) and for 54- and 60-inch (1350 and 1500 mm) diameters, the minimum cover shall be 2 ft. (0.6 m) in single run applications. Backfill for minimum cover situations shall consist of Class 1, Class 2 (minimum 90% SPD) or Class 3 (minimum 90%) material. Maximum fill heights depend on embedment material and compaction level; please refer to Technical Note 2.01. Contact your local ADS representative or visit our website at www.ads-pipe.com for a copy of the latest installation guidelines.

Pipe Dimensions

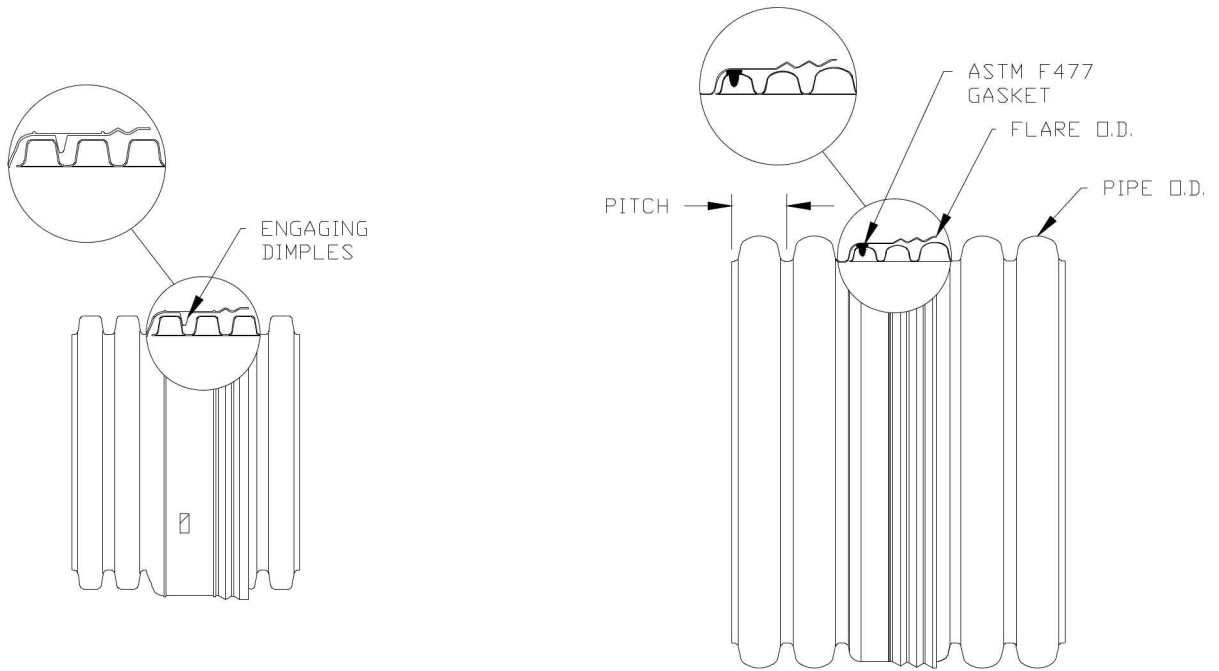
	Nominal Diameter, in (mm)													
Pipe I.D. in (mm)	4 (100)	6 (150)	8 (200)	10 (250)	12 (300)	15 (375)	18 (450)	24 (600)	30 (750)	36 (900)	42 (1050)	48 (1200)	54* (1350)	60 (1500)
Pipe O.D.** in (mm)	4.8 (122)	6.9 (175)	9.1 (231)	11.4 (290)	14.5 (368)	18 (457)	22 (559)	28 (711)	36 (914)	42 (1067)	48 (1219)	54 (1372)	61 (1549)	67 (1702)
Perforations	All diameters available with or without perforations													

*Check with sales representative for availability by region.

