Table E-1 2014 Erosion Monitoring and Maintenance

ESCA RP 2014 Annual Natural Resource Report - Appendix E

Date	MRA	Location	Туре	Findings	Actions
1/30/2014	FEG	Grenade Range	Post-Rain Event	-Wattles, erosion blanket, and sand bags functioning properlyMinor ponding observed above water bar.	-None needed.
2/11/2014	FEG	Grenade Range	Post-Rain Event	-Wattles, erosion blanket, and sand bags functioning properly.	-None needed.
2/11/2014	SEA	Blue Line Road	Post-Rain Event	-Rolling dips near Watkins Gate Road functioning wellRilling observed at north end of Blue Line Road.	-Continue to monitor rilling at north end of Blue Line Road.
2/11/2014	IAR	R44/R47/ Development Parcel	Post-Rain Event	-Wattles, silt fence, and sand bags functioning properlyErosion blanket on escarpment is torn in places.	-Continue to monitor erosion blanket on escarpment for possible erosion.
2/17/2014	IAR	R47: Escarpment and south road	Routine	-No erosion observed along road south of R47Erosion blanket is in need of repair to function properly.	-None.
2/24/2014	IAR	R47/ Development Parcel	Repair	-Rilling occurring in south development parcelRilling occurring in R47 near west gate.	-Sand bags filled and installed in south development parcel to control rilling and prevent gully formation and soil transportSand bags installed in R47 as water barControl of rilling in south development parcel and near R47 west gate completed on 2/24/2014.
2/27/2014	FEG	Grenade Range	Post-Rain Event	-Wattles need soil removed upslope in placesSand bags functioning properlyErosion blanket should be installed where rilling and gullying occurring.	-BMPs repaired on March 3-6, 2014.
2/27/2014	IAR	R47/ Development Parcel	Post-Rain Event	-Wattles functioning adequately but some should be replaced. New wattles needed on north sideErosion blanket torn in placesExisting sand bags functioning well. More sand bags needed along north side of R47 and development parcel.	-None.
2/27/2014	SEA	Blue Line Road	Post-Rain Event	-Rolling dips near Watkins Gate Road are starting to get overtopped and should be larger.	-Communicated findings to Army.
3/3/2014	FEG	Grenade Range	Post-Rain Event	-Some wattles need sand removed on upslope sideBlanket needs to be installed where gully developingExisting sand bags functioning well. More sand bags needed on east side of aquatic feature AF-09-1A.	-BMPs repaired on March 3-6, 2014.
3/6/2014	FEG	Grenade Range	Post-Rain Event	-Some wattles need sand removed on upslope sideErosion blanket needs to be installed where gully developingExisting sand bags functioning well. More sand bags needed on east side of aquatic feature AF-09-1A.	-Sand removed upslope of wattlesSand bags installed everywhere needed to slow water or reinforce water barsSand removed from above sand bag chevronsSand bag berms erected on east side of aquatic feature AF09-1AFEG erosion repairs made March 3-6, 2014.
8/25/2014	IAR	Development Parcel	Pre-Winter	-Most water bars functioning properly but some need repair due to cutting through and along water barsSand bags needed where rilling and gullying occurring.	BMPs repaired. Completed on October 6, 2014.
8/25/2014	IAR	R47	Pre-Winter	-Wattles along north fence need repair. Additional wattles neededErosion blanket on escarpment torn in placesSilt fence functioning but one hold presentSand bags functioning well.	BMPs repaired. Completed on October 6, 2014.
8/26/2014	FEG	Grenade Range	Pre-Winter	-Wattles need repairErosion blanket in one location needs repairSand bags need repair. Additional bags needed.	BMPs repaired. Completed on October 6, 2014.
9/8/2014	FEG	Grenade Range	Pre-Winter	-Wattles around aquatic features can be removed where not needed. Wattles on north slope need replacement at places. An additional row can be addedBlanket undercut with rills at places. Can be addressed upslope or with additional blanket installed in rillPlastic sand bags should all be removedWater bars need reinforcement with sand bags at low pointsTwo additional water bars needed on upper terrace.	BMPs repaired. Completed on October 6, 2014.

