REEPORT-MCMORAN

Freeport-McMoRan Chino Mines Company P.O. Box 10 Bayard, NM 88023

Sherry Burt-Kested Manager, Environmental Services Telephone: 575-912-5927 e-mail: sburtkest@fmi.com

May 22, 2018

Certified Mail #70182290000117904850

Return Receipt Requested

Ms. Rebecca Roose, Director New Mexico Environment Department Water Protection Division P.O. Box 5469 Santa Fe, NM 87502

Dear Ms. Roose:

Re: Smelter/Tailing Soils Investigation Unit - Chino AOC Vegetation Monitoring Report, Hurley Railroad Interim Remedial Action

Freeport-McMoRan Chino Mines Company (Chino) submits under separate cover the revised 5 year Vegetation Monitoring Report for the Hurley Railroad Interim Remedial Action Site, Smelter/Tailing Investigation Unit under the Chino Administrative Order on Consent (AOC). This report was submitted today to Mr. David Mercer, New Mexico Environment Department (NMED) AOC Project Manager. The monitoring report was revised in response to comments received from the NMED in a letter dated May 1, 2019. NMED also provided conditional approval of the report pending corrections made to Section 4, Page 5 and Section 4.2, Page 5, and to Table 6. Chino has revised the report in response to these specific comments. Additionally, Chino revised some statements for better clarity but could not discern or address without specifications the request for improved composition as per general comment provided through public review.

Please contact Ms. Pam Pinson at (575) 912-5213 if you have any questions regarding this quantitative vegetation survey report.

Sincerely,

Sherry Burt-Kested, Manager **Environmental Services**

SBK 20190522-001

David Mercer, NMED (via email) XC: Joseph Fox, NMED (via email) Petra Sanchez, U.S. Environmental Protection Agency (via email) Mike Steward, FCX (via email)



REPORT VEGETATION MONITORING REPORT

Hurley Railroad Interim Remedial Action, Smelter/Tailing Soils Investigation Unit

Submitted to:

Freeport-McMoRan Chino Mines Company PO Box 10 Bayard, NM 88023

Submitted by:

Golder Associates Inc.

5200 Pasadena Avenue, N.E. Suite C Albuquerque, New Mexico, USA 87113

+1 505 821-3043

1779616

May 17, 2019



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1.0 INTRODUCTION

Freeport McMoRan Chino Mines Company (Chino) conducted the Hurley Railroad Interim Remedial Action (Hurley RR IRA) in 2012 near the Town of Hurley, New Mexico. The remedial action fulfilled the mitigation requirements under IRAs within the Smelter/Tailing Soils Investigation Unit (STSIU) as part of an Administrative Order on Consent (AOC) with the New Mexico Environment Department (NMED) (NMED 1994).

The Hurley RR IRA was performed in areas adjacent to the Southwest Railroad (SWRR) corridor where surface soils were impacted mostly by windblown concentrate from the historic Hurley Concentrator and, to a lesser degree, railroad operations (Figure 1). Specifically, remediation was undertaken to address elevated copper in surface soils. Removal of surface soils was completed in December 2012 as documented in the Supplemental IRA Completion Report for the Hurley RR site remediation (Golder 2013).

Pursuant to the commitments in the IRA Work Plan (Chino 2003a and 2003b) and the Completion Report (Golder 2013), Chino performed quarterly qualitative vegetation and erosion monitoring of the remediated areas for four years after initial vegetation establishment. To fulfill the vegetation monitoring requirements described in the Completion Report, Chino retained Golder Associates Inc. (Golder) to conduct a quantitative vegetation survey of the Hurley RR IRA site to document the status of the revegetated area five years after seeding.

1.1 Background

Prior to the remedial action, surface soils in the Hurley RR IRA site had incurred substantial physical impacts associated with construction and grading of the SWRR track corridor, facilities, and dirt access roads, various paved roads and a former residential area east of the tracks. At the time of the soil removal, much of the area had naturally revegetated to various degrees with grasses, forbs, and shrubs. Thus, the much of the site was represented by disturbed soil and vegetation conditions prior to the removal efforts.

The Interim Removal Action Work Plan for the STSIU (the Work Plan), approved by NMED, addressed elevated copper in surface soils to the north and west of Hurley (ARCADIS 2007). The objective of the IRA was to remove soils in areas with copper concentrations higher than 5,000 milligrams per kilogram (mg/kg), delineated laterally. Chino applied the NMED-approved residential remedial action criteria of 5000 mg/kg for the Hurley Soils Investigation Unit (HSIU) to be conservative. The IRA also proposed that soils in areas with higher than or equal to 5,000 mg/kg copper concentrations would be removed vertically until the copper concentrations were less than 2,700 mg/kg to minimize exposure of newly stripped soils to ground-feeding birds. Following the completion of the Golf Course IRA, NMED determined the pre-feasibility study remedial action criteria (Pre-FS RAC) for copper in the STSIU was 1,600 mg/kg for both HSIU residential and ecological risk (NMED 2010 and 2011).

The STSIU IRA was implemented for areas north and west of Hurley in 2008 with the Hurley Golf Course accounting for most of the acreage, as detailed in the Interim Removal Action Completion Report, STSIU (ARCADIS 2009). Additional areas identified in the 2007 Work Plan (ARCADIS 2007) as exceeding the RAC along the non-operational areas of the SWRR corridor north and west of the Town of Hurley were not addressed in 2008 because of access issues. Access to the railroad corridor was granted in 2012 by SWRR and a second interim action for soil removal was implemented that year. The 2008 Golf Course IRA and 2012 Hurley Railroad IRA sites are shown in Figure 1.

Soil removal for the Hurley RR IRA was performed from September 4, 2012 to December 17, 2012 by Tipe Construction (Tipe) with oversight and confirmation sampling performed by Golder. The soil removal equipment included a road grader, front-end loader, backhoe, bulldozer, 2 skid-steer loaders. In addition, hand shovels were

used to scrape soils in some areas. Mesquite and other vegetation were cleared and grubbed to the extent practical prior to soil removal. The Work Plan required excavation of no less than 2 inches of soil. As a general rule, Tipe removed 3 inches of soil on the first pass. When confirmation sampling determined that additional excavation was necessary, Tipe removed an additional 2 inches of soil in successive increments until the field testing indicated that the criteria were achieved. Overall, soils were excavated to a depth of 3 to 12 inches. Final grading was conducted to eliminate low and high areas that might hamper positive drainage. Backfilling was not necessary to accomplish final grades. Based on the final delineation, 30.9 acres were remediated in the Hurley RR IRA site (Figure 2) and the total volume of soil removed was approximately 22,000 cubic yards. A photolog illustrating the soil removal process is provided in Appendix A.

The site was seeded by Rocky Mountain Reclamation the following spring prior to the summer monsoons. The seedbed was prepared by disking the soil surface to approximately 6 inches and seeded with a rangeland drill using a combined drill/broadcast process. A chain drag behind the seeder was used to improve soil-seed contact. The site was then mulched and crimped to protect the soil surface from erosion during the establishment phase. The seed mix and application rates for the remedial action are listed in Table 1 and are generally consistent with the Work Plan. The functions and attributes of the primary plant species are listed in Table 2.

Seed germination was observed about one month after seeding and seedling establishment was consistent across the site at the end of the 2013 growing season. By mid-summer 2014, canopy cover in revegetated areas was estimated to be 70% of undisturbed areas (see Appendix A for photos) and was sufficient to control wind and water erosion. Once vegetation establishment was deemed adequate, monthly stormwater inspections ceased and sediment controls (silt fences, straw wattles, and straw bales) were removed. Chino personnel conducted quarterly monitoring thereafter pursuant to the IRA Work Plan (ARCADIS 2007). The quarterly inspection reports for the site are provided in Appendix B.

1.2 Objectives

The primary objective for revegetation of the Hurley RR site is to limit erosion and provide dust control for remediated areas through the re-establishment of a native plant community. A secondary benefit of the reclamation is to establish wildlife habitat recognizing the site is adjacent to the Town of Hurley with significant vehicular and train traffic that may limit wildlife use of the area.

Per the Completion Report (Golder 2013), Chino is required to conduct a quantitative survey of revegetated areas and submit a report evaluating the site relative to Chino's *Vegetation Success Standards* (Appendix C, Mining and Minerals Division's [MMD] Revision 01-1 to Permit GR009RE). The post-mining land use (PMLU) for Chino Mine is wildlife habitat, although for these remediated sites there is potential for residential, business, or infrastructure development due to the proximity to the Town of Hurley. Under MMD's guidance for a wildlife PMLU, total canopy cover, shrub density, and plant diversity are evaluated to determine vegetation success (Section 2).

The intent of this document is to detail the methods and results of the quantitative vegetation monitoring in the remediated areas at the Hurley RR IRA. On October 23 and 24, 2017, Golder conducted a quantitative vegetation survey of the Hurley RR site to evaluate the progress of the revegetation after five growing seasons. Combined, the survey covered approximately 30.9 acres.

2.0 SUCCESS CRITERIA

Revegetation of the Hurley RR site was intended primarily to limit erosion and provide dust control for disturbed areas through re-establishment of a native plant community (Golder 2013). Reclamation success at Chino is

evaluated by a reference area approach as described in the *Interim Technical Standards* (ITS, DBS&A 1999) and the *Closure/Closeout Plan* (CCP, Chino 2007). The reclamation success criteria were developed for reclaimed tailing areas and are based upon analysis of vegetation data collected in the South Mine Reference Area (Figure 1).

Under the reference area approach, revegetation success criteria are established for the reclamation in proportion to a mature, native reference area. Reclaimed areas are eligible for bond release 12 years after seeding when both the reclaimed and reference areas are monitored to allow formal hypotheses testing to determine whether the success standards are met. The Hurley RR site technically is not a reclamation site (only native ground was revegetated), nor is it expected to have fully progressed in just five years. Therefore, the South Mine Reference Area was not monitored as part this study and reference area data presented in the ITS report (DBS&A 1999) were used to assign benchmarks or technical guidance to evaluate the progress and success of the Hurley RR remediation.

Table 3 provides the reclamation success criteria for Chino and the technical guidance used to evaluate the Hurley RR site five years after seeding. In summary, revegetation efforts are considered successful when the canopy cover on the reclaimed facility is at least 70% of the reference area canopy cover. Canopy cover in the South Mine Reference Area in 1999 was 54.1%, making the success criterion 37.9%.

Shrub density is considered adequate if it is a least 60% of the reference area. Shrub density at the South Mine Reference Area was 7.3 stems per square meter (stems/m²) based on quadrat frequency data collected in 1999. Thus, the technical guidance for the Hurley RR IRA vegetation monitoring was set at 4.4 stems/m².

In addition to comparison to cover and shrub density, the revegetation would be considered successful if the plant community is composed of diversity of plant forms (grasses, forbs, and shrubs) without excessive noxious species. Diversity is evaluated against numerical guidelines for different structural components of the vegetation (Table 3). In summary, the diversity guideline would be met if at least three warm season grasses and two shrubs each have cover levels of at least 1%, and one perennial, cool- or intermediate-season grass with a minimum cover level of 0.5%. In addition, two non-weedy forb species with minimum cover level of at least 0.1% are required to meet the diversity guideline. Diversity is also demonstrated by evidence of colonization or recruitment of native (not-seeded) plants from adjacent undisturbed areas. Recruitment of native plant species is indicative of ecological succession and the capacity of the site to support a self-sustaining ecosystem.

3.0 METHODS

Golder conducted the quantitative vegetation survey of the remediated sites and reference area between October 23 and 24, 2017. Vegetation attributes were quantified using sampling methods approved by the MMD. Golder collected vegetation data using the approved transect/quadrat system (DBS&A 1999). Transect locations were selected from randomly generated coordinates on a 50-foot grid imposed over the remediated site. Transect coordinates originated from the southwestern corner of the grid. Each 30-meter (m) transect is configured in a dogleg pattern (Figure 3). Four 1-m² quadrats were placed at pre-determined intervals along each transect for quantitative vegetation measurements.

For each quadrat, ocular estimates were made of total canopy, species canopy cover, basal cover, surface litter, surface rock fragments, and bare soil. Prior to formal sampling, the site was traversed on foot to inventory the plant community. Not all plant species observed during the general site inspection are expected to occur in the sampling quadrats.

3.1 Vegetation and Ground Cover

Field scientists determined species canopy cover, total canopy cover, surface litter, surface rock fragments, and bare soil in each quadrat. They also measured basal cover and plant frequency on a species-basis by counting the number of individual plants rooted in each quadrat. A percent-area card with a minimum resolution of 0.1 percent was used to increase accuracy and consistency of the measurements. Cover estimates less than 0.1 percent were entered as trace amounts.

Canopy cover is the percentage of quadrat area included in the vertical projection of the canopy (Daubenmire 1968). Canopy cover estimates made on the species basis may exceed 100 percent in individual quadrats where the vegetation overlaps (multi-layered canopies). In contrast, the total canopy cover, surface litter, rock fragments, and bare soil does not exceed 100 percent. Relative canopy cover for a specific species or plant class is the calculated proportion of the canopy cover summed for all species.

Basal cover is the proportion of ground occupied by the crowns of grasses and rooting stems of forbs and shrubs. Like the total cover estimates, basal cover estimates do not exceed 100 percent. A photograph of each quadrat was taken to preserve a record of the conditions at the time of sampling.