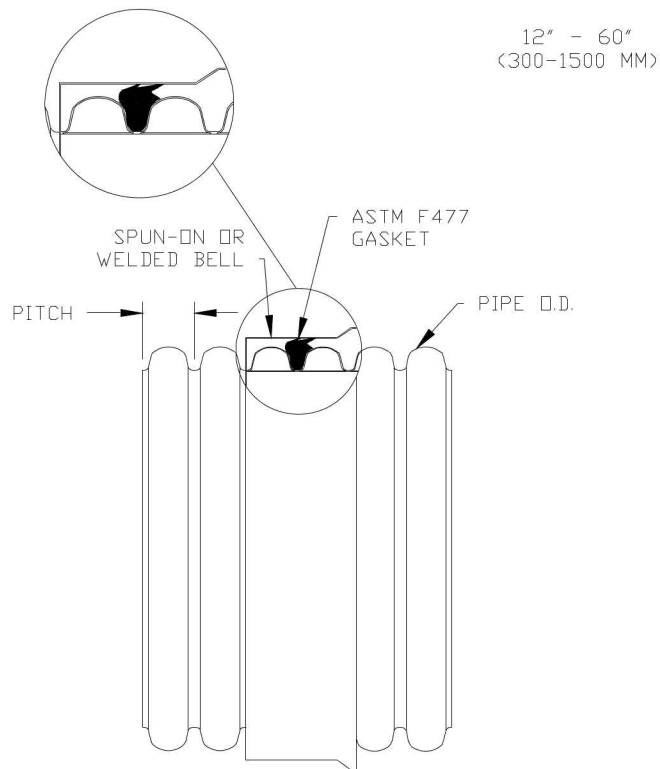
**Pipe O.D. values are provided for reference purposes only, values stated for 12- through 60-inch are ± 1 inch. Contact a sales representative for exact values.

N-12[®] ST IB (per AASHTO) JOINT SYSTEM

(Joint configuration & availability subject to change without notice. Product detail may differ slightly from actual product appearance.)

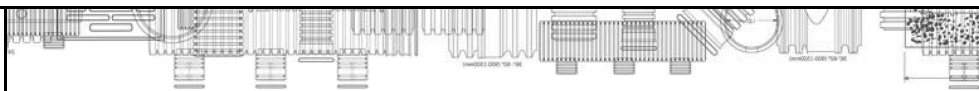


4" - 10"
(100-250 MM)



12" - 60"
(300-1500 MM)

4" - 60"
(100-1500 MM)



TECHNICAL NOTE

Dual Wall HDPE Perforation Patterns

TN 1.01
December 2011

Introduction

Perforated pipe plays an integral role in many applications of HDPE pipe. Generally, perforated pipe is used to accelerate the removal of subsurface water in soils or to allow storm water to percolate into the soil. Currently, two classifications of perforations are specified in the AASHTO material specifications for HDPE pipe: Class I, and Class II. Class I perforations are commonly used in combination storm/underdrain systems while Class II incorporates subsurface drainage and detention/retention systems. Both classes are explained in more detail in the AASHTO materials specifications (M294 and M252). AASHTO M252 covers pipe diameters 3- through 10-inch (75 - 250 mm) while M294 covers 12-inch through 60-inch (300 - 1500 mm).

Standard Perforation Patterns

AASHTO Class II Perforation

The following terminology for perforations is derived from the applicable AASHTO specification. Differences between the specifications are covered in the table below. Class II perforations shall be located in the outside valleys of the corrugations, be circular and/or slotted and evenly spaced around the circumference and length of the pipe. The perforations shall be located in the outside valleys of the corrugations. The water inlet area shall be no less than 0.945 in²/ft (20 cm²/m) for pipe diameters 4- through 10-inch (100 - 250mm), 1.42 in²/ft (30 cm²/m) for pipe diameters 12- through 18-inch (300 - 450 mm) and 1.89 in²/ft (40 cm²/m) for pipe diameters larger than and equal to 24 inches (600 mm). Table 1 below represents ADS standard perforation patterns for AASHTO Class II.