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Date	MRA	Location	Туре	Findings	Actions
9/9/2014	IAR	Development Parcel	Pre-Winter	-Water bars are breached in multiple locations. Secondary road has large gullies.	BMPs repaired. Completed on October 6, 2014.
9/17/2014	IAR	Development Parcel	Pre-Winter	-Wattles not functioning properly and need more sand bags to weight them downSand bags need to be installed in gullies and water bar breachesPlastic and wattles needed for sand stockpile at Weston trailer.	BMPs repaired. Completed on October 6, 2014.
9/17/2014	IAR	R44 North and South	Pre-Winter	No erosion observed.	BMPs repaired. Completed on October 6, 2014.
10/6/2014	FEG	Grenade Range	Pre-Winter	-Wattles needed to slow surface flowSmall section of erosion blanket on steep slope needs repairSand bags needed where rills/gullies formedPlastic sand bags should be replaced with burlap that will biodegrade in place.	-New wattles installed throughout grenade rangeRepaired erosion blankets where undercutting occurredNew sand bags installed throughout grenade range where needed. Plastic sand bags replaced with burlapRepairs completed on October 6, 2014.
10/6/2014	IAR	R47	Pre-Winter	-Wattles needed along north fenceSilt fence has a hole.	-New wattles installed along north side of R47 where neededAdditional silt fence installed inboard of existing silt fenceRepairs completed on October 6, 2014.
10/6/2014	IAR	Development Parcel	Pre-Winter	-Wattles needed to slow sheet flowSand bags needed along berms and in gulliesVehicle traffic should be focused along single route to reduce aeolian erosion.	-watties installed to slow water flow and prevent rillingNew sand bags installed throughout development parcel where needed to control erosionVehicle driving routes marked out to avoid excessive loosening of hard packed sand.
11/3/2014	SEA	Blue Line Road	Post-Rain Event	-No major concernsMinor rilling on north end of Blue Line Road.	-None needed .
11/3/2014	IAR	R47	Post-Rain Event	-No major concernsSmall gully identified on east end of escarpment.	-None needed.
11/3/2014	IAR	Development Parcel	Post-Rain Event	-Water has run around many sand bag dams on water bars and gullies. Need repair -Significant sand movement in center of parcel	-Repairs made on 11/12/2014.
11/3/2014	FEG	Grenade Range	Post-Rain Event	-Water running under some new wattlesWater bars need to be cleaned outSand bag chevrons need cleaning -New piece of erosion blanket on east facing slope needs to be staked more thoroughly.	-Repairs made on 11/10/2014.
11/10/2014	FEG	Grenade Range	Post-Rain Event	-No concerns	-Additional stakes added to wattlesWater bars cleaned out and berms built upApprox 25 sand bags filled and placedBMP repairs completed on November 12, 2014.
11/12/2014	IAR	Development Parcel	Post-Rain Event	-No concerns	-Repairs made to all water bars, wattles, and chevrons on 10-12 November 2014.
11/12/2014	FEG	Grenade Range	Pre-Winter	-No concerns	-Hydroseeding done on two acres using locally collected native seed and local grass seed genotypeHydroseeding completed on November 12, 2014.

Table E-1 2014 Erosion Monitoring and Maintenance

ESCA RP 2014 Annual Natural Resource Report - Appendix E

Date	MRA	Location	Туре	Findings	Actions
11/12/2014	IAR	R47-Escarpment/ Development Parcel	Pre-Winter	-No concerns	-Hydroseeding of 0.5 acre escarpment using locally collected native seed and local grass seed genotypeHydromulching of 2.5 acres in south end of development parcelHydroseeding completed on November 12, 2014.
12/1/2014	IAR	Development Parcel	Post-Rain Event	-No concerns	-None needed.
12/1/2014	FEG	Grenade Range	Post-Rain Event	-No concerns	-None needed.
12/3/2014	FEG	Grenade Range	Post-Rain Event	-Significant seedling growth from hydroseed! -A sand bag had been driven over as you enter grenade range	-Crushed sand bag was repaired.
12/3/2014	IAR	Development Parcel	Post-Rain Event	-No concerns	-None needed.
12/3/2014	IAR	R47	Post-Rain Event	-Significant seedling growth from hydroseed!	-Minor shoveling along silt fence to keep it buried.
12/3/2014	SEA	Blue Line Road	Post-Rain Event	-Minor rilling and beginning of gullies along north end of SEA MRA blue line road.	-None needed.