3.2 Shrub Density

Shrub density, or the number of woody plants per area, was determined using a belt transect method (Bonham, 1989). Shrub density was determined from a 2-meter wide, 30-meter long belt transect along the perimeter of the dog-legged transect (Figure 3). Shrubs rooted in the belt transect were counted. Counts were made on a species basis. Shrub density was also calculated based on plant frequency data collected for each quadrat.

3.3 Plant Diversity

Plant diversity is assessed by comparing the number and occurrence of perennial species by life form found in the remediated sites to the technical standard developed for Chino (Section 2). The number of perennial grass (warm and cool seasons), perennial forb, and shrub species observed within the quadrats and their associated cover levels were compared to the technical standard (Table 3).

3.4 Sample Adequacy

The number of samples required to characterize a particular vegetation attribute depends on the uniformity of the vegetation and the desired degree of certainty required for the analysis. Sample adequacy is the minimum number of samples required to estimate a parameter within a given level of precision (Cochran 1977) and must be met for classical null hypothesis testing for bond release comparisons (MMD 1999). In contrast, vegetation monitoring activities, like those performed at the Hurley RR site, do not need to have this level of statistical rigor. Often it is impractical to achieve sample adequacy in vegetation monitoring studies and a minimum sample number approach is taken. MMD recognizes this limitation and has provided minimum sample sizes for various quantitative methods (MMD 1996).

The number of samples necessary to meet sample adequacy was calculated for total canopy cover and shrub density assuming the data were normally distributed using Snedecor and Cochran (1967).

$$m = \frac{t^2 s^2}{(\overline{x}D)^2}$$

Where *m* equals minimum number of samples required, *t* is the two-tailed t-distribution value based on a 90% level of confidence with n-1 degrees of freedom, *s* is the standard deviation of the sample data, \overline{x} is the mean, and *D* is the desired level of accuracy, which is 10% of the mean. Sample adequacy is achieved when there is 90% confidence that the sample mean for total canopy cover is within 10% of the true population mean. The vegetation monitoring of the remediated site does not require or did not attempt to meet sample adequacy, though the number of samples necessary to meet sample adequacy is reported.

4.0 RESULTS

Vegetation attributes were measured at 20 quadrats along 5 randomly located transects within the remediated site during the 2017 monitoring event (Figure 2). Work was performed on October 23 and 24, 2017. Tables in Appendix C summarize individual quadrat data and photographs of the quadrats are provided in Appendix D.

4.1 Precipitation

Precipitation records from the Pond 7 gage for the past 5 years (2013 through 2017) are shown in Table 4. The average precipitation at this gauge for the 5-year period was 11.7 inches. This compares to the annual average precipitation regionally at Fort Bayard, New Mexico (Western Regional Climate Center, www.wrcc.dri.edu) of approximately 15.7 inches. The precipitation data indicate the first 2 years after seeding were well below average. Despite the droughty conditions, the distribution of moisture, particularly through the monsoonal period (July through early October), was sufficient for vegetation establishment. Near normal precipitation occurred in 2015 and 2017. The August total recorded at Pond 7 in 2017 is roughly twice the Fort Bayard regional monthly average for August.

4.2 Canopy Cover

Mean canopy cover (\pm 90% confidence interval [CI]) for the Hurley RR site was 80.0% (\pm 6.5%; Table 5). The canopy cover for the individual quadrats ranged from 28 to 100% (Appendix C, Table C-1). The calculated minimum sample size needed to meet sample adequacy (N_{min}) for total canopy cover is 14 samples (Table 5). Figure 4a illustrates the mean cover for total vegetation canopy, surface rock, litter, and bare soil.

Figure 4b illustrates the proportional canopy cover for perennial grasses, perennial forbs, annual forbs and woody plants. Perennial grasses represent 67.1% of the total relative canopy cover at the remediated site. Sideoats grama (*Bouteloua curtipendula*) is the dominant perennial grass with blue grama (*B. gracilis*), streambank bristlegrass (*Setaria leucopila*), sand dropseed (*Sporobolus cryptandrus*) and galleta (*Pleuraphis jamesii*) providing significant canopy cover (Table 6). Shrubs were the next most abundant plant class captured in the quadrats with 19.8% of the total relative cover. Slender janusia (*Janusia gracilis*), a vine, provided significant cover in addition to four-wing saltbush (Atriplex canescens), broom snakeweed (*Gutierrezia sarothrae*) and catclaw mimosa (*Mimosa aculeaticarpa var. biucifera*). Relative forb cover was 13.1 percent. Common forbs included slender goldenweed (*Machaeranthera gracilis*), dwarf pennyroyal (*Hedeoma nana*), rose heath (*Chaetopappa ericoides*), dwarf pennyroyal (*Hedeoma nana*), hairyseed bahia (*Bahia absinthifolia*), and Russian thistle (*Salsola tragus*).

4.3 Basal Cover

Basal cover associated with vegetation is a fraction of the total canopy cover and reflects the morphology of the predominant vegetation in the Chino Mine operational area (i.e., bunchgrasses, annual forbs, and shrubs). Although basal cover is not evaluated for revegetation success, it was measured to aid in ecological interpretations of a site. Basal cover is an important attribute because it is less affected by annual climatic variations than canopy cover, and thus, provides a consistent basis for evaluating reclamation success and changes in community structure.

Mean basal cover for the Hurley RR site was 6.6% (\pm 0.8%; Table 5). The basal cover for the individual quadrats ranged from 3 to 12.5% (Appendix C, Table C-2). The composition of the mean basal cover of the remediated area is illustrated in Figure 5a and indicates that perennial grasses dominate with 91% relative basal cover (Figure 5b).

4.4 Shrub Density

Shrub density at the Hurley RR site was $0.9 (\pm 1.1)$ stems/m² (3650 shrubs/acre) using the belt transect method compared to 4.6 (± 2.3) stems/m² (18,000 shrubs/acre) based on the quadrat frequency data (Table 5). The primary reason for the increased density with the quadrat data is attributed to numerous root shoots of slender janusia and Siberian elm (*Ulmus pumila*) encountered on transect VT 3. Five other shrub species were found in the quadrats including fairyduster (*Calliandra eriophylla*), and broom snakeweed that occur at a moderate frequency. The belt transects captured these species and other shrubs including four-wing saltbush, catclaw mimosa, soaptree yucca (*Yucca elata*) Douglas' ragwort (*Senecio flaccidus var. douglasii*), and winterfat (*Krascheninnikovia lanata*).

4.5 Diversity

The Hurley RR site supports a diverse complement of grass, forb and woody plant species. A total of 54 species were identified in the remediated area and more than half (32 species) of the species were captured in the 20 individual quadrats (Table 6). The seed mix contained 16 plant species (Table 1), of which 11 were identified in the revegetation. The other 43 volunteer species were either recruited from adjacent undisturbed areas or resprouted from vegetative propagules following topsoil removal.

In remediated areas, 16 grasses species, 11 woody plants, and 27 forbs were found. Warm season grasses generally dominate the canopy cover, though both a cool season grass (Letterman's needlegrass, *Achnatherum lettermanii*) and intermediate season grass (Plains lovegrass, *Eragrostis intermedia*) occur on the site. Woody plants are represented not only by shrubs but vines and trees as well. Numerous perennial and annual forbs were documented, and though Russian thistle is present at the site, no noxious weeds were found during the field investigation. The number of species identified at the site demonstrates that in the five years since seeding, the site is being colonized by native species and is self-sustaining.

5.0 SUMMARY

The primary objective for revegetation of the Hurley RR site is to limit wind and water erosion for remediated areas through the re-establishment of a native plant community. Golder conducted a quantitative vegetation survey of the site to document the progress of revegetation five years after completion of the IRA. Canopy cover, shrub density and diversity were measured and compared to the reference area technical guidance for Chino South Mine. This guidance is typically applied in 2 of the last 4 years of the 12-year liability period after seeding as part of demonstrating reclamation success.

The revegetation efforts associated with the IRA at the Hurley RR site are considered successful. An early-seral stage mixed grama-shrub community is well established across the Hurley RR site. Based on the 2017 sampling, mean total canopy cover is 80.0% and more than twice the reference area guidance for canopy cover set at 37.9%. Given the less than favorable precipitation during the vegetation establishment period and the condition of the plant community in 2017, the strong canopy cover demonstrates that the remediated site is resilient and self-sustaining. Shrub density of the Hurley RR site is 63% of the South Mine Reference Area using the quadrat frequency estimation method, exceeding the revegetation success standard of 60% of the reference area woody plant density.

Forty-three plant species that were not included in the reclamation seed mix were identified at the Hurley RR site. Recruitment of native plant species into the reclaimed plant community demonstrates the process of ecological succession and the gradual establishment of self-sustaining ecosystem. Vegetation on the remediated site meets the diversity requirements for warm-season grasses, forbs, and shrubs. Six warm-season, perennial grasses met the minimum occurrence of 1% canopy cover. Two annual forbs (excluding Russian thistle) and nine perennial forbs met the minimum occurrence of 0.1% canopy cover. Five woody plant species met the 1% canopy cover minimum occurrence. Cool season grasses are generally lacking at the site. The lack of cool season grasses is consistent with the surrounding undisturbed ecosystem (Golder 2015 and 2016). As such, the minimum cover for cool-season grasses was not met as specified in the diversity success standards. Based on regional studies, the requirements for cool-season grasses is being re-evaluated and may not be applicable in the future.

No significant erosion issues were documented during the 5-year monitoring period, and the currently established plant community meets the overall objective as a best management practice for erosion control. The reclaimed plant community provides significant canopy cover, while also providing both ecological and rangeland values to the area.

Results from the 2017 vegetation survey of the Hurley RR IRA indicate that revegetation efforts were successful, and the remediated area can support a self-sustaining ecosystem. The survey data demonstrate that the vegetation on the Hurley RR site is diverse and exceeds Chino's vegetation success standards for total canopy cover and shrub density. Thus, the IRA objective to return the area to a post-mining beneficial use (i.e., wildlife habitat) is met with a viable self-sustaining vegetated cover. No additional vegetation monitoring is recommended as the interim remedial action for the remediated site will remain under the oversight of the Chino AOC and will be addressed and released under the STSIU's Record of Decision.

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Tables

Table 1: Seed Mix Used at the Hurley Railroad IRA

Species	Life Form	Duration	Seasonality	Application Rate ^a
Blue grama (<i>Bouteloua gracilis</i>)	Grass	Perennial	Warm	0.25
Side-oats grama (Bouteloua curtipendula)	Grass	Perennial	Warm	0.60
Indian ricegrass (Achnatherum hymenoides)	Grass	Perennial	Cool	1.40
Green sprangletop (Leptochloa dubia)	Grass	Perennial	Warm	0.50
Needle and thread grass (Hesperostipa comata)	Grass	Perennial	Cool	0.55
Prairie junegrass (<i>Koeleria macrantha</i>)	Grass	Perennial	Cool	0.10
Galleta (<i>Pleuraphis jamesii</i>)	Grass	Perennial	Warm	0.45
Streambank wheatgrass (<i>Elymus lanceolatus</i>)	Grass	Perennial	Cool	0.50
Sand dropseed (Sporobolus cryptandrus)	Grass	Perennial	Warm	0.10
Blue flax (<i>Linum lewisii</i>)	Forb	Perennial	NA	0.15
Prairie coneflower (Ratibida columnifera)	Forb	Perennial	NA	0.25
White prairie clover (Dalea candida)	Forb	Perennial	NA	0.20
Fairyduster (Calliandra eriophylla)	Shrub	Perennial	NA	0.05
Rubber rabbitbrush (Ericameria nauseosa)	Shrub	Perennial	NA	0.25
Winterfat (Krascheninnikovia lanata)	Shrub	Perennial	NA	0.60
Fourwing saltbush (Atriplex canescens)	Shrub	Perennial	NA	1.40
Total PLS (Ib/acre)				7.35

Notes:

a = Rate is in pounds of pure live seed (PLS) per acre (lb/ac)

NA = Not applicable



Table 2: Functions and Attributes of the Primary Plant Species for the Hurley Railroad IRA

Species	Character	Attributes and Function
Blue grama (Bouteloua gracilis)	N, P, W, G	Sod and bunch grass providing ground cover and forage
Side-oats grama (Bouteloua curtipendula)	N, P, W, G	Bunchgrass providing ground cover and forage
Indian ricegrass (Achnatherum hymenoides)	N, P, C, G	Bunchgrass providing ground cover and forage
Green sprangletop (Leptochloa dubia)	N, P, W, G	Erect bunc grass; aggressive short-lived nurse plant with forage value
Needle and thread grass (Hesperostipa comata)	N, P, C, G	Tufted, erect bunchgrass providing ground cover and forage
Prairie junegrass (Koeleria macrantha)	N, P, C, G	Bunchgrass providing ground cover and forage
Galleta (pleuraphic jamesii)	N, P, W, G	Sod and bunch grass providing ground cover and forage
Streambank wheatgrass (<i>Elymus lanceolatus</i>)	N, P, C, G	Sod-forming grass providing ground cover and forage
Sand dropseed (Sporobolus cryptandrus)	N, P, W, G	Warm-season bunch grass providing erosion control of sandy soil
Blue flax (<i>linum lewisii</i>)	N, P, F	Persistent forb providing forage, browse, erosion control and beautification
Prairie coneflower (Ratibida columnifera)	N, P, F	Herbaceous perennial providing spring browse, forage, structural cover and beatification
White prairie clover (Dalea candida)	N, P, F	Leguminous forb providing forage and browse
Fairyduster (Calliandra humilis)	N, P, SS	Spreading herbaceous perennial providing browse
Rubber rabbitbrush (Ericameria nauseosa)	N, P, S	Mid-height to tall shrub providing winter browes, cover, and pollinator habitat
Winterfat (Krascheninnikovia lanata)	N, P, SS	Low shrub providing winter browse
Fourwing saltbush (Atriplex canescens)	N, P, S	Mid-height to tall shrub providing browse and cover