Nominal I.D.		Perforation Type	Maximum Slot Length or Diameter		Maximum Slot Width		Minimum Inlet Area	
in	mm		in	mm	in	mm	in ² /ft	cm ² /m
4	100	Slot	0.875	22	0.125	3	1.0	21
6	150	Slot	0.875	22	0.125	3	1.0	21
8	200	Slot	1.18	30	0.125	3	1.0	21
10	250	Slot	1.18	30	0.125	3	1.0	21
12	300	Circular	0.313	8	-	-	1.5	32
15	375	Circular	0.313	8	-	-	1.5	32
18	450	Circular	0.313	8	-	-	1.5	32
24	600	Circular	0.313	8	-	-	2.0	42
30	750	Circular	0.375	9.5	-	-	2.0	42
36	900	Circular	0.375	9.5	-	-	2.0	42
42	1050	Circular	0.375	9.5	-	-	2.0	42
48	1200	Circular	0.375	9.5	-	-	2.0	42
54	1350	Circular	0.375	9.5	-	-	2.0	42
60	1500	Circular	0.375	9.5	-	-	2.0	42

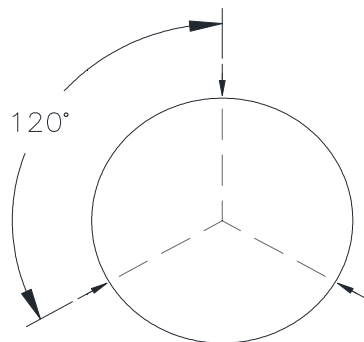


Figure 1

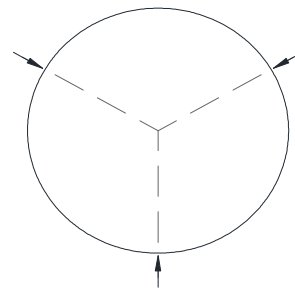
AASHTO Class II Perforation Patterns

Note: Actual pattern may vary by region, however all patterns meet the AASHTO and ASTM minimum requirements for the open inlet area.

4" – 10"
PIPE DIAMETERS

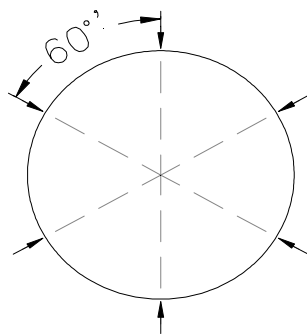


3 AT 120°

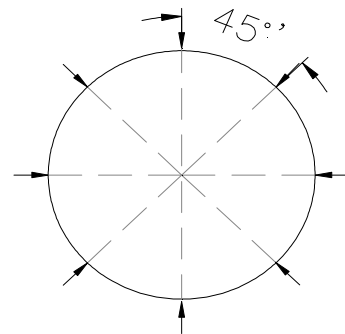


ROTATED
EVERY VALLEY

12" – 18"
PIPE DIAMETERS



** NUMBER OF HOLES AROUND
CIRCUMFERENCE VARIES BASED ON
DIAMETER AND REGION **



** NUMBER OF HOLES AROUND
CIRCUMFERENCE VARIES BASED ON
DIAMETER AND REGION **



AASHTO Class I Perforation

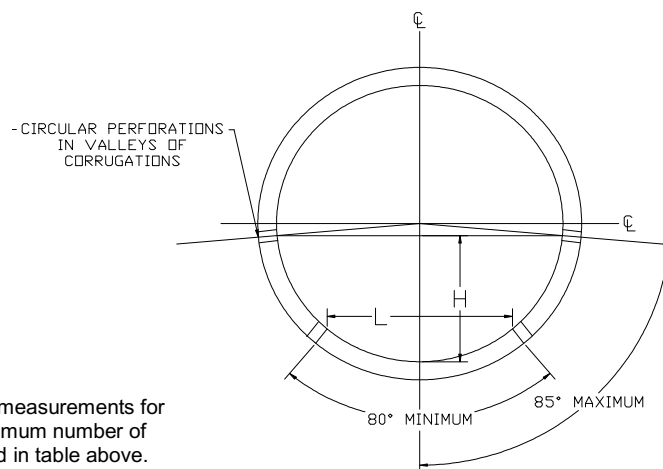
The following terminology is derived from the applicable AASHTO specification. ADS manufactures 12- through 24-inch (300 – 600 mm) Class I perforation as a standard product (ADS designation 'C' perforation), however, other sizes may be ordered as a made to order with sufficient lead time. Please contact your local ADS representative when ordering 4- through 10-inch and 30- through 60-inch Class 1 perforated pipe. The perforations shall be approximately circular and arranged in rows parallel to the axis of the pipe. The locations of the perforations shall be in the valley of the outside corrugation and also in each corrugation. The perforations shall be arranged in two equal groups placed symmetrically on either side of the lower half of the pipe. Please note that certain perforation patterns are not available in various parts of the United States. **Please contact your local ADS representative for availability and ordering of Class I perforations.**