ESCA RP Erosion Monitoring F	orm	Conducted By: Tallis			
MRA: FEG		Monitoring Date: 130/7.014			
Type of Monitoring: Pre-rain event Post	rain-event) F	Routine - Other			
1. Existing Erosion/Sediment Control Measures Present? Yer N. If N skip to 2.					
Type Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comments/Notes			
Wattles	N				
Blanket	N				
Silt Fence					
Sand Bags	N				
		×			
2. Are there signs of water erosion? Y N- N	I/A				
Rilling - gullying - Loss of fines from surfa	ce - Sand/silt	deposit in fans/basins			
Comments:		1			
3. Are there signs of wind erosion? Y(N)-N	/A				
Loss of fines on surface - Dunes - Soil on	leaves - Oth	er			
Comments:					
4. Are there areas of ponding? Some ponding above	Y) N Size	and depth:			
5. Work Areas					
Stockpiles are surrounded with wattles, co	overed, comp	pacted, not present? (Circle applicable)			
Describe:		8			
6. Do you have other erosion concerns?					
No					
Note: Distance DAAD and area	flour minht	seems concentrated in IAD photograph the steen hare			
parts of the development parcel adjacent to		ecome concentrated. In IAR photograph the steep, bare			

ESCA RP Erosion Monitoring Form				Conducted By: Joshua Tallis		
MR	MRA: FEG Grenade Range			3 8 "	Monitoring Date: 2/11/2014	
Тур		nitoring: Pre-rain event Post r		toutine	- Other	
1. Exis	ting Ero	sion/Sediment Control Measur	es Present?	Por N.	If N skip to 2.	
Тур		Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comm	ents/Notes	
Wa	ttles	Yes	No	Se	e photos	
Blai	nket	Yes	No		•	
Silt	Fence	Yes Yes	No		<u> </u>	
Sar	nd Bags	Yes	No	7		
		gns of water erosion? Y (N) N				
		ying - Loss of fines from surfac	e - Sand/silt	deposit	t in fans/basins	
	nments:	~				
		gns of wind erosion? Y (N) N//				
l —		s on surface - Dunes - Soil on	leaves - Othe	er		
Cor	nments:					
4. Are	there are	eas of ponding?	Y (N)Size a	and dep	th:	
5. Wor	k Areas					
		are surrounded with wattles, co	vered, comp	acted, r	not present? (Circle applicable)	
	Describe: N/A					
6. Do y	ou have	e other erosion concerns?				
	j	No				
				ecome (concentrated. In IAR photograph the steep, bare	
parts o	of the de	velopment parcel adjacent to ra	ange 47.			

ESCA RP Erosion Monitoring Form			Conducted By: Joshua Tallis		
	MRA: SEA			Monitoring Date: 2/11/2014	
	Type of Mo	onitoring: Pre-rain event Post r	rain-event) F	Routine - Other	
1. Existing Erosion/Sediment Control Measures Present? or N. If N skip to 2.					
	Туре	Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comments/Notes	
	Wattles				
	Blanket				
	Silt Fence				
	Sand Bags				
	Water Bar	Yes.	No	Large water bars/road dips are working well. They were constructed by the Army near watkins Grate west	
2	Ara thora si	gns of water erosion∜Y)- N - N	1/4		
10.6		gns of water erosion (Y - N - N)		denosit in fane/hasins	
			EA WIRT		
3.	Are there sig	gns of wind erosion? Y (N) N/		E PHOLES	
	Loss of fine	es on surface - Dunes - Soil on	leaves - Oth	er	
	Comments:		e .		
4.	Are there are	reas of ponding?	Y N Size a	and depth:	
5.	. Work Areas	1			
			overed, comp	pacted, not present? (Circle applicable)	
	Describe:	. 1/0-		146	
	l l	NIA		The state of the s	
6.	Do you have	e other erosion concerns?			
	Ni)			
		4-4		1 P	
		aph a il BMPs and areas where evelopment parcel adjacent to re		ecome concentrated. In IAR photograph the steep, bare	