Notes:

N = Native

P = Perennial

W = Warm season

G = Grass

C = Cool season

S = Shrub

SS = Subshrub

F = Forb



	Criterion		Success Standard Technical Guida			
Cover Total canopy cover		ver	≥ 70% of Reference Area (54.1%)	38%		
Shrub Density	Stems per squa	re meter or acre	\geq 60% of Reference Area (7.6 stems/m ²)	4.4 stems/m ²		
	Perennial	Warm season	≥ 3 species, each ≥ 1%	each ≥ 1% cover		
	Grasses Cool season		\geq 1 species, each \geq 0.5% cover			
Diversity	Forbs		≥ 2 species, each ≥ 0.1% cover			
	Shrubs		≥ 2 species, each ≥ 1% cover			

Table 3: Chino Mine Reclamation Success Standards and Technical Guidance for the Hurley RR IRA

Note:

From DBS&A, 1999



May 2019

Year Feb Mar May Jul Sep Oct Nov Dec **Grand Total** Jan Apr Jun Aug Pond 7 2013 0.56 0.00 0.00 0.04 0.00 0.00 3.80 1.92 1.75 0.00 0.78 0.74 9.59 2014 0.00 0.39 0.24 0.20 1.68 0.00 1.57 0.00 0.00 1.12 0.21 0.61 6.02 2015 1.66 0.34 0.39 0.11 0.17 1.65 2.54 2.89 1.36 1.85 0.66 0.41 14.03 2016 0.58 0.13 0.01 0.51 0.13 0.42 1.59 2.60 1.07 1.60 12.61 0.15 3.82 2017 2.73 1.04 0.02 0.01 0.36 1.29 2.92 6.49 0.39 0.30 0.23 0.34 16.12 Fort Bayard 0.87 0.87 0.69 0.39 0.47 0.78 3.20 3.30 2.05 1.25 0.76 1.04 15.66 Average

Note:

-- Not available

Table 4: Monthly Precipitation for Pond 7



Cover		Shrub I	Density
Total Canopy (%)		Belt transect (st	ems/m ²)
Mean	80.0	Mean	0.9
Std Dev	17.6	Std Dev	1.3
90% CI	6.5	90% CI	1.0
Nmin	14	Nmin	481
Basal (%)		Frequency (ster	ms/m²)
Mean	6.6	Mean	4.6
Std Dev	2.2	Std Dev	6.3
90% CI	0.8	90% CI	2.3
Nmin 33		Nmin	332

Table 5: Summary Statistics for Canopy and Basal Cover andShrub Density

Notes:

90% CI = 90 percent confidence interval around the mean Nmin = sample adequacy (cover α =0.1, shrub density α =0.2)



Tab	e 6: Com	prehensive	Plant Lis	st and '	Vegetation	Cover	and Densi	v – Hurley	Railroad	IRA
i ab	e u. uum	prenenaive		ταπα	vegetation	00461		.y — Hune	y mani oau	11\7

Scientific Name	Common Namo		Mean Cover (%)		Mean	
Scientific Name	Common Name	Code	Canopy	Basal	Density (stems/m ²)	Source
Grasses						
Andropogon gerardii	Big bluestem	ANGE				V
Aristida divaricata	Poverty threeawn	ARDI	1.64	0.19	0.35	V
Aristida purpurea	Purple threeawn	ARPU	0.60	<0.10	<0.10	V
Bothriochloa barbinodis	Cane bluestem	BOBA3				V
Bothriochloa ischaemum	Yellow bluestem	BOIS	0.74	<0.10	0.15	V
Bouteloua curtipendula	Sideoats grama	BOCU	32.21	2.76	12.95	S
Bouteloua gracilis	Blue grama	BOGR	8.48	0.78	3.45	S
Dasyochloa pulchella	Fluffgrass	DAPU2				V
Eragrostis intermedia	Plains lovegrass	ERIN				V
Leptochloa dubia	Green sprangletop	LEDU	0.20	<0.10	0.10	S
Pleuraphis jamesii	Galleta	PLJA	7.05	0.71	1.90	S
Schedonnardus paniculatus	Tumblegrass	SCPA	7.00	0.71		V
Setaria leucopila	Streambank bristlegrass	SELE	11.86	1.19	2.60	v
Setana leucopila Sorghastrum nutans	Indiangrass	SONU		1.19	2.60	V
	ÿ					
Sporobolus cryptandrus	Sand dropseed	SPCR	9.80	0.34	2.50	S V
Stipa lettermannii	Letterman stipa	STLE				V
Forbs	Downdo milloretele		0.4.4	.0.40	0.10	
Astragalus parryi	Parry's milkvetch	ASPA	0.14	<0.10	0.10	V
Aletes spp.	Unk parsley	ALETE				V
Asteracea spp	Unk composite	ASTER				V
Bahia absinthifolia	Hairyseed bahia	BAAB	0.65	0.0025	0.05	V
Calylophus hartwegii	Hartweg's sundrops	CAHA				V
Chaetopappa ericoides	Rose heath	CHER	1.78	<0.10	1.65	V
Chenopodium neomexicanum	New Mexico goosefoot	CHNE	<0.10	<0.10	<0.10	V
Circium spp	Unk thistle	CIRCI				V
Dalea candida	White prairie clover	DACA				S
Eriogunum spp.	Unk buckwheat	ERIOG				V
Fabaceae spp.	Unk legume	FABAC				V
Hedeoma nana	Dwarf pennyroyal	HENA	1.55	<0.10	0.70	V
Lesquerella spp.	Unk bladderpod	LESQU	<0.10	<0.10	<0.10	V
Lotus wrightii	Wright's deervetch	LOWR	0.39	<0.10	0.30	V
Machaeranthera canescens	Purple aster	MACA	0.59	<0.10	0.25	V
Machaeranthera gracilis	Slender goldenweed	MAGR	4.02	<0.10	1.65	V
Pectis angustifolia	Lemonweed	PEAN	<0.10	<0.10	0.95	V
Psilostrophe tagetina	Wooly paperflower	PSTA				V
Psorothamnus scoparius	Broom dalea	PSSC	0.58	<0.10	0.25	V
Ratibida columnifera	Cone flower	RACO	<0.10	<0.10	<0.10	S
Salsola tragus	Russian thistle	SATR	4.16	<0.10	2.00	V
Saisola tragus Senna bauhinoides	Twinleaf senna	SEBA	<0.10	<0.10	0.10	v
Solanum elaeagnifolium	Silverleaf nightshade	SOEL	0.24	<0.10	0.10	V
Sphaeralcea hastulata	Spear globemallow	SPHA	0.24	<0.10	0.20	V
Sphaeralcea leptophylla	Scaly globernallow	SPLE	0.08	<0.10	0.20	V
Stephanomeria pauciflora	Skeleton weed				1	
Stephanomena paucinora Thelesperma filifolium						V
Shrubs and Trees	Greenthread	THME				v
	Four wing colthuch		2.40	0.04	0.05	0
Atriplex canescens	Four-wing saltbush	ATCA	2.40	0.04	0.05	S
Calliandra eriophylla	Fairyduster	CAER	0.27	0.01	0.65	S
Eramerica nauseosus	Rubber rabbitbush	ERNA				S
Gutierrezia sarothrae	Broom snakeweed	GUSA	5.45	0.26	0.45	V
Janusia gracilis	Slender janusia	JAGR	8.63	0.08	1.25	V
Krascheninnikovia lanata	Winterfat	KRLA				S
Mimosa aculeaticarpa var. biucifera	Catclaw mimosa	MIACB	3.10	<0.10	0.25	V
Senecio flaccidus var. douglasii	Douglas' ragwort	SEFL				V
Ulmus pumila	Siberian elm	ULPU	1.01	<0.10	1.70	V
Yucca elata	Soaptree yucca	YUEL		-		V
Zinnia acerosa	Desert zinnia	ZIAC				V

stems/m² = stems per square meter

S= seeded, V=volunteer



Figures





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SMELTER/TAILING SOILS INVESTIGATION UNIT BOUNDARY (STSIU) HURLEY SOILS INVESTIGATION

HURLEY RAILROAD IRA

GOLF COURSE IRA

RAZORBACK RIDGE

SOUTH MINE REFERENCE AREA

---- SWRR RAILROAD TRACKS/CORRIDOR



COORDINATE SYSTEM: NAD 1983 STATEPLANE NEW

MEXICO WEST FIPS 3003 FEET AERIAL IMAGERY: NATIONAL AGRICULTURE IMAGERY PROGRAM (NAIP), USDA FARM SERVICE AGENCY. IMAGE TAKEN JUNE 2016.

REFERENCE

CLIENT FREEPORT MCMORAN, CHINO MINES GRANT COUNTY, HURLEY, NEW MEXICO

PROJECT HURLEY RAILROAD IRA VEGETATION MONITORING

TITLE

SITE	LOCATION MAP	

CONSULTANT		YYYY-MM-DD	2018-02-19	
		PREPARED	DZF	
	Golder	DESIGN	DZF	
	Golder	REVIEW	DR	
		APPROVED	DR	
PROJECT No.	CONTROL	RE	EVIEW	FIGURE
1779616			-	1



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• TRANSECT LOCATION

SOIL REMOVAL AREAS

--- SWRR RAILROAD TRACKS/CORRIDOR -



CLIENT FREEPORT MCMORAN, CHINO MINES GRANT COUNTY, HURLEY, NEW MEXICO

PROJECT HURLEY RAILROAD IRA VEGETATION MONITORING

TITLE SOIL REMOVAL AREAS AND VEGETATION TRANSECT LOCATIONS

CONSULTANT		YYYY-MM-DD	2018-02-19	
		PREPARED	DZF	
	Golder	DESIGN	DZF	
	Golder	REVIEW	DR	
		APPROVED	DR	
PROJECT No.	CONTROL	RE	EVIEW	FIGURE
1779616			-	2

REFERENCE

COORDINATE SYSTEM: NAD 1983 STATEPLANE NEW MEXICO WEST FIPS 3003 FEET AERIAL IMAGERY: NATIONAL AGRICULTURE IMAGERY PROGRAM (NAIP), USDA FARM SERVICE AGENCY. IMAGE TAKEN MAY 2016.



Figure 3: Vegetation Plot, Transect, and Quadrat Layout







APPENDIX A

Construction and Site Vegetation Photos











APPENDIX B

Sediment Control and Reclamation/Erosion Inspections

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD



:	
Sill force & Wattles	in place
Title:	Date
1+55	(4-20-12)

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

(HBi-weekly Inspection () Inspection before long weekends or down time Rainfall: _____ Inches () Rainfall Event Inspection **Does Not** Yes No Apply 6 ()() Are all run-on BMPs properly located and properly installed? (m () () Are all runoff BMPs properly located and properly installed? Do any sedimentation BMPs require repair or to be cleaned out? () () () () () Is there any sediment leaving the excavation area (yards)? Is there any evidence of erosion on cuts? () () () ()Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses? H Does the Sediment Control Plan require revision? () ()

1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time

greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.

- 2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.
- 3. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).
- 4. Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition.
- If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

BSERVATIONS and COMME Start of Week	Removin / replacing	weddles	daily
For how 1 road	accors		·
	, _ to		
pected by:	Title:	Date:	
yol home	$H_{5}S$	10- é	2-12

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD



- 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
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- If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMMENTS:				
Crew will potch	broken Silt Force	west of depot		
before Weekend	·			
.				
spected by:	Title:	Date:		
UNP /by	1455	105-12		
- Am - F				
V				

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

		() Bi-weekly Inspection () Inspection before long weekends or down time () Rainfall Event Inspection Rainfall: Inches		
Ye	s No	Does I Apply	• • • •	
()	()	(*)	Are all <u>run-on</u> BMPs properly located and properly installed?	
(+)-	()	()	Are all runoff BMPs properly located and properly installed?	
()	(4)	()	Do any sedimentation BMPs require repair or to be cleaned out?	
()	(4)	()	Is there any sediment leaving the excavation area (yards)?	
()	H-	()	Is there any evidence of erosion on cuts?	
()	5	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?	
()	4	()	Does the Sediment Control Plan require revision?	
 Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.). Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary). 				
OBSERVATIONS and COMMENTS:				
No rain secently ; Brits in good andition				
	<u> </u>			

Inspected by: York More

Title: 1455

Date:

10-10-12
A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

	• •	-	spection (Unspection before long weekends or down time t Inspection Rainfall: Inches
Ye	s No	Does I Apply	Not
()	()	(4)	Are all <u>run-on</u> BMPs properly located and properly installed?
()	(c)	Ward	Are all runoff BMPs properly located and properly installed?
()	Ŵ	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	Ø	()	Is there any sediment leaving the excavation area (yards)?
()	W	()	Is there any evidence of erosion on cuts?
()	(1)	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	W-	()	Does the Sediment Control Plan require revision?
1.	Inspections		erformed (1) bi-weekly, (2) immediately before holidays or any down time

greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater. 2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.

- Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).
- 4. Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition.
- 5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).



A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

) Bi-v () Rain	veekly Inspect nfall Event Ins	on () Inspection pection Rainfall:	before long weekend Inches	ls or down time	
Ye	es No	Does Not Apply				
()	()	(H) Are	all <u>run-on</u> BMPs properly	located and properly	installed?	
(L)	()	() Are	all <u>runoff</u> BMPs properly l	ocated and properly	installed?	
top	e e	() Do :	ny sedimentation BMPs	equire repair or to be	e cleaned out?	
()	('	() Isth	ere any sediment leaving	the excavation area	(yards)?	
()	(4)	() Is th	ere any evidence of erosi	on on cuts?		
()	Ũ		ere any evidence of sedi way accesses?	nent, debris, or mud	l on public roadways or	
()	(4)	() Doe	s the Sediment Control P	an require revision?		
2. 3.	 Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.). Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition. 					
		and COMME	NTS:			
<u> </u>	B/4/3	LOE go	»d-			
		-				
				····*		
			T:41		Deter	
Inspected	Dr Gala		Title:		Date: 1h-16-12	
Y						

Inspect

-))

10-16-12

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

			Ispection V Inspection before long weekends or down time int Inspection Rainfall: <u>0.0</u> Inches		
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()	()	()	Are all <u>run-on</u> BMPs properly located and properly installed?		
()	(4)	()	Are all runoff BMPs properly located and properly installed?		
(\$	()	()	Do any sedimentation BMPs require repair or to be cleaned out?		
()	(1)	()	Is there any sediment leaving the excavation area (yards)?		
()	()	()	Is there any evidence of erosion on cuts?		
()	(6)	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?		
()	(4	()	Does the Sediment Control Plan require revision?		
1.			performed (1) bi-weekly, (2) immediately before holidays or any down time		
2. 3.	Inspect sto Evaluate th	greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).			
4		te prace			

 Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition. 5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COM	MMENTS:	
Crew is repairing		and cleanly road
in prep for	3-day wind	
	<i>a</i>	
		- <u></u>
spected by:	Title:	Date:
UPP Ra	455	10-18-12
for rig		
\mathbf{V}		

	.,		spection () Inspection before long weekends or down time Int Inspection Rainfall: Inches
Yes	No	Does Apply	
(1)	()	()	Are all run-on BMPs properly located and properly installed?
()	()	()	Are all runoff BMPs properly located and properly installed?
()	(4)	· ()	Do any sedimentation BMPs require repair or to be cleaned out?
()	(9	()	Is there any sediment leaving the excavation area (yards)?
()	(e)	()	Is there any evidence of erosion on cuts?
()	5	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	5	. ()	Does the Sediment Control Plan require revision?
1. ins	spections	s to be p	performed (1) bi-weekly, (2) immediately before holidays or any down time

- Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
- 2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.
- 3. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).
- 4. Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition.
- 5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

BSERVATIONS and COMM	IENTS:	
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ected by:	Title:	Date:
VOR Ron	455	10.23.12
\smile		

		eekly Ins fall Ever	spection () Inspection before long weekends or down time at Inspection Rainfall: <u>0.</u> Inches
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(9	()	()	Are all runoff BMPs properly located and properly installed?
()	(9	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	(4	()	Is there any sediment leaving the excavation area (yards)?
()	()	_()	Is there any evidence of erosion on cuts?
()	1	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	(4)	()	Does the Sediment Control Plan require revision?

- 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
- 2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.
- 3. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).
- 4. Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition.
- If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMMENT	S:	
All BMS box goo	d	
	_,	
Inspected by:	Title:	Date:
Nop More	1455	10.29.12
- per g		
\bigcirc		

			spection \hat{U} Inspection before long weekends or down time int Inspection Rainfall: $\underline{0.0}$ Inches
Yes	No	Does Apply	
()	()	(4	Are all <u>run-on</u> BMPs properly located and properly installed?
(2)	()	()	Are all <u>runoff</u> BMPs properly located and properly installed?
()	(⁽)	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	H	()	Is there any sediment leaving the excavation area (yards)?
()	(1)	()	Is there any evidence of erosion on cuts?
()	()	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	(4)	()	Does the Sediment Control Plan require revision?
2. 3. 4. 5.	greater the Inspect stread Evaluate maintenar Observe BMP to er If a "Yes" plan revis	an a norr form wate the effect nce pract structura nsure pro- answer ions. Re- v physic	berformed (1) bi-weekly, (2) immediately before holidays or any down time mal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater. er drainage areas for evidence of pollutants entering the drainage systems. triveness of controls and BMP (good housekeeping activities, preventive ices, etc.). I measures, sediment controls, vegetative cover, and other stormwater oper function or proper condition. was checked to any of the above questions, explain necessary actions or evise the plan as needed within 1 week of inspection and implement any al changes within 1 week of inspection (attach additional sheet if

OBSERVATIONS and COMMENTS:					
Noted & silt forge	repairs that Type	completed before			
Leaving the site	· · · ·	• • · · · · · · · · · · · · · · · · · ·			
Inspected by:	Title:	Date:			
YOLKM	455	11-1-12			
V V					

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

				spection () Inspection before long weekends or down time nt Inspection Rainfall: Inches			
Ye	5	No	Does I Apply				
()	,	()	4	Are all run-on BMPs properly located and properly installed?			
4		()	()	Are all runoff BMPs properly located and properly installed?			
()		()	()	Do any sedimentation BMPs require repair or to be cleaned out?			
()		(4-	()	Is there any sediment leaving the excavation area (yards)?			
()		(4)	()	Is there any evidence of erosion on cuts?			
()		5	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?			
()		(4	()	Does the Sediment Control Plan require revision?			
1. 2.	greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.						
3.	Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).						
4.				measures, sediment controls, vegetative cover, and other stormwater ber function or proper condition.			

5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMMENTS: AI Thurs. 6000 No work Sinco 00 1 chaire 25Y Inspected by: Title: Date:



- 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
- 2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.
- Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).
- 4. Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition.
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2-12

		() Bi-weekly Inspection (Inspection before long weekends or down time () Rainfall Event Inspection Rainfall:				
Yes	s No	Does Appl				
()	()	10	Are all <u>run-on</u> BMPs properly located and properly installed?			
6	()	()	Are all runoff BMPs properly located and properly installed?			
()	¥	()	Do any sedimentation BMPs require repair or to be cleaned out?			
()	t	()	is there any sediment leaving the excavation area (yards)?			
()	4	()	is there any evidence of erosion on cuts?			
()	er	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?			
()	Ø	()	Does the Sediment Control Plan require revision?			
1.		spections to be performed (1) bi-weekly, (2) immediately before holidays or any down time eater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.				

- 2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.
- 3. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).
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OBSERVATIONS and COMMENT		
weit-prepted tos	- 3 day we	lev, Silf ferce
Neult-prepted tos	<u> </u>	
Inspected by:	Title:	Date:
yperhoy	1A-55	11-15-12

			spection () Inspection before long weekends or down time nt Inspection Rainfall: Inches
Yes	i No	Does Apply	
()	()	(9)	Are all run-on BMPs properly located and properly installed?
(•)	()	()	Are all runoff BMPs properly located and properly installed?
()	· (9)	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	(+)	()	Is there any sediment leaving the excavation area (yards)?
()	(9)	()	Is there any evidence of erosion on cuts?
()	H	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	(9)	()	Does the Sediment Control Plan require revision?
1.	Inspections	s to be p	erformed (1) bi-weekly, (2) immediately before holidays or any down time

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OBSERVATIONS and COMMENTS: eck inspection holy god all Inspected by: Title: Date: 1755

			nspection (Utrispection before long weekends or down time ent Inspection Rainfall: Inches
Yes	No	Does Apply	
()	()	4	Are all <u>run-on</u> BMPs properly located and properly installed?
4	()	()	Are all <u>runoff</u> BMPs properly located and properly installed?
()	6	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	4	()	is there any sediment leaving the excavation area (yards)?
()	0	()	Is there any evidence of erosion on cuts?
()	9	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	(4	()	Does the Sediment Control Plan require revision?

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OBSERVATIONS and COMMENTS:				
· (rew repaired sec	ction of silt frice.	that was sur over,		
- Minor refurs in	prep for 4-day th	orksgiving water		
Inspected by:	Title:	Date:		
yol hoz	<u>4</u> 55	11-21-12		

11-26-12

			nspection () Inspection before long weekends or down time ent Inspection Rainfall: Inches			
Yes	No		Does Not Apply			
()	()	()	Are all run-on BMPs properly located and properly installed?			
(4)	()	()	Are all runoff BMPs properly located and properly installed?			
()	(4)	()	Do any sedimentation BMPs require repair or to be cleaned out?			
()	(4)	()	Is there any sediment leaving the excavation area (yards)?			
()	()	()	Is there any evidence of erosion on cuts?			
()	()	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?			
()	راپ	()	Does the Sediment Control Plan require revision?			
1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time						

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OBSERVATIONS and COMM	······································	
Inspected by:	Title: 	Date:

			spection ()/Inspection before long weekends or down time nt Inspection Rainfall: Inches
Yes	No	Does Apply	
()	()	67	Are all <u>run-on</u> BMPs properly located and properly installed?
hajin	()	()	Are all runoff BMPs properly located and properly installed?
()	14	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	(1)	_()	Is there any sediment leaving the excavation area (yards)?
()	Ċ)	()	Is there any evidence of erosion on cuts?
()	(}	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	4	()	Does the Sediment Control Plan require revision?
1 10	montinue		

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OBSERVAT	IONS and					
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Inspected by:			Title:		Da	te:
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						11000
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2-4-12

		nspection () Inspection before long weekends or down time ent Inspection Rainfall: Inches	
Yes	No	Does Apply	
(()	67	Are all <u>run-on</u> BMPs properly located and properly installed?
(9)	()	()	Are all runoff BMPs properly located and properly installed?
()	(9	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	(1)	()	Is there any sediment leaving the excavation area (yards)?
()	Q	()	Is there any evidence of erosion on cuts?
()	Ø	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	11 -	()	Doop the Cardiment Canter Dian manine maintain 0

- () () Does the Sediment Control Plan require revision?
- 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
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OBSERVATIONS and COMMENTS:		
All BMPS box good		
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Inspected by:	Title:	Date:
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			nspection Junspection before long weekends or down time ent Inspection Rainfall: <u>O. o</u> Inches		
Yes	No	Does Not Apply			
()	() -	(2)	Are all <u>run-on</u> BMPs properly located and properly installed?		
4	0	()	Are all runoff BMPs properly located and properly installed?		
()	(9	()	Do any sedimentation BMPs require repair or to be cleaned out?		
()	6	()	Is there any sediment leaving the excavation area (yards)?		
()	Ŵ	()	Is there any evidence of erosion on cuts?		
()	(\$	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?		
()	(6	()	Does the Sediment Control Plan require revision?		

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OBSERVATIONS and	COMMENTS:					
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spected by:		Title	<u>ò</u> .		Dat	e.
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с <i>С</i>						

12-11-12

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

	•••	() Bi-weekly Inspection () Inspection before long weekends or down time () Rainfall Event Inspection Rainfall: Inches							
Ye	s No		Does Not Apply						
()	()	H	Are all run-on BMPs properly located and properly installed?						
(4)-	- ()	()	Are all runoff BMPs properly located and properly installed?						
()	(4)	()	Do any sedimentation BMPs require repair or to be cleaned out?						
()	H	()	Is there any sediment leaving the excavation area (yards)?						
()	67	_ ()	Is there any evidence of erosion on cuts?						
()	H	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?						
()	YT	()	Does the Sediment Control Plan require revision?						
1.			performed (1) bi-weekly, (2) immediately before holidays or any down time mal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.						

2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.

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OBSERVATIONS and COMME	INTS:	
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Inspected by:	Title:	Date:
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12-17-12

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

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			spection Inspection before long weekends or down time
Yes	No	Does Apply	
()	() ·	(4	Are all run-on BMPs properly located and properly installed?
(1)	()	()	Are all runoff BMPs properly located and properly installed?
()	W -	<u>()</u>	Do any sedimentation BMPs require repair or to be cleaned out?
()	(4	()	Is there any sediment leaving the excavation area (yards)?
()	4	. ()	Is there any evidence of erosion on cuts?
()	(4)	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	H	()	Does the Sediment Control Plan require revision?

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OBSERVATIONS and COM	MENTS:	
Find inspection -	last day of project	
- ven making pefel		site
		.rem
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Inspected by:	Title:	Date:
YOR M	1455	12.17.12
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- 2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.
- 3. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).
- 4. Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition.
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OBSERVATIONS and COMM	ENTS:	
Confleted Substantin	1 repairs to 5	11+ Dyce - Mostly
regaining fercing	to posts an	
with soil		, , , , , <u>,</u>
Inspected by:	Title:	Date:
yerton	Iechnicia	12-26-12
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		:

A SEDMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

			ent Inspection Rainfall: Inches					
Yes	No	Does Apply						
()	()	(}	Are all <u>run-on</u> BMPs properly located and properly installed?					
9	()	()	Are all <u>runoff</u> BMPs properly located and properly installed?					
()	(4)	-()	Do any sedimentation BMPs require repair or to be cleaned out?					
()	()	• ()	Is there any sediment leaving the excavation area (yards)?					
()	(4)	()	Is there any evidence of erosion on cuts?					
()	(4)	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?					
()	9	· ()	Does the Sediment Control Plan require revision?					
			performed (1) bi-weekly, (2) immediately before holidays or any down time					
	reater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.							

3. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).

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OBSERVATIONS and COMMENTS: Sed RR \cap^{\dagger} W30 Inspected by: Date: Title:

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A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

		() Bi-weekly Inspection () Rainfall Event Inspection		
Ye	3	No	Does Apply	
(.)		()	(4)	Are all <u>run-on</u> BMPs properly located and properly installed?
(4	/	()	()	Are all runoff BMPs properly located and properly installed?
()		(4)	()	Do any sedimentation BMPs require repair or to be cleaned out?
()		4	()	Is there any sediment leaving the excavation area (yards)?
()		()	()	Is there any evidence of erosion on cuts?
()		(•)	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()		(9	()	Does the Sediment Control Plan require revision?
1.				performed (1) bi-weekly, (2) immediately before holidays or any down time nal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.

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OBSERVATIONS and COMMEN	TS:	Jud Shapling 14
Repaired 60' section	of sild tag	W. of RR Hacks.
Also repaired server		s along Niaz Rd.
and I spot E. of	4 trues	J J
	<u> </u>	
Inspected by:	Title:	Date:
yor hoy	H5.5	1-9-13

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			spection (⁴⁾ Inspection before long weekends or down time nt Inspection Rainfall: Inches
Yes	No	Does Apply	
()	()	(4	Are all <u>run-on</u> BMPs properly located and properly installed?
(4	()	()	Are all runoff BMPs properly located and properly installed?
()	(9	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	9	()	Is there any sediment leaving the excavation area (yards)?
()	9	()	Is there any evidence of erosion on cuts?
()	(4	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	(4	()	Does the Sediment Control Plan require revision?
gre 2. Ins 3. Ev ma 4. Ob BM 5. If a pla ne	eater tha spect sto aluate th intenance serve s IP to ens a "Yes" a in revisio	n a norn rm wate ce practi tructural sure prop answer v ons. Re physica	erformed (1) bi-weekly, (2) immediately before holidays or any down time hal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater. In drainage areas for evidence of pollutants entering the drainage systems. tiveness of controls and BMP (good housekeeping activities, preventive ces, etc.). measures, sediment controls, vegetative cover, and other stormwater per function or proper condition. was checked to any of the above questions, explain necessary actions or evise the plan as needed within 1 week of inspection and implement any al changes within 1 week of inspection (attach additional sheet if

OBSERVATIONS a	nd COM	/MENT	S:		
Re-stapled	70'	of	5ilt fercing	along	Diaz Rd.
<u> </u>					·
			. <u> </u>		
spected by:			Title:		Date:
All you	~		(45)		1-16-13
()					<u></u>
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A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

	(*) Bi-	weekly In	spection () Inspection before long weekends or down time							
	() Ra	() Rainfall Event Inspection Rainfall: Inches								
Ye	s No	Does Not o Apply								
()	()	(4)	Are all <u>run-on</u> BMPs properly located and properly installed?							
(4	()	()	Are all <u>runoff</u> BMPs properly located and properly installed?							
()	6	()	Do any sedimentation BMPs require repair or to be cleaned out?							
()	(4	()	Is there any sediment leaving the excavation area (yards)?							
()	4	, ()	Is there any evidence of erosion on cuts?							
()	()	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?							
()	()	()	Does the Sediment Control Plan require revision?							
1. 2. 3.	 Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive 									
4.	Observe	aintenance practices, etc.). bserve structural measures, sediment controls, vegetative cover, and other stormwater MP to ensure proper function or proper condition.								

5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMMENTS: ferce 60 Sil 5/206 'e n 0 e 5% 0 n e n Title: Date: Inspected by: -25-13

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

	Bi-v () Rai	veekly lr nfall Eve	nspection () Inspection before long weekends or down time ent Inspection Rainfall: Inches	
Yes	s No	Does Apply		
()	()	(9)	Are all <u>run-on</u> BMPs properly located and properly installed?	
(•)	()	()	Are all <u>runoff</u> BMPs properly located and properly installed?	
()	(4)	()	Do any sedimentation BMPs require repair or to be cleaned out?	
()	()	()	Is there any sediment leaving the excavation area (yards)?	
()	()	()	is there any evidence of erosion on cuts?	
()	(4)	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?	
()	(4)	- ()	Does the Sediment Control Plan require revision?	
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- 5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COM	NENTS:	
Re-stupled Fi	encing abons Deia	7. Rd.
In process of	- amending Su	UPPP to include
updates to	BMPS. WORK is	Perdise
Recent rain + 5	now but no ind:	action sediment
is lawing site.		
Inspected by:	Title:	Date:
yor Mon	Technicia	1-31-13
\cup ·		

			spection () Inspection before long weekends or down time nt Inspection Rainfall: Inches
Yes	No	Does Apply	
()	()	()	Are all run-on BMPs properly located and properly installed?
4	()	()	Are all runoff BMPs properly located and properly installed?
()	(4	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	(4)	()	Is there any sediment leaving the excavation area (yards)?
()	(0	()	Is there any evidence of erosion on cuts?
()	3	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
	~		

- () (4 () Does the Sediment Control Plan require revision?
- 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
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- 5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMM	ENTS:	
Silt Ferce along	Diaz Rd was in f	airly good Condition.
No repairs were	required. No inspection	~ olong RR
tracks Reading	BMP updates.	- J
Inspected by:	Title:	Date:
Usp hon -	Technicar	2-6-13
perg		

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

			nspection () Inspection before long weekends or down time ent Inspection Rainfall: Inches	
Yes	No	Does Apply		
()	()	(4)	Are all <u>run-on</u> BMPs properly located and properly installed?	
(4)	()	()	Are all runoff BMPs properly located and properly installed?	
()	(4	()	Do any sedimentation BMPs require repair or to be cleaned out?	
()	(9	()	Is there any sediment leaving the excavation area (yards)?	
()	(4	()	is there any evidence of erosion on cuts?	
()	(4	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?	
()	(9	()	Does the Sediment Control Plan require revision?	
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greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
 Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.

- Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).
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OBSERVATIONS and COMM	ENTS:	
Repaired lengthy ser	tions of ferce clorg	Niez Rd. Met-
w/ Michael Jonz	en (FMI Gostracting)	Ve: uptoming efforts
to repair swpp	BMPs.	
		<u></u>
Inspected by:	Title:	Date:
York May	Technicon	2-14-13
v		

			nspection () Inspection before long weekends or down time ant Inspection Rainfall: Inches
Yes	No	Does Apply	
()	()	()	Are all <u>run-on</u> BMPs properly located and properly installed?
()	(4)	. ()	Are all <u>runoff</u> BMPs properly located and properly installed?
(4)	0	` ()	Do any sedimentation BMPs require repair or to be cleaned out?
()	(4)	()	Is there any sediment leaving the excavation area (yards)?
()	(4	()	Is there any evidence of erosion on cuts?
()	(4)	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	(4)	()	Does the Sediment Control Plan require revision?
1. In:	spection	s to be j	performed (1) bi-weekly, (2) immediately before holidays or any down time

- 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
- 2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.
- 3. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).
- 4. Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition.
- 5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMMENTS: รม terco atter 2 40 Ð Place ふ aner 24/20 Inspected by: Title: Date: Techniquer 2.98.



- 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
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OBSERVATIONS and COMM	ENTS:	
BMP repairs + 4	grades underung -	Ditches installed hast
week look good.	Strew untiles to	replace silt face
Ictes this week	. Identified addition	clareas along
boundaries that re		Visit w/
Jen Pepe (Gold	er) and Mike Janz	zer (FAZ).
Inspected by:	Title:	Date:
Yor More	Technician	3-11-13

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

1

			ent Inspection Rainfall: Inches
Yes	No	Does Apply	
Ś	()	()	Are all run-on BMPs properly located and properly installed?
(1)	()	()	Are all runoff BMPs properly located and properly installed?
()	(4)	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	(4)	()	Is there any sediment leaving the excavation area (yards)?
()	(4)	()	Is there any evidence of erosion on cuts?
()	W	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
(4)	()	()	Does the Sediment Control Plan require revision?

- 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
- 2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.
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OBSERVATIONS and	COMMENTS:
Site inspection	following upgrades to BMPs, including trenches
	off controlls and wattles replacing silf fence.
	lete, SWPPP Will be revised to show new
	= 40' of trench in road near bidge requires,
hand shareling	to correct, will complete during next inspected Title: Date:
Inspected by:	Title: Date:
Jen Pepe -	Project Manager 3/14/13

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

1

		•	spection () Inspection before long weekends or down time nt Inspection Rainfall: Inches		
Yes	No	Does Apply			
()	()	N	Are all <u>run-on</u> BMPs properly located and properly installed?		
W	()	()	Are all runoff BMPs properly located and properly installed?		
()	W	()	Do any sedimentation BMPs require repair or to be cleaned out?		
()	(4)	()	Is there any sediment leaving the excavation area (yards)?		
()	ey -	()	Is there any evidence of erosion on cuts?		
()	4	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?		
()	(4	()	Does the Sediment Control Plan require revision?		
1. Ir	1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time				

- greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
- 2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.
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OBSERVATIONS and COMMENTS Rocky Maty Seed Onside - + Shovele) loose soil ou NPDF'S FOCMS @ entro	illing + seeding. No .	lust. Looks good. Postel New chered ones.
New wattles book	good .	
Inspected by: Har Mon	Title: Techirci-	Date: 3-96-13

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A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

1

	• • •		nspection () Inspection before long weekends or down time ent Inspection Rainfall: Inches
Yes	No	Does Apply	
()	()	_ <u>()</u>	Are all <u>run-on</u> BMPs properly located and properly installed?
()	9	()	Are all runoff BMPs properly located and properly installed?
5	()	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	M	()	Is there any sediment leaving the excavation area (yards)?
()	4	()	Is there any evidence of erosion on cuts?
()	4	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	4	()	Does the Sediment Control Plan require revision?
1 In	cnastia	as to bo	performed (1) bi weekly (2) immediately before belidays or any down time

- 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
- 2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.
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- 5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMMEN	ITS:	
Along Dicz Rd - 1	Wattle stolen & 1	wattle two over,
Repaired several ru	nover areas and a	nchored with rocks.
Took "extra" wattle	e From N. Polygons	and replaced
missing one along	Maz. All else	looks good.
		5
Inspected by	Title:	Date:
ANR My	Pchnician	4-11-13
$\int 0$		
2		

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			spection nt Inspection	() Inspection be Rainfall:	fore long we	eekends or down time hes	
Yes		Does I Apply					
()	()	()	Are all <u>run-on</u>	BMPs properly loc	ated and pr	operly installed?	
N	()	()	Are all <u>runoff</u> B	3MPs properly loca	ated and pro	operly installed?	
()	(1)	()	Do any sedime	entation BMPs req	uire repair c	or to be cleaned out?	
()	W	()	Is there any se	ediment leaving the	e excavatior	n area (yards)?	
()	(4)	()	Is there any ev	vidence of erosion	on cuts?		
()	(0)	()	Is there any e roadway acce		ent, debris, c	or mud on public roadway	's or
()	()	()	Does the Sedi	ment Control Plan	require rev	ision?	
2. Ins 3. Eva ma 4. Ob BM 5. If a pla neo	 greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.). Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary). 						
OBSERVATIONS and COMMENTS: - Repaired Strew Wattle W, af RR tracks e large culvert- - Repaired Wattles eact of Dioz Rd. - All other BMAS Look good							
Inspected by:				Title:		Date: 6-[0-13	
your maya	ے میں			Techica Intern		6-10-12	
Bin Archid	ald			butern		6-10-13	

boten

6-10-13

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A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

() Bi-weekly Inspection
() Rainfall Event Inspection

() Inspection before long weekends or down time Rainfall: _____ Inches

Yes	No	Does Not Apply
$()_{i}$	()	Are all <u>run-on</u> BMPs properly located and properly installed?
હ	()) Are all <u>runoff</u> BMPs properly located and properly installed?
()	()) Do any sedimentation BMPs require repair or to be cleaned out?
()	()) Is there any sediment leaving the excavation area (yards)?
()	(1)) Is there any evidence of erosion on cuts?
()	(1) Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	()) Does the Sediment Control Plan require revision?
1 li	nspection	o be performed (1) bi-weekly (2) immediately before bolidays or any down time

1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.

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5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMM			
nepaired straw w	attles on East side o good	f Diaz Rd.	
All other BMP: 100/c	900		
	0	· ·	
· · · · · · · · · · · · · · · · · · ·			
nspected by:	Title:	Date:	;
Brian Architald	Intern	6-24-13	

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

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	• •		nspection (᠕ Inspection before long weekends or down time ent Inspection Rainfall: Inches
Yes	s No	Does Appl	s Not y
(H	()	Ś	Are all run-on BMPs properly located and properly installed?
(\$	()	()	Are all runoff BMPs properly located and properly installed?
()	(1)	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	(V	()	Is there any sediment leaving the excavation area (yards)?
()	(\mathbf{v})	()	Is there any evidence of erosion on cuts?
()	(\/	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	(J⁄	()	Does the Sediment Control Plan require revision?
1	Inspection	ns to be	nerformed (1) bi-weekly. (2) immediately before holidays or any down time

 Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.