Nominal I.D.		Min. No. of Rows of Perforations	Maximum Perforation Hole Diameter		Minimum Perforation Hole Diameter		"H" Maximum		"L" Minimum		Nominal Inlet Area	
in	mm		in	mm	in	mm	in	mm	in	mm	in ² /ft	cm ² /m
4*	100	2	0.19	5	n/a		1.77	45	2.56	65	1.0	21.8
6*	150	4	0.19	5	n/a		2.76	70	3.74	95	1.7	37.4
8*	200	4	0.19	10	n/a		3.70	94	1.18	130	1.4	30.0
10*	250	4	0.19	10	n/a		4.72	6.30	6.30	160	1.1	22.8
12	300	6	0.40	10	0.20	5	5.4	138	7.6	192	2.9	62.3
15	375	6	0.40	10	0.20	5	7.2	184	10.1	256	2.2	46.2
18	450	6	0.40	10	0.20	5	8.1	207	11.3	288	2.1	44.6
24	600	8	0.40	10	0.20	5	10.9	276	15.1	384	2.4	50.6
30*	750	8	0.40	10	0.20	5	13.6	345	18.9	480	1.8	38.7
36*	900	8	0.40	10	0.20	5	16.3	414	22.7	576	1.4	30.4
42*	1050	8	0.40	10	0.20	5	19.0	483	26.5	672	1.4	30.7
48*	1200	8	0.40	10	0.20	5	21.7	552	30.2	768	1.4	30.4
60*	1500	8	0.40	10	0.20	5	27.2	690	37.8	960	1.2	26.6

* Denotes perforation pattern made to order. Special pipe request required.

n/a Denotes no requirement specified in AASHTO

Figure 2
AASHTO Class I Perforation Patterns



NOTE: Diagram illustrates measurements for values of "H" and "L" – minimum number of rows of perforations is listed in table above.

FOR 4"-60" (100-1500mm)
PIPE PER AASHTO M252/294

APPENDIX F – FINAL INSPECTION REPORT

INSPECTION REPORT
(Ref. FSH 6309.11, R-1)

Intermediate Final

Forest: Custer Gallatin NF District: Gardiner Contract No. AG-0343-C-

Project/Timber Sale Name: NewWorld Mine Repository Sump Drain Field 17-0019

Contractor/Purchaser: North Wind Construction

Inspectors:	<u>Name</u>	<u>Signature</u>
	_____	_____
	_____	_____
	_____	_____

Others Present:	<u>Name</u>	<u>Title</u>
	<u>Robert Grosvenor</u>	<u>District Rep</u>
	_____	_____
	_____	_____

(√) - ADEQUATE	X - SEE CONTINUATION SHEET(S)	0 - NOT APPLICABLE
-----------------------	--------------------------------------	---------------------------

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Progress and/or Progress Schedule | 8. <input type="checkbox"/> Use and Possession (Public Works) Date: _____ |
| 2. <input checked="" type="checkbox"/> Posting (Labor Provisions etc.,
Public Works) | 9. <input type="checkbox"/> Guarantee Effective (Public Works Other Than Roads)
Date _____ |
| 3. <input checked="" type="checkbox"/> COR/ER Project File and Diaries | 10. <input checked="" type="checkbox"/> Payment: <input type="checkbox"/> Partial <input checked="" type="checkbox"/> Final |
| 4. <input checked="" type="checkbox"/> Safety & Sanitary Requirements | 11. _____ Retention Amount Agreed to: _____ |
| 5. <input checked="" type="checkbox"/> Project Control Orders | 12. _____ Contract Time Suspended Date _____ |
| 6. <input type="checkbox"/> Project Substantially Complete
Date: _____ | 13. <input checked="" type="checkbox"/> Payrolls (Public Works) |
| 7. <input type="checkbox"/> Expected Completion Date _____ | 14. <input checked="" type="checkbox"/> Project Completed Date <u>10/28/17</u> |

Forest Engineer's And COR/ER Recommendations

- The project reasonably conforms to all contract drawings, specifications, and general requirements. Project acceptance is recommended.
- Project acceptance is not recommended at this time. Deficiencies from contract drawings, specifications, and general requirements were noted and are listed on the continuation sheet.
- Project acceptance is recommended when identified deficiencies have been satisfactorily corrected and/or completed.