ESCA	RP Erosion Monitoring F	orm	Conducted By: JOSHUA TALLIS
MRA: [/	AR R44, R47, I	Devel.fa	Monitoring Date: 2/11/2014
Type of Mo	nitoring: Pre-rain event - Post r		
1. Existing Ero	sion/Sediment Control Measur	es Present?	Yor N. If N skip to 2.
Туре	Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comments/Notes
Wattles	Yes	No	Some are full of holes from birds other animals but appear to still fund
Blanket	No	Yes	Blanket is decomposing and tearing Large holes exist
Silt Fence	Yes	No	The party water water
Sand Bags	Jes	No	
	1		
I 2. Are there side	I gns of water erosion?(Y	l /A	
	lying - Loss of fines from surfac		deposit in fans/basins
Comments:	Rilling in development Rilling on road extern	parcel ing range	near pump nouse. 47 from south near pedestriangate
	es on surface - Dunes - Soil on		W CALL TENCE
Comments:		eaves - Othe	er en
1. Are there ar	eas of ponding?	Y N Size a	and depth:
5. Work Areas Stockpiles a		vered comp	acted, not present? (Circle applicable)
Describe:	,	1010u, 00111p	action, flot presents (efficie applicable)
N	/A		
Stight Rilling	sound deposition not visible.	along	Range 44 north transacts.
	aph all BMPs and areas where velopment parcel adjacent to ra		ecome concentrated. In IAR photograph the steep, bare

	ESCA	RP Erosion Monitoring F		Conducted By:		
	MRA: /A	R-RUS, of R47	ment	Monitoring Date: 2/17/2014		
	Type of Mo	nitoring: Pre-rain event - Post r	_	outine) Other		
1.	Existing Ero	sion/Sediment Control Measur	es Present?	or N. If N skip to 2.		
	Туре	Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comments/Notes		
	Wattles	_				
	Blanket	N	Y	Blunket torn in a few places		
	Silt Fence			,		
	Sand Bags	_				
2.		gns of water erosion? Y -(N) N				
	Rilling - gull	lying - Loss of fines from surfac	ce - Sand/silt	deposit in fans/basins		
	Comments:	100		v v		
3.	Are there sig	gns of wind erosion? Y (N) N/	A			
	Loss of fine	es on surface - Dunes - Soil on	leaves - Oth	er		
	Comments					
4.	Are there ar	reas of ponding?	Y / Size	and depth:		
5.	Work Areas					
		are surrounded with wattles, co	overed, comp	pacted not present? (Circle applicable)		
	Describe:					
6.	Do you have	e other erosion concerns?				
		No				
N	ote: Photogra	aph all BMPs and areas where	flow might b	ecome concentrated. In IAR photograph the steep, bare		
pa	arts of the de	evelopment parcel adjacent to r	ange 47.	1		

	ESC#	A RP Erosion Monitoring F	orm	Conducted By Tallis		
Γ	MRA: 1/	R R47/Dev	el, Par	Monitoring Date: 2/24/2014		
l	Type of Mo	nitoring: Pre-rain event - Post				
Existing Erosion/Sediment Control Measures Present (Y or N. If N skip to 2.						
	Туре	Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comments/Notes		
	Wattles	NA				
	Blanket	7				
	Silt Fence					
	Sand Bags	Sand bags needed	X	Sand loags tilled.		
	Berms	N/A	Y	Sand bage were fitted in the		
			,	· · · · · · · · · · · · · · · · · · ·		
2.		ns of water erosion? Y - N 🔨				
		ying - Loss of fines from surfac	e - Sand/silt	deposit in fans/basins		
	Comments:					
3.	Are there sig	ns of wind erosion? Y - N N/				
	Loss of fines	s on surface - Dunes - Soil on I	eaves - Othe	r		
	Comments:					
4.	Are there are	eas of ponding?	Y/N Size a	nd depth:		
5. \	Work Areas					
	Stockpiles a	re surrounded with wattles, cov	ered, compa	cted, not present? (Circle applicable)		
	Describe:	•••				
6. [Do you have	other erosion concerns?		PILA A TO A		
4	Samo	d bags w south lar	ere -	tilled and placed in the	2.	
	cross	con in rills	TUVNI	ng To gullysi		
		oh all BMPs and areas where floarts of the development parce		come concentrated. In IAR/photograph		