2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.

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OBSERVATIONS and COMMENTS: Repaired BMPs along Diaz Road					
	J .				
ected by:	Title:	Date:			
ian Architald	L to	7-2-13			

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

	• •	-	nspection () Inspection before long weekends or down time ent Inspection Rainfall: Inches
Yes	No	Does Apply	
()	()	(\mathbf{v})	Are all run-on BMPs properly located and properly installed?
(4)	()	()	Are all runoff BMPs properly located and properly installed?
()	(4	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	(\mathcal{Y})	()	Is there any sediment leaving the excavation area (yards)?
()	(4	()	Is there any evidence of erosion on cuts?
()	(4)	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	(Y	()	Does the Sediment Control Plan require revision?

1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.

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OBSERVATIONS and COMMENT	S:	
Repaired BMPs along	Diaz Rd. Allothe	BMPS look good
· J		
		·
		· · · · · · · · · · · · · · · · · · ·
nspected by:	Title:	Date:
Brian Archilald	Intern	7-8-13

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

(VBi-weekly Inspection

	() Ra	all Évent Inspection Rainfall: Inches
Yes	No	Does Not Apply
()	()	(Are all <u>run-on</u> BMPs properly located and properly installed?
(Y	()	() Are all <u>runoff</u> BMPs properly located and properly installed?
(1)	()	() Do any sedimentation BMPs require repair or to be cleaned out?
()	લ	() Is there any sediment leaving the excavation area (yards)?
С	()	() Is there any evidence of erosion on cuts?
()	6	() Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	(*	() Does the Sediment Control Plan require revision?

() Inspection before long weekends or down time

1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.

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5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMMEN		
Repaired BMPs along	This wad. There ditch along milned	one a few small,
openings along drainage	ditch along milroad	tracks that should
be repaired.	J	-
		······
Inspected by:	Title:	Date:

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

() Bi-weekly Inspection

() Inspection before long weekends or down time Rainfall: • 95 Inches Rainfall Event Inspection Does Not Yes No Apply C. () () Are all run-on BMPs properly located and properly installed? \mathcal{A} ()()Are all runoff BMPs properly located and properly installed? (1 () () Do any sedimentation BMPs require repair or to be cleaned out? \mathcal{C} () ()Is there any sediment leaving the excavation area (yards)? 4 () () Is there any evidence of erosion on cuts? 3 () Is there any evidence of sediment, debris, or mud on public roadways or () roadway accesses? $\langle \cdot \rangle$ () ()Does the Sediment Control Plan require revision? 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time

greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.

Inspect storm water drainage areas for evidence of pollutants entering the drainage systems. 2.

3. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).

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- 5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMME		
All BMPs look good	d	
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Inspected by:	Title:	Date:
Inspected by: Brin Arciilald	Intern	7-25-13
A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

() Bi-weekly Inspection

	() Rai	() Rainfall Évent Inspection Rainfall: •5 Inches				
Yes	No	Does Apply				
()	()	(4	Are all run-on BMPs properly located and properly installed?			
ы	()	()	Are all runoff BMPs properly located and properly installed?			
()	$(\vee$	()	Do any sedimentation BMPs require repair or to be cleaned out?			
()	Q,	()	Is there any sediment leaving the excavation area (yards)?			
()	()	()	Is there any evidence of erosion on cuts?			
()	6	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?			
()	()	()	Does the Sediment Control Plan require revision?			

() Inspection before long weekends or down time

1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.

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OBSERVATIONS and COMMENT		
All BMPs look good	d	
	<u></u>	
	·	<u> </u>
Inspected by:	Title:	Date:
Inspected by: Brian Architald	Intern	7-29-13

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

() Bi-weekly Inspection

			ent Inspection Rainfall: Inches
Yes	No	Does Apply	
()	()	Ś	Are all run-on BMPs properly located and properly installed?
(()	()	Are all runoff BMPs properly located and properly installed?
()	6	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	()	()	Is there any sediment leaving the excavation area (yards)?
()	()	()	Is there any evidence of erosion on cuts?
()	()	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	()	()	Does the Sediment Control Plan require revision?

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- 5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

Repaired straw watt	le along RR tracks.	All other BMPs look
9000	3	
nspected by:	Title:	Date:
Brian Archilald	Interes	8-5-13

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

Bi-weekly Inspection () Inspection before long weekends or down time () Rainfall Event Inspection Rainfall: Inches				
No	Does Apply			
()	H2	Are all run-on BMPs properly located and properly installed?		
()	()	Are all <u>runoff</u> BMPs properly located and properly installed?		
()	()	Do any sedimentation BMPs require repair or to be cleaned out?		
Ø	()	is there any sediment leaving the excavation area (yards)?		
4	()	Is there any evidence of erosion on cuts?		
¥‡	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?		
N.	()	Does the Sediment Control Plan require revision?		
	() Ra No () () ()	() Rainfall Éve No Apply () ψ () () () () () () ψ () ψ () ψ () ψ ()		

1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.

- 2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.
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- 5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMME	NTS:	
Repared Wattle on E	, side of Dint Rd.	
NE Sediment is also startin		attle on
n Short cection of	DART RA.	· · · · · · · · · · · · · · · · · · ·
nspected by:	Title:	Date:
KAMAGI GARXIEW	Fater	5/20/12



- 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
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- 3. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).
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- If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMMENTS:		
Installed 5 bales of Straw a	Cast of N. Hurk,	Red to prevent run-off
From Occess Docd. Secur	i wattles in he	, Hipk locations, Shoved
sedered (minimal) from 10	ed and from	around Brils where
it has accumulated rec	senting, BMPS Pr	open located, repaired,
and cleard out upon departs		-on rocds
Inspected by:	Title:	Date:
you hove	Technica	8-28-13
V		

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

() Bi-weekly inspection () Inspection before long weekends or down time (L) Rainfall Event Inspection Rainfall: 1.> Inches **Does Not** Yes No Apply ()() M Are all run-on BMPs properly located and properly installed? N ()() Are all <u>sunoff</u> BMPs properly located and properly installed? () Do any sedimentation BMPs require repair or to be cleaned out? V ()()Ø ()Is there any sediment leaving the excavation area (vards)? ()Û ()Is there any evidence of erosion on cuts? () ()Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses? ()()Does the Sediment Control Plan require revision?

- 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
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- 3. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).
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- If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATION	and COMMEN	rs:			
blary rains	receiling h	we spure	d very	good Plan	+ growth.
Swifice 780	to covered .	n most a	Ras. T.	3MP5 in	900d
Condition.	Hay bales	WOSKIN	well.	Mininal	repairs
required.				1	
nspected by:	· ····	T (4)		Data	
the Pho		Title:		Date:	10:17
porton				<u> </u>	
\bigcup \bigcup					

A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

() Bi-weekly Inspection () Inspection before long weekends or down time (c) Rainfall Event Inspection Rainfall: 1,07 Inches **Does Not** Yes No Apply w Are all run-on BMPs properly located and properly installed? ()()()Are all runoff BMPs properly located and properly installed? (4) ()()()Do any sedimentation BMPs require repair or to be cleaned out? ()() Is there any sediment leaving the excavation area (yards)? ()() Is there any evidence of erosion on cuts? Is there any evidence of sediment, debris, or mud on public roadways or ()()roadway accesses?

- () () Does the Sediment Control Plan require revision?
- 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
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- 5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMMENTS:			
Repaired Martles Near	the Bate of ha	, Near the	access
	Diazand, the		ator tonk
Stoveled Sedimont fion	m the Paad, t	epaire So	me
oun att V ditched alon	s west of the	e Rail 1000	Trocks
Inspected by;	Failed (Repair Title:	Date:	Rocks
E H			
Con and a second	Jechnician	-12	<u>=10</u>

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A SEDIMENT CONTROL PLAN INSPECTION AND MAINTENANCE RECORD

			nspection () Inspection before long weekends or down time ent Inspection Rainfall:Inches
es	No	Does Apply	
	()	6)	Are all run-on BMPs properly located and properly installed?
	0	()	Are all <u>runoff</u> BMPs properly located and properly installed?
/	()	()	Do any sedimentation BMPs require repair or to be cleaned out?
	(i)	()	Is there any sediment leaving the excavation area (yards)?
	(4)	()	Is there any evidence of erosion on cuts?
	W	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
	(1)	()	Does the Sediment Control Plan require revision?
gre Ins Eva ma	eater that pect stor aluate the intenance	n a norn rm wate ne effec ce practi	berformed (1) bi-weekly, (2) immediately before holidays or any down time nal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater. In drainage areas for evidence of pollutants entering the drainage systems. Ativeness of controls and BMP (good housekeeping activities, preventive ices, etc.).
	Ins gre Ins Eva ma	NRai No () () () () () () () () Inspections greater tha Inspect sto Evaluate the maintenance	Does No Apply () (

- Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition.
- If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

.

	٨	
- Repayed Wattle a	astside of D	a > ld
Looks Like ATL	/ Tracks on	Wattles
-Rapaired Wattle 6	in the Railhoad	Tlack and
Bridge Mine Gat	e Rd	<u></u>
<u> </u>		
nspected by:	Title:	Date:
Stan	Technician	9-13-12

	()Bi ∕KRa	-weekly ir ainfall Eve	Inspection () Inspection before long weekends or down time Int Inspection Rainfall: 23 Inches Last week Following 11 Spectron
Yes	No	Does Apply	NOT
()	()	-AT	Are all run-on BMPs properly located and properly installed?
()	X	()	Are all runoff BMPs properly located and properly installed?
X	()	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	\times	()	Is there any sediment leaving the excavation area (yards)?
\mathbf{X}	()	()	Is there any evidence of erosion on cuts?
0	\times	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	K	()	Does the Sediment Control Plan require revision?

- 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
- 2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.
- 3. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).
- 4. Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition.
- 5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMMEN	ITS:	
Cleaned out sediment	From Hay bales an	d wattle along
DiaZ. Repositioned W	attle that had blown	out and secured it
with new stakes.		
		·····
Inspected by:	Title:	Date:
Yord Morgan	Technician	9-16-13

			Ispection () Inspection before long weekends or down time Int Inspection Rainfall: <u>1, 1, 1</u> Inches
Yes	No	Does Apply	
()	()	(1)	Are all run-on BMPs properly located and properly installed?
6	()	()	Are all <u>runoff</u> BMPs properly located and properly installed?
()	()	()	Do any sedimentation BMPs require repair or to be cleaned out?
W/	()	()	Is there any sediment leaving the excavation area (yards)?
4	()	()	Is there any evidence of erosion on cuts?
()	()	0	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?

- () () Does the Sediment Control Plan require revision?
- 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater.
- 2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.
- 3. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).
- 4. Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition.
- 5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMMENTS:	:		0
Repaired all ditch	on the	IN side	of the
Tracks, with Some	lun off,	Repaired	with Rocks
We tod (2) V Ditch c	onthe Es	side of	The Tracks
tail Repaired With	Rocks,	Hay ha	Leshave
Sediment Builta	p behuce	then	1 1/2 +03/2, UP
Inspected by:	Title:		Date:
511			alal
An	<u>lechnc</u>	lan_	9/23/17
\subset		•	

	() Ra		nspection () Inspection before long weekends or down time ant Inspection Rainfall: Inches
Yes	No	Does Apply	
()	()	\times	Are all run-on BMPs properly located and properly installed?
()	X	()	Are all runoff BMPs properly located and properly installed?
X	()	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	X	()	Is there any sediment leaving the excavation area (yards)?
X	()	()	Is there any evidence of erosion on cuts?
0	\times	()	is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	X	()	Does the Sediment Control Plan require revision?

- 1. Inspections to be performed (1) bi-weekly, (2) immediately before holidays or any down time greater than a normal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater. 2. Inspect storm water drainage areas for evidence of pollutants entering the drainage systems.
- 3. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).
- 4. Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition.
- 5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMM	IENTS:	
Extensive repairs to	ditcles, berns, & working	
W. of RR Tracks	New Blue Stake	New Stakes in
wittles	-	
Inspected by:	Title:	Date:
LAD MOR	Technician	10-24-13
All of		

			nspection () Inspection before long weekends or down time ent Inspection Rainfall: 0.67 Inches $0.11-16-13$
Yes	No	Does Apply	
()	()	W	Are all run-on BMPs properly located and properly installed?
4	()	()	Are all <u>runoff</u> BMPs properly located and properly installed?
()	4	()	Do any sedimentation BMPs require repair or to be cleaned out?
()	ú-	- ()	Is there any sediment leaving the excavation area (yards)?
()	(4	()	Is there any evidence of erosion on cuts?
()	Ø	()	Is there any evidence of sediment, debris, or mud on public roadways or roadway accesses?
()	4	()	Does the Sediment Control Plan require revision?
1. Ins	spection	s to be j	performed (1) bi-weekly, (2) immediately before holidays or any down time
2. Ins	spect sto	orm wate	mal weekend, and (3) within 24 hours of a rainfall of 0.50-inch or greater. er drainage areas for evidence of pollutants entering the drainage systems.