Mary Beth Marks
ER/COR Signature
Mary Beth Marks

Rein Wern
Forest Engineer or Acting Signature
Project

REMARKS

Inspection Services were provided by Shane Matolyak of Tetra Tech throughout the construction of this project.

The project was constructed as designed.

A site inspection was conducted on August 31/17 w/ Mary Beth Marks (COR) & ~~Mary Beth Marks~~ Robert Grosvenor.

All work looked acceptable, road regrade, regrade, seeding & erosion control mat on all disturbed areas.

The disturbed area was larger than predicted in the contract therefore the contract amount of erosion control mat ~~was~~ did not cover entire area. All work acceptable

Plan to buy more & have FS personnel lay it.

(This was completed on 10/12/17)

Mary Beth Marks

**APPENDIX G – AS-CONSTRUCTED DRAWINGS, FINAL SEED MIX, USFS-
INSTALLED EROSION MAT INVOICE**

Marks, MaryBeth -FS

From: Marks, MaryBeth -FS
Sent: Thursday, August 24, 2017 4:36 PM
To: 'Matolyak, Shane'
Cc: 'Christopher Richardson, PMP'
Subject: RE: New World seed label

I spoke with Judy at Circle S Seeds of Montana, Inc regarding the information on the seed bag tag and how she arrived at the quantities in the mix.

The seed provided was for 2.5 acres and two 50# bags of seed were provided for the site.

On the seed tag it had the pounds of the various seed provided and they were confusing when we compared them to the mix in the contract. Judy explained the conversion from PLS to Bulk. The following table summarizes number of pounds of PLS for 2.5 acres and then the conversion to Bulk pounds. Each species has a different conversion rate depending upon the % germination in the lot.

	<u>PLS #</u>	<u>Bulk #</u>
Tufted Hairgrass	4.0	12.0
Canby Bluegrass	10.0	14.75
Climax Timothy	7.75	8.00
Copperhead wheatgrass	63.75	65.5
	Total	100.25# = 2 - 50# bags of seed

Learn something new everyday 😊



Mary Beth Marks, Geologist
On Scene Coordinator
Forest Service
Custer Gallatin and Beaverhead Deerlodge
National Forests

p: 406-587-6709

c: 406-579-3730

f: 406-587-6758

mmarks@fs.fed.us

10 East Babcock Ave

Bozeman, MT 59715

www.fs.fed.us



Caring for the land and serving people

From: Matolyak, Shane [mailto:Shane.Matolyak@tetrattech.com]
Sent: Thursday, August 24, 2017 10:38 AM
To: Marks, MaryBeth -FS <mmarks@fs.fed.us>
Subject: New World seed label

Mary Beth,

14990 Madison Frontage Rd.
 P.O. Box 130
 Three Forks, MT 59752

Circle S Seeds of Montana, Inc
 (406)285-3269

Ibs.	Variety	Lot #	Pur	Ger	Hard/Dorm	Viable	TZ	Tested	Org	Mix
5.99	VNS	Tufted Hairgrass 05-048	93.7	36	0	36	38	2/10/2017	CAN	14.37 0.00
7.36	Canbar Cert.	Canby Bluegrass 14.368619	95.63	71	0	71		3/17/2017	10	14.87 3.00
3.99	Climax	Timothy 15-0031	99.86	98	0	98		7/14/2017	CAN	1.97 0.00
32.67	Copperhead QA	Slender Wheatgr W62-238-4196QA	99.49	82	16	98		7/24/2017	VVY	65.06 9.00

Other Crop	Weed	Prohibited	Restricted/#	Inert	Weight	Name
0.25	0.09	0.00	0.00	1.40	50	New World Mine 2.5 Acres