2/34/2014 2/34/2014 Sand bag chevron matalled to slow water flow and			

MRA: FEG - Grewle Runge Type of Monitoring: Pre-rain event (Post rain-event) Routine - Other 1. Existing Erosion/Sediment Control Measures Present of N. If N skip to 2. Type (Functioning Property) (Evidence of overtopping, undermining or flow around?) Wattles Wattles	ESCA	RP Erosion Monitoring F	orm	Conducted By: Tallis + N. Handle
Type of Monitoring: Pre-rain event Post rain-event Routine - Other 1. Existing Erosion/Sediment Control Measures Present For N. If N skip to 2. Type Functioning Properly? (Evidence of overtoping, undermining or flow around?) Wattles Wattles Blanket Silt Fence Sand Bags Are there signs of water erosion? In N. N/A Rilling gullying: Loss of fines from surface - Sand/silt deposit in fans/basins Comments: In stall blanket In New and of water but seen and soft water but seen and seen and soft water but seen and soft water bu	MRA: FZ	EG - Grenade K	mine	V 1 1
Functioning Properly? (Evidence of overtopping, undermining or flow around?) Wattles Blanket Silt Fence Sand Bags Are there signs of water erosion? In N/A Comments Down Down				Routine - Other
(Evidence of overtopping, undermining or flow around?) Wattles W	1. Existing Ero	sion/Sediment Control Measur	es Present	or N. If N skip to 2.
Silt Fence Sand Bags 2. Are there signs of water erosion O-N-N/A Rilling Gullying Loss of fines from surface - Sand/silt deposit in fans/basins Comments Last Last Last New and of water but seen on 3. Are there signs of wind erosion? Y. N.N/A Loss of fines on surface - Dunes - Soil on leaves - Other Comments: 4. Are there areas of ponding? Pending but ind water water flow might become concentrated. In IAR photograph the steep, bare Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare	Туре	(Evidence of overtopping,	repair or	Comments/Notes
Blanket Silt Fence Sand Bags 2. Are there signs of water erosion (2) - N - N/A (Rilling Gullying) Loss of fines from surface - Sand/silt deposit in fans/basins Comments (1) - Sand (2)	Wattles	Y	У	Remove soil behind wattles
Sand Bags 2. Are there signs of water erosion (2) - N - N/A Rilling Gullying Loss of fines from surface - Sand/silt deposit in fans/basins Comments:	Blanket			
2. Are there signs of water erosion? N - N - N/A (Rilling Squllying). Loss of fines from surface - Sand/silt deposit in fans/basins Comments: In stall blanket a N end end of water bas seen on 3. Are there signs of wind erosion? Y (N N/A) Loss of fines on surface - Dunes - Soil on leaves - Other Comments: 4. Are there areas of ponding? Pending bahind water bas where flow might become concentrated. In IAR photograph the steep, bare. Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare.	Silt Fence	_		
Rilling dulying. Loss of fines from surface - Sand/silt deposit in fans/basins Comments: In the bounder of water but seen on 3. Are there signs of wind erosion? Y N N/A Loss of fines on surface - Dunes - Soil on leaves - Other Comments: 4. Are there areas of ponding? W/N Size and depth: 2 " Sand bags . 5. Work Areas Stockpiles are surrounded with wattles, covered, compacted not present? (Circle applicable) Describe: Describe: N/A 6. Do you have other erosion concerns?	Sand Bags	У	N	
Rilling Jullying Loss of fines from surface - Sand/silt deposit in fans/basins Comments: In July by Met & New and of water but seen on 3. Are there signs of wind erosion? Y N N/A Loss of fines on surface - Dunes - Soil on leaves - Other Comments: 4. Are there areas of ponding? Wind N Size and depth: 2 " Sand bags . 5. Work Areas Stockpiles are surrounded with wattles, covered, compacted not present? (Circle applicable) Describe: Describe: Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare				
Rilling dulying. Loss of fines from surface - Sand/silt deposit in fans/basins Comments: In the bounder of water but seen on 3. Are there signs of wind erosion? Y N N/A Loss of fines on surface - Dunes - Soil on leaves - Other Comments: 4. Are there areas of ponding? W/N Size and depth: 2 " Sand bags . 5. Work Areas Stockpiles are surrounded with wattles, covered, compacted not present? (Circle applicable) Describe: Describe: N/A 6. Do you have other erosion concerns?				
Rilling Jullying Loss of fines from surface - Sand/silt deposit in fans/basins Comments: In July by Met & New and of water but seen on 3. Are there signs of wind erosion? Y N N/A Loss of fines on surface - Dunes - Soil on leaves - Other Comments: 4. Are there areas of ponding? Wind N Size and depth: 2 " Sand bags . 5. Work Areas Stockpiles are surrounded with wattles, covered, compacted not present? (Circle applicable) Describe: Describe: Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare				
Rilling-gullying) Loss of fines from surface - Sand/silt deposit in fans/basins Comments	Are there si	gns of water erosion XY - N - N	I I/A	
Comments: In the blanket & Newdend of water bur seen on phin D 5.11 N/A Loss of fines on surface - Dunes - Soil on leaves - Other Comments: 4. Are there areas of ponding? Ronding behind water bur white sand bags. 5. Work Areas Stockpiles are surrounded with wattles, covered, compacted not present? Circle applicable) Describe: Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare	The second second			deposit in fans/basins
Loss of fines on surface - Dunes - Soil on leaves - Other Comments: 4. Are there areas of ponding? Ronding behind water bur white sand bags. 5. Work Areas Stockpiles are surrounded with wattles, covered, compacted not present? (Circle applicable) Describe: Describe: Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare				
A. Are there areas of ponding? **Ponding behind water born w/ white sand bogs.** 5. Work Areas Stockpiles are surrounded with wattles, covered, compacted not present? (Circle applicable) Describe: **Describe:**		111111111111111111111111111111111111111		
A. Are there areas of ponding? Ronding behind water bur white sand bags. 5. Work Areas Stockpiles are surrounded with wattles, covered, compacted not present? (Circle applicable) Describe: Describe: Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare	Loss of fine	es on surface - Dunes - Soil on	leaves - Oth	er
Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable) Describe: Describe: Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare	Comments			
Stockpiles are surrounded with wattles, covered, compacted not present? (Circle applicable) Describe: Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare	4. Are there ar	behind water	(Y) N Size :	and depth: 2" sand bags.
Describe: N/A 5. Do you have other erosion concerns? Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare				(Circle analicable)
Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare		are surrounded with wattles, co	overea, comp	pacted (not present? (Circle applicable)
Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare		NIA		
	6. Do you have	e other erosion concerns?	No	
				ecome concentrated. In IAR photograph the steep, bare

13	ESCA	A RP Erosion Monitoring F	orm	Conducted By: Tallis + N. Handley	
Г	MRA: (A	R R47+ Dovel	Parcel	Monitoring Date: 2/27/2014	
	Type of Mo	nitoring: Pre-rain event - Post r		Routine - Other	
1.	Existing Ero	sion/Sediment Control Measur	es Present?	or N. If N skip to 2.	
	Туре	Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comments/Notes	
	Wattles	Generally in good shape	Y	Some wattles should be fixed. Wostly new wattles need to be install	94
	Blanket	on escarpment needs	У	blanket tory in many places, especially at top	
	Silt Fence		N		
	Sand Bags	Need more	y	Need to fill and place new sound bag on rivulets in R47 + developarcel	0
		-			
2. /	Are there sig	ns of water erosion? (N - N/	Α		
	Rilling - gully	ring -(Loss of fines from surfac	e Sand/silt	deposit in fans/basins	/
		Devel Parcel-Gullys 5	tenting.	loss of fines and deposition @ bottom of site.	5
122		ns of wind erosion? Y -(N)- N/A on surface - Dunes - Soil on lo			
1	Comments:	on surface - Duries - Ooil On N	Daves Offic		
4 4	re there are	as of ponding?	Y /(N) Size aı	nd depth:	
(TA)	as alore are	as or portaing:	. NO SIZO di		
5. V	Vork Areas			1	
5	Stockpiles ar	e surrounded with wattles, cov	ered, compa	cted, not present? (Circle applicable)	
[Describe:				
	N/A				
6. D	o you have o	other erosion concerns?			
	No				
Note	e: Photograp	h all BMPs and areas where flo	ow might bed	ome concentrated. In IAR photograph	

the steep, bare parts of the development parcel adjacent to range 47.

ESCA RP Erosion Monitoring F	orm	Conducted By: Jiallis The Ham			
MRA: SEA - Blue, L	1 0				
Type of Monitoring: Pre-rain event - Post					
 Existing Erosion/Sediment Control Measur 	es Present	Yor N. If N skip to 2.			
Type Functioning Properly?	Need	Comments/Notes			
(Evidence of overtopping, undermining or flow around?	repair or correction?				
Wattles / s	Corrections				
N/A					
Blanket					
Silt Fence					
Sand Bags					
Rolling yes but some Dios overtopping	V	Dip and bern need to be bigger where Army did reports near Watkins Gale We			
Dips overtopping		bigger where Army did			
	,	reports near Watkins Ciale We			
α					
Are there signs of water erosion? N - N/A					
Rilling - gullying - Loss of fines from surface - Sand/silt deposit in fans/basins					
Comments: Rilling starting in a	north	end. Blue Line Rd.,			
. Are there signs of wind erosion? Y (N) N/A	1				
Loss of fines on surface - Dunes - Soil on leaves - Other					
Comments:					
Are there areas of ponding?	Y / Size a	nd depth:			
Work Areas					
Stockpiles are surrounded with wattles, cov	ered, compa	cted, not present? (Circle applicable)			
Describe:					
NA					
L Do you have other erosion concerns?					
x)					
No					
		come concentrated. In IAR photograph			

the steep, bare parts of the development parcel adjacent to range 47.

	ESCA	RP Erosion Monitoring F	orm	Conducted By: Tallis	
	MRA: II	-G - Grenade	Ramas	Monitoring Date: 3 - 3 - 2014	
	Type of Mo	nitoring: Pre-rain event Post r			
1		sion/Sediment Control Measur			
l'·	Type	Functioning Properly?	Need	Comments/Notes	
		(Evidence of overtopping,	repair or		
l	Mattles	undermining or flow around?	correction?	most watter functioning well.	1
	Wattles	N	X	some need sed ment shovels	anded.
	Blanket	N 1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Minos erogion around edge	0
	0:14 =	N	<i>\X</i>	of blanket. See photos	
	Silt Fence				
	Sand Bags	\/	\/	Need sand boors placed	2
ŀ		/	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	E and of AF-09-1A to prevent	0
		(on low end.	nex
2.	Are there-sic	ns of water erosion (Y)- N - N	I/A		
K	~//	ying Loss of fines from surface		deposit in fans/basins	
`	Comments	See photos	ans	map	
3.	Are there sign	gns of wind erosion? Y (N) N/	A		
	Loss of fine	s on surface - Dunes - Soil on	leaves - Oth	er	
	Comments:				
l					
4	Are there ar	eas of ponding?	Y N Size	and depth:	
1		- wattles an	I alo	ung water baro. See photos	
5	Work Areas				
ľ			overed, comp	pacted, not present? (Circle applicable)	
ı	Describe:	1.			
l		JA			
_	Do you have	e other erosion concerns?			
ا°.	Do you nave	outer erosion concerns?			
	\mathcal{N}	0			
				ecome concentrated. In IAR photograph the steep, bare	
Ina	arts of the de	velopment parcel adjacent to r	ange 47.		ı

ESCA F	RP Erosion Monitoring F	orm	Conducted By: Talls			
MRA: FE	MRA: FEG - Grenade Range Monitoring Date: 3/6/2014					
	toring: Pre-rain event Post r		utine - Other			
1. Existing Erosi	on/Sediment Control Measur	es Present? Y	or N. If N skip to 2.			
(1	Functioning Properly? Evidence of overtopping, Indermining or flow around?	Need C repair or correction?	omments/Notes			
Wattles	4	N				
Blanket	7	N				
Silt Fence		_				
Sand Bags	Y	N				
	s of water erosion? Y -(N)N					
	ng - Loss of fines from surfac	ce - Sand/silt de	eposit in fans/basins			
Comments:	10					
	is of wind erosion? Y (N) N/					
	on surface - Dunes - Soil on	leaves - Other				
Comments:	Comments:					
4. Are there area	as of ponding?	Y / N Size and	d depth:			
5. Work Areas						
	e surrounded with wattles, co	vered, compac	ted not present? (Circle applicable)			
Describe:	Describe:					
6. Do you have o	other erosion concerns?					
	No					
	h all BMPs and areas where elopment parcel adjacent to r	_	ome concentrated. In IAR photograph the steep, bare			

	ESCA	RP Erosion Monitoring F	orm	Conducted By: J. Tall's	
	MRA: IAR	2 - Development	Parcel		
		nitoring: Pre-rain event - Post r			
1.	Existing Ero	sion/Sediment Control Measur	es Present?	Por N. If N skip to 2.	
	Туре	Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comments/Notes	
	Wattles		A		
	Blanket				
	Silt Fence				
	Sand Bags	_			
	water Bas	N	У	See photos + map	
2.	Are there sig	gns of water erosion (Y)- N - N	/A		
		ying) Loss of fines from surface	ce - Sand/silt	deposit in fans/basins	
	Comments:				
3.		gns of wind erosion? Y N- N/			
		s on surface - Dunes - Soil on	leaves - Oth	er	
	Comments:				
4.	Are there ar	eas of ponding?	Y/N Size	and depth:	
			\mathcal{O}		
5.	Work Areas				
		are surrounded with wattles, co	vered, comp	acted not present? (Circle applicable)	
	Describe:				
6.	Do you have	e other erosion concerns?			
	No				
L	ata. Dhai	anh all DMDs and access with	florer majorist is	seems concentrated in IAD photograph the steen here	
	Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.				

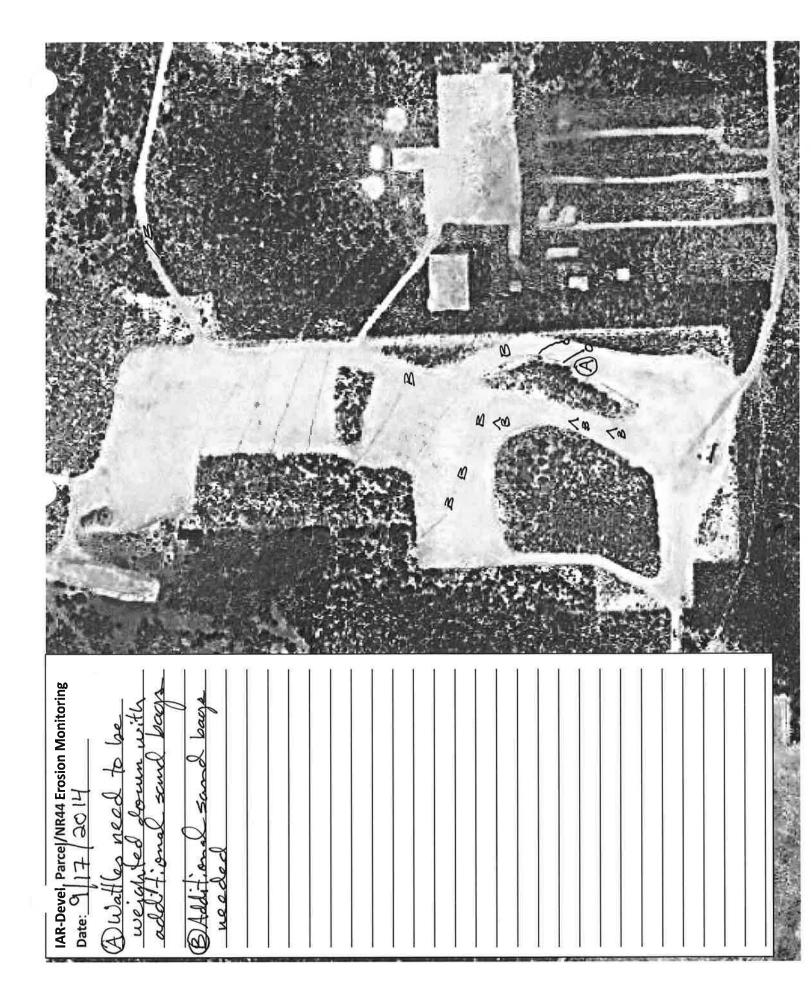
ESCA RP Erosion	Monitoring Form	Conducted By: Jalis				
MRA: IAIR - RI	17	Monitoring Date: 8/25/2014				
Type of Monitoring: Pre-rai	n event - Post rain-event - I	Routine-Other Pre-Winter				
Existing Erosion/Sediment (
Type Functioning Proceeding (Evidence of or undermining or	vertopping, repair or					
Wattles N	Y	Replace and add additional				
Blanket	Y	See photos and map.				
Silt Fence	7	One minos hole present				
Sand Bags	2	3				
Are there signs of water ero	osion (