- 3. Evaluate the effectiveness of controls and BMP (good housekeeping activities, preventive maintenance practices, etc.).
- 4. Observe structural measures, sediment controls, vegetative cover, and other stormwater BMP to ensure proper function or proper condition.
- 5. If a "Yes" answer was checked to any of the above questions, explain necessary actions or plan revisions. Revise the plan as needed within 1 week of inspection and implement any necessary physical changes within 1 week of inspection (attach additional sheet if necessary).

OBSERVATIONS and COMMENTS	: 1	
All BMPs Look	geod K-EDai	ved one Wattle
along Daz Hat	was disturbe	
	· · · · · · · · · · · · · · · · · · ·	
Inspected by:	Title:	Date:
Edho Garcing	Field Teco	11-20-13

Company: Golder Associates Inc. ATTN: Jen Pepe 301 W. College Ave Suite 8 Silver City NM 88061

Facility: Hurley Railroad IRA Diaz Road Hurley NM 88043

Permit Tracking Number: NMR12AB25

This email acknowledges that a complete Notice of Termination (NOT) form for NOI Tracking Number NMR12AB25 covered under EPA's Construction General Permit (CGP) has been processed and the NOI is now terminated. Your NOT was completed and submitted on 11/03/2014.

If you have general questions regarding the stormwater program or your responsibilities under the CGP, please call your region contact. Regional contact email and phone number can be found at: http://cfpub.epa.gov/npdes/contacts.cfm If you have questions about your NOI form, please call the EPA NOI Processing Center at 1-866-352-7755 (toll free) or send an inquiry via the online form at: http://cfpub.epa.gov/npdes/noicontact.cfm

If you have difficulty accessing CDX, please contact the CDX Help Desk at: (888) 890-1995.

You can return to the eNOI system using the following link at any time https://cdx.epa.gov/SSL/cdx/login.asp.

EPA NOI Processing Center Operated by Avanti Corporation 1200 Pennsylvania Ave., NW Mail Code: 4203M Washington, DC 20460 1-866-352-7755

NPDES FORM 3510-13	\$EPA	UNITED STATES ENVIRONMENTAL P WASHINGTON, DC 2 NOTICE OF TERMINATION (NOT) F DISCHARGES ASSOCIATED WITH CON UNDER AN NPDES GENER	0460 OR STORMWATER ISTRUCTION ACTIVITY	Form Approved. OMB Nos. 2040-0004						
Submission of this Notice of Termination constitutes notice that the operator identified in Section II of this form is no longer authorized discharge pursuant to the NPDES Construction General Permit (CGP) from the site identified in Section III of this form. All necessary information must be included on this form. Refer to the instructions at the end of this form.										
I. Approval to Use Paper NOI Form										
Have you been given approval from the Regional Office to use this paper NOT form*?										
* Note: You mus	t have been given approval by the Re	gional Office prior to using this paper NOT	form.							
II. Permit Infor	II. Permit Information:									
NPDES Stormwa	ter General Permit Tracking Number	: <u>NMR12AB25</u>								
Reason for Term	ination (Check only one):									
You have c	ompleted earth-disturbing activities at your s	the site and that operator has submitted an NOI and o te, and you have met all other requirements in Part 8. or another general NPDES permit addressing stormw	.2.1.							
III. Operator In	formation									
Name: Golder As	ssociates Inc.									
IRS Employer Ide	entification Number (EIN): 58-14010	<u>)1</u>								
Mailing Address	:									
Street: <u>301 W. C</u>	ollege Ave Suite 8									
City: Silver City	\$	State: <u>NM</u>	Zip: <u>88061</u>							
Phone: <u>575-388</u> -	0118		Fax (Optional): 57	75-388-0120						
Email: jpepe@go	older.com									
IV. Project/Site	e Information									
Project/Site Nam	e: Hurley Railroad IRA									
Project/Site Add	ress:									
Street:										
City: <u>Hurley</u>	\$	State: <u>NM</u>	Zip: <u>88043</u>							
County or simila	r government subdivision: Grant									
V. Certification	n Information									
that qualified pers persons directly re	onnel properly gathered and evaluated esponsible for gathering the information	tachments were prepared under my direction of the information submitted. Based on my inquir , the information submitted is, to the best of my lse information, including the possibility of fine	y of the person or persons v / knowledge and belief, true	vho manage the system, or those , accurate, and complete. I am						
First Name, Mido	lle Initial, Last Name: John Purcell									
Title:										
Signature:		Date: Friday, Augu	st 17, 2012							
E-mail: jpurcell@	golder.com									

NPDES FORM 3510-9	\$EPA	UNITED STATES ENVIRONMENTAL PROTEC WASHINGTON, DC 20460 NOTICE OF INTENT (NOI) FOR STORMWATE ASSOCIATED WITH CONSTRUCTION ACTIV NPDES GENERAL PERMIT	R DISCHARGES	Form Approved. OMB Nos. 2040-0004
NPDES Construin Section II of the required prior to submit a complete submit a comp	iction General Permit (CGP) permit numb nis form meets the eligibility requirements commencement of construction activity of	e that the operator identified in Section II of this form er identified in Section I of this form. Submission of th of Parts 1.1 and 1.2 of the CGP for the project identii ntil you are eligible to terminate coverage as detailed e not authorized if your NOI is incomplete or inaccura	is NOI also constitut fied in Section III of th in Part 8 of the CGP	es notice that the operator identified his form. Permit coverage is P. To obtain authorization, you must
	o Use Paper NOI Form			
	given approval from the Regional Office t	o use this paper NOI form*?	Yes NO	
lf yes, prov approval:	ide the reason you need to use this pape	r form, the name of the EPA Regional Office staff per	son who approved yo	our use of this form, and the date of
Reas	on for using paper form:			
Name	e of EPA staff person:			
Date	approval obtained:			
* Note: You are	e required to obtain approval from the a	pplicable Regional Office prior to using this pape	r NOI form.	
II. Permit Info	ormation:	Tracking	Number (EPA Us	e Only) NMR12AB25
Permit Number:	<u>NMR120000</u>	(see Appendix B of the CC	GP for the list of eligit	ble permit numbers)
III. Operator	Information			
Name: Golder A	Associates Inc.			
Phone: 575-388	3-0118		Fax (Optional): 57	5-388-0120
Email: jpepe@o	golder.com			
IRS Employer Ic	lentification Number (EIN): <u>58-1401091</u>			
Point of Contact	(First Name, Middle Initial, Last Name):	Jen Pepe		
Mailing Address	:			
Street: 301 W.	College Ave Suite 8			
City: Silver City	S	state: <u>NM</u>	Zip: <u>88061</u>	
NOI Preparer (0	Complete if NOI was prepared by some	one other than the certifier):		
Prepared by (Fi	rst Name, Middle Initial, Last Name): Joh	n Purcell		
Organization:	Golder Associates Inc			
Phone:			Fax (Optional):	
E-mail: jpurcell(@golder.com			

IV. Project/Site Inform	ation							
Project/Site Name: <u>Hurley</u>	Railroad IRA							
Project/Site Address:								
Street/Location:								
City: <u>Hurley</u>			State: <u>NM</u>		Zip: <u>8804</u>	<u>-3</u>		
County or similar governme	ent subdivision: Gran	t -						
For the project/site for wl	nich you are seeking	ı permit coverag	e, provide th	e following inf	ormation:			
Latitude/Longitude (Use on	e of three possible fo	rmats, and specif	y method)					
Latitude 1 2 3	_	N(degrees, mir N(degrees, mir N(degrees, dec	nutes, decimal	, .	de 1 2 3	_	W(degre	ees, minutes, seconds) ees, minutes, decimal) ees, decimals)
Latitude/Longitude Data So	ource: 🔲 U.S.G.S topo	ographical map	EPA Web	b Site	GPS		Othe	r:
If you used a U.S.G	S.S. topographic map,	what was the sca	ale?					
Horizontal Reference Datu	m: 🔲 NAD 27	VAD 8	3 or WGS 84	Unknown				
Is your project located in In	dian Country lands?		Yes	No No				
If yes, provide the name of the Indian tribe associated with the area of Indian country (including name of Indian reservation, if applicable), or if not in Indian country, provide the name of the Indian tribe associated with the property:								
Are you requesting coverag	ge under this NOI as a	a "federal operato	or" as defined i	in Appendix A?			Yes	No No
Estimated Project Start Dat	e: 08/27/2012		Estimated P	Project Complet	on Date: 10/19/2	2012		
Estimated Area to be Distu	rbed (to the nearest q	uarter acre): 32.0)					
Have earth-disturbing activ	ities commenced on y	our project/site?					Yes 🖌 No	
lf yes, is your proje	ct an emergency-rela	ted project?					Yes	No No
Have stormwater d	ischarges from your p	oroject/site been c	covered previc	ously under an I	NPDES permit?		Yes	No No
lf yes, provide permit:	e the Tracking Numbe	er if you had cove	rage under EF	PA's CGP or the	NPDES permit	number if you had co	verage und	ler an EPA individual
V. Discharge Informat	ion							
Does your project/site discl Sewer System (MS4)?	narge stormwater into	a Municipal Sepa	arate Storm	Yes	No No			
Are there any surface wate	rs within 50 feet of yo	ur project's earth	disturbances	? Yes	No No			
Receiving Waters and We	tlands Information:	(Attach a separa	ate list if nec	essary)				
Surface water(s) to which discharge	Impaired Water	Listed W	ater Pollutan	t(s) Tier 2, 2.5	or 3	Source		IDL Name and Ilutant
Describe the methods you	used to complete the	above table: Plea	ase refer to the	e Source(s) in t	he above table.			
VI. Chemical Treatme	nt Information							
Will you use polymers, floc	culants, or other treat	ment chemicals a	it your constru	uction site?			Yes	No No
If yes, will you use cationic treatment chemicals* at your construction site?							Yes	No No
If yes, have you be filing your NOI*?	en authorized to use o	cationic treatment	t chemicals by	/ your applicabl	e EPA Regional	Office in advance of	Yes	No No

If you have been authorized to use cationic treatment chemicals by your applicable EPA Regional Office, attach a copy of your authorization letter and include documentation of the appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards.										
Please indicate the treatme	ent chemicals that you will use:									
* Note: You are ineligible for coverage under this permit unless you notify your applicable EPA Regional Office in advance and the EPA office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards.										
VII. Stormwater Pollut	tion Prevention Plan (SWPPP) Information									
Has the SWPPP been prep	pared in advance of filing this NOI?									
SWPPP Contact Informat	ion:									
First Name, Middle Initial, L	.ast Name: <u>Steve Bounds</u>									
Organization: TIPE Constr	uction									
Phone: <u>575-537-0186</u>	Fax (Optional):									
E-mail: admin@tipeconst.c	200 <u>m</u>									
VIII. Endangered Spec	ies Protection									
Using the instructions in Ap	opendix D of the CGP, under which criterion listed in Appendix D are you eligible for coverage under this permit (o	nly check 1 box)?								
Provide a brief summary of Service, specific study):We (MSGP) - 2000 Chino Mine	the basis for criterion selection listed in Appendix D (e.g., communication with U.S. Fish and Wildlife Service or N estLand Resources, Inc Draft Biological Evaluation in Support of Endangered Species Act (ESA) Certification M s Company	lational Marine Fisheries ulti-Sector General permit								
If you select criterion B, pro	ovide the Tracking Number from the other operator's notification of authorization under this permit:NMR05A945									
If you select criterion C, you	u must attach a copy of your site map (see Part 7.2.6 of the permit), and you must answer the following questions	:								
What federally-liste	ed species or federally-designated critical habitat are located in your "action area":									
What is the distanc	e between your site and the listed species or critical habitat (miles):									
If you select criterion D, E, Service.	or F, attach copies of any letters or other communications between you and the U.S. Fish and Wildlife Service or	National Marine Fisheries								
IX. Historic Preservati	on									
Is your project/site located	on a property of religious or cultural significance to an Indian tribe?	🗌 Yes 🖌 No								
If yes, provide the na	ame of the Indian tribe associated with the property:									
Are you installing any storn	nwater controls as described in Appendix E that require subsurface earth disturbance? (Appendix E, Step 1)	🗌 Yes 🖌 No								
If yes, have prior sur disturbances have p	veys or evaluations conducted on the site have already determined historic properties do not exist, or that prior recluded the existence of historic properties? (Appendix E, Step 2)	Yes No								
	bu determined that your installation of subsurface earth-disturbing stormwater controls will have no effect on [rties? (Appendix E, Step 3)	Yes No								
days to	did the SHPO, THPO, or other tribal representative (whichever applies) respond to you within the 15 calendar o indicate whether the subsurface earth disturbances caused by the installation of stormwater controls affect c properties? (Appendix E, Step 4)	Yes No								
_	If yes, describe the nature of their response:									
	Written indication that adverse effects to historic properties from the installation of stormwater controls can be actions.									
	No agreement has been reached regarding measures to mitigate effects to historic properties from the install controls.	ation of stormwater								
[Other:									
X. Certification Inform	lation									

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name: John Purcell

Title:

Signature:

Date: Friday, August 17, 2012

E-mail: jpurcell@golder.com

FREEPORT-MCMORAN COPPER & GOLD INC.