Order Verification Report



9/8/2017 4:25:54 PM

TrueNorth Steel, Inc.
1501 S 30th St W
Billings MT 59102
406-656-2253

Salesperson: Robert Ludwick

Route To: 1619

Ship To: 1

Cash Customer
702 13th Ave E
West Fargo ND 58078-3304
USA

Cash Customer- Billings
Customer Pick Up
1501 S 30TH St W
Billings MT 59102-6725
USA

Fax:

Order	Cust PO	Ship Via	Package	Prepaid	Date Order	Terms	Verification Date
BI00011687	Custer Gallatin Ntl	Customer Pickup			9/8/2017	COD Only	9/8/2017
Line/Release	Due Date	Qty	UM	Item	Unit Price	Net Amount	
1	9/18/2017	6.000	EA	RGNAGSC-150BN100SY Sc-150Bn Straw/Coconut Bionet Blanket 8'	108.75000	652.50	

Mary Beth Marks 406-579-3730
paid Visa \$652.50 9/8/17

Sales Amount:	652.50
Order Disc (0.00%):	0.00
Sales Tax:	0.00
Freight:	0.00
Misc:	0.00
Prepaid:	0.00
Total:	652.50

APPENDIX H – PAY REQUEST



North Wind Construction Services, LLC

PRELIMINARY SCHEDULE ONLY
 BILLING INVOICE NOT SELECTED
 FOR POSTING!

Invoice Number: 00000000007689 Account: 4USDAFS-MT
 Date: 10/03/17

To: USDA - FOREST SERVICE Remit To: North Wind Construction Services, LLC
 WESTERN MONTANA ACQUISITION ZONE ATTN: ACCOUNTS RECEIVABLE
 24 FORT MISSOULA ROAD 1425 Higham Street
 MISSOULA, MT 59804 Idaho Falls, ID 83405

VAT Number 80-0651375
 Terms: NET 30 Due Date: 11/02/17 Customer PO: AG-0343-C-17-0019
 Project No: 40095 Invoice Total: \$184,937.00
 Project Name: NEW WORLD MINE REPOSITORY Bill Number:
 Currency: USD

NEW WORLD MINE REPOSITORY SUMP DRAINAGE FIELD CONSTRUCTION, CUSTER - GALLATIN NATIONAL FOREST
 PERIOD OF PERFORMANCE: 08/14/2017 - 09/22/2017

Item Number	Item Description	Rev	Quantity	Unit Price	Discount Amount	Total Price
	TASK 151 MOBILIZATION, DEMOBILIZATION, BONDING AND INSURANCE		1	44,777.00	\$0.00	\$44,777.00
	TASK 151 LOAD AND HAUL K-30-B LLDPE LINER FROM BEAL MTN MINE		1	2,885.00	0.00	2,885.00
	TASK 204.02(b) EXCAVATE & STOCKPILE REPOSITORY WASTE TO SUMP		1	62,562.00	0.00	62,562.00
	TASK 204.02(e) INFILTRATION BASIN DRAIN/ BEDDING GRAVEL		149	82.25	0.00	12,255.25
	TASK 204.02(f) TYPE IV-A GEOTEXTILE		90	21.80	0.00	1,962.00
	TASK 602.06 8" HDPE SOLID PIPE (SUMP DRAIN PIPE)		125	36.26	0.00	4,532.50
	TASK 602.06 8" HDPE PERFORATED PIPE		75	31.83	0.00	2,387.25
	TASK 204.02(g) CUT & PLACE K-30-B LLDPE LINER STRIP		1	2,756.00	0.00	2,756.00
	TASK 204.02(h) SECONDARY SAMPLING SUMP		1	7,140.00	0.00	7,140.00
	TASK 204.02(j) INSTALL TYPE IV-A GEOTEXTILE SUMP SEPARATION		1	20,440.00	0.00	20,440.00
	TASK 204.02(m) CUT & PLACE K-30-B LLDPE LINER STRIP		1	14,965.00	0.00	14,965.00
	TASK 713.17 TEMPORARY ROLLED EROSION CONTROL MAT		1	8,275.00	0.00	8,275.00
	Price of Items					\$184,937.00
	Less Total Discount Amount					0.00
	Plus Total Tax					0.00
	Invoice Total					\$184,937.00