Monthly Quarterly 1" Rain Event Reclamation Unit: Weather Conditions: Clewr Dieezy3 Cool Groff Louise Inspector Steve barcia JAM 12-11-2014 Vegetation Cond Fences/Livestock: Noted that fence wester Pailfond track is down Dry Brosses And Shrubs Visible. Ditches/Water Control: Significant Erosion (Attach Description): Non visible Novisible Concerns. Monitoring Stations: None. Other Observations: None.

Chino Mines Co. Reclamation/Erosion Monitoring Form

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Rev: 04/02/2009



Chino	Mines	Co.	Reclamation/Erosion	Monitoring	Form
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		R	Monthly Quarterly 1" Rain Event
Reclamation Unit:	Weather Conditions:		
Inspector: Steven Garcing Time/Date:	Cloudy & wet		
Steven Garcing Time/Date:	-		
1:30 PM 3-18-2015 Vegetation Conditions:	Fences/Livestock:		
Dry Brass And Shrubs Visible			
Some new stouth Also showing	None.		
up through out.			
Ditches/Water Control:	Significant Erosion (Attach Description):		
	eigeniterit Erosion (Augen Desciption).		
None visible.	None Visible.		
Monitoring Stations:			
None			
Other Observations:			

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Reclamation Unit:

Golf Couse

Chino Mines Co. Reclamation/Erosion Monitoring Form

Monthly

	X	Quarterly 1" Rain Event
Weather Conditions:		
Classin		
Fences/Livestock:		
None		

Inspector: Steve Garcia	
Time/Date:	
11.40 Am C-18-2015	
11:40 Am C-18-2015 Vegetation Conditions: Abundwort New growth of grasses	Fences/Livestock: None
And Plants.	
Ditches/Water Control:	Significant Erosion (Attach Description):
Acres 11 Acres	None Uisible.
Novisible Conconns.	10000 0131000.
Monitoring Stations:	1
None.	
1000 .	
	8
Other Observations:	

Chino Mines Co. Reclamation/Erosion Monitoring Form

		N N	Monthly Quarterly 1" Rain Event
Reclamation Unit:	Weather Conditions:		
Golf Course. Inspector: Steven Garcins Time/Date:	Clear		
Steven Garcins	_		
\$ 12:00 pm 9-17-2015			
Vegetation Conditions: Lots of Vegetstian Visible	Fences/Livestock:		
throughout site.	Acne		
Ditches/Water Control:	A		
	Significant Erosion (Attach Description):		
Novisible concerns.	None Visible		
Monitoring Stations:			
None.			
Other Observations:			

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Rev: 04/02/2009



Reclamation/Erosion Monitoring Form	
V.	Monthly Quarteri

Chino Mines Co. Reclamation/Frosion M

arterly 1" Rain Event Reclamation Unit: Weather Conditions: Galf Course Inspector Time/Date: Vegetation Conditions: Abundant day 31455 Fences/Livestock: None. Visible. Ditches/Water Control: Significant Erosion (Attach Description): No visible concernes. NURVISIBLE Monitoring Stations: None. Other Observations: None. Printed Document Is Uncontrolled

Rev: 04/02/2009

Chino Mines Co. Reclamation/Erosion Monitoring Form

		Monthiy Quarterly 1" Rain Event
Reclamation Unit:	Weather Conditions:	
Inspector: Hurley Rai/Ragd.	Clean, dry	
Steven M. Graveiva		
12:15 3-24-2016 Vegetation Conditions:	Fences/Livestock:	
Abundant Pry grassand	Nonett	
Shoubs visible throughout	VUCTICOT	
site.		
Sicen ucgetation Also		
Visible.		
Ditches/Water Control:	Significant Erosion (Attach Description):	
	None Visible.	
Novisible Concerns.	None Vistore.	
Monitoring Stations:		****
1		
None.		
Other Observations:		
None.		
1 10 1.0		



Monthly Quarterly 1" Rain Event

Reclamation Unit:	Weather Conditions:
GolfCourse RA, Road Breas	Cloudy
Steve Garcia	
	1
2001 6-28:2016	
Lots of dry grass and other	Fences/Livestock:
Lots ope any grass struct	Λ
vactation visible. Aswell As	None.
New slow th.	
Ditabas	
Ditches/Water Control:	Significant Erosion (Attach Description):
Novisible concerns.	r 11
	None Visible
Monitoring Stations:	
Vlonc.	
Other Observations:	- Lauge A. Arc (Huy 140)
Other Observations: Noticed tire tracks on plot North	OT OVEN WHAS C. TOP,

Chino Mines Co.	Reclamation/Erosion	Monitoring	Form
-----------------	----------------------------	------------	------

	Monthly 76 Quarterly
Reclamation Unit:	Mercer AlmEn 1" Rain Event
Inspector:	Weather Conditions: - Cloudy Lool
Stoven GATCIA PARPiason Time/Date:	
10:45 AM 9/27/20/6	Fences/Livestock:
Lotsof Snass Visible Adong with some shrubs	Lows Srazing Onold Portion of Golf Course
Ditches/Water Control:	Significant Erosion (Attach Description):
Nouisible concerns.	None Noted.
Aonitoring Stations:	
None.	
ther Observations:	



Monthly Quarterly 1" Rain Event

Reclamation Unit:	Weather Conditions:
Golf Lours Roil Road	Postly Clarky
Inspector:	- Thatly Clarky
Steve marcia / PAM Pinson	
l'ime/Date:	1
206 m 12-8-20/6 Vegetation Conditions:	
	Fences/Livestock:
Abundant day grass Andother	Fenco down
Plants, Shrubs visible	10.000000
1 4112,01000 015/070	
Ditches/Water Control:	Significant Erosion (Attach Description):
and Annalat	
berman wests, de of Tomel Along	rione hored
berman west side ut lo Add Alons Fence washed out in Alen	
PLALOS.	
Monitoring Stations:	
1	
None.	
Other Observations:	

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Rev: 04/02/2009



	Monthly X Quarterly 1" Rain Event
Reclamation Unit:	Weather Conditions:
Golf Lourse Rail Rond AVEA	Clear, warm
Steven M. Gasrci 14	
10.20 3-9-2017 Vegetation Conditions:	Fences/Livestock:
Abundant day grassus; ble	Fence, west side of tracks
Throughout site, Along with	in need of rebuild, down through
other vegitation	mostop its lestu
Ditches/Water Control: Some washout Visible on	Significant Erosion (Attach Description): Nome Uisible.
Roadwastoffracks.	10110 01310 0
NO147C W D 3 + O F F F F F F F F F F F F F F F F F F	
Monitoring Stations:	
None.	
Other Observations:	



		Monthly Quarterly 1" Rain Event
Reclamation Unit:	Weather Conditions:	
Golf Lourse Roil Road Ster	Porthy Cloudy Hot	
Steven M. Graveia Time/Date:	_	
11.30 Am 6-23-2017 Vegetation Conditions:	Forece // inectable	
Steen vesiets tion and day	Fences/Livestock:	
grass visible throashoutsite.	None.	
Ditches/Water Control:	Significant Erosion (Attack Description)	
	Significant Erosion (Attach Description):	
Novisible concens.	Nonevisible	<i>.</i>
Ionitoring Stations:		
None.		
ther Observations:		
Norie.		

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	Monthly Quarterly 1" Rain Event
Reclamation Unit:	Weather Conditions:
Inspector: Course Rail Rond Arca	Cloudy 3 Cool
Stevan M. Granding	
1:50 PM 12-5-2017 Vegetation Conditions:	Fences/Livestock:
Dry grass visible + Maroughout	None.
Some Dieon Vesktation, Sunstlowers in bloom Notedon	
site.	
Ditches/Water Control:	
Diches/Water Control:	Significant Erosion (Attach Description):
Novisible concerns.	Nanc visible.
Monitoring Stations:	
None.	
Other Observations:	





Monthly

	Quarterly 1" Rain Event								
Reclamation Unit: GGHCOURGE RRIRA Avea Inspector:	Weather Conditions: Lindy, OVENCASK								
Inspector: Pam PINSON Time/Date: 2:30 pm 7-27-17 Vegetation Conditions:									
Bood graases 2 Shrubs	Fences/Livestock:								
	Significant Erosion (Attach Description):								
BMP'SON West Side of tracks need reset.	Notan issur actoss IRA aveas.								
Monitoring Stations: NA									
Other Observations:									
Sther Observations: 5 Yr quantitative Survey will be performed For IRA Area in Octoberon as carly as late Sept.									

APPENDIX C

Quadrat Data Summaries

Table C-1: Canopy Cover Summary

			TRANS	SECT 3			TRAN	SECT 8			TRAN	SECT 9			TRANS	SECT 25		TRANSECT 26				
FORM	SPECIES CODE ¹	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4	
F	SOEL	0.2		0.9														3.6				
	SPLE	0.4	1.2												6		0.3	0.6		2.2		
	PEAN		0.1														0.8					
	ASPA		2.4												0.3							
	SEBA		0.2																			
	MAGR			30	29				12			8	0.3					0.7	0.4			
	LOWR					0.3			6.2					1.2								
	SATR			-			1		1	5.6	0.2	11.5	56		5.5	2.2					· 0.1	
	MACA			-					11.8												·	
	CHER									1.4	14.4	2.1	3.3	1.6	3.8	8.9						
	LESQU														<0.1						·	
	CHNE																0.4					
	RACO																		0.5		·	
	SPHA	0.2		0.5	0.4											0.1					·	
	HENA	31																				
	BAAB		13																			
G	BOCU	34	52	8.3	19	27		67	29	27.8	36	20	20	18	16	13	7	72	80	66	32	
	PLJA	20		6.4		8.2	6.5	6	13		7.4	11.5	28	29						5		
	BOGR		3.8			32	23.2	19	5.1	4.8	9	10.5		12.4			6.2	9.5	3.1	14	17	
	SELE			29	62				11	7.1		11.2	12.8	17	53	28					6	
	SPCR			2	16			6	12		18	42.2	30.8		25	28	16				·	
	BOIS							8												2.5	i 4.2	
	LEDU								4													
	ARDI									28	4.7											
	ARPU																12					
S	ULPU	4.2	2.8	11.5	1.7																	
	JAGR	25	21	19	30		0.5				18							16	6	28.6	8.5	
	GUSA	2.5	26	25										9	1.5		45					
	ATCA			48																		
	CAER							0.7	0.6						4							
	PSSC									11.5												
	MIACB	19		8																		
(blank)	BARE	6		1.1	<0.1	6.9														-		
	LITTER	0.3		0.3		1.1	1.3			7.4												
	ROCK	0.7	0.4	0.1	<0.1	26				1.6												
	TOTAL	93	96	98.5	100	66	28	91	72	81	83	88	94	77	89	68	75	81	82.5	88	8 48	

Notes:

-- = Species not observed

¹ See table 5 for corresponding scientific and common names





Table C-2: Basal Cover Summary

			TRANS	SECT 3		TRANSECT 8					TRANS	SECT 9			TRANS	SECT 25		TRANSECT 26				
FORM	SPECIES CODE ¹	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4	
F	SOEL	<0.1		<0.1														<0.1				
	SPLE	<0.1	<0.1												0.2		<0.1	<0.1		<0.1		
	PEAN		<0.1														<0.1					
	ASPA		<0.1												<0.1							
	SEBA		<0.1																			
	MAGR			0.1	0.1				0.1			<0.1	<0.1					<0.1	<0.1			
	LOWR					<0.1			<0.1					<0.1								
	SATR						<0.1		<0.1	<0.1	<0.1	<0.1	0.2		<0.1	0.1					<0.1	
	MACA		-	-			-		0.1													
	CHER			-			-			<0.1	0.15	<0.1	<0.1	<0.1	0.1	0.2						
	LESQU														<0.1							
	CHNE																<0.1					
	RACO																		<0.1			
	SPHA	<0.1		<0.1	<0.1											<0.1						
	HENA	0.3																				
	BAAB		<0.1																			
G	BOCU	2.15	2.8	0.4	1.1	1.8		9.7		1.3	3.5	1.5		1.5	0.55	0.6	0.4	7.5	9	010		
	PLJA	2.4		1		0.5	0.55	0.1	2.1		1	1.8		2.8						0.3		
	BOGR		0.3			2.4	2.4	2.2	0.7	<0.1	0.75	0.8		1.4			0.3	0.9	0.65	1.25		
	SELE			2.3					1.65	1.2		0.6				3.4					0.7	
	SPCR			<0.1	0.5			0.1	0.4		1.4	1.9	0.9		0.25	1	0.4					
	BOIS							0.4												0.2	0.1	
	LEDU								0.2													
	ARDI									3.2	0.5											
	ARPU																0.5					
S	ULPU	0.1	<0.1	0.1	<0.1																	
	JAGR	0.3	<0.1	0.2	0.1		<0.1				0.4							<0.1	<0.1	0.1	0.3	
	GUSA	<0.1	0.9	1										0.2	<0.1		2.9					
	ATCA			0.8																		
	CAER							<0.1	<0.1						0.1							
	PSSC									0.2												
	MIACB	0.3		0.1																		
(blank)	BARE	78		64			25.6				31	12										
	LITTER	8					3.4															
	ROCK	8.4		7.5			68															
	TOTAL	5.6	4.1	6	5.6	4.7	3	12.5	8.1	6	7.7	6.7	6	7.8	7.6	5.3	4.5	8.4	9.7	7.5	4.4	

Notes:

-- = Species not observed

¹ See table 5 for corresponding scientific and common names





APPENDIX D

Quadrat Photographs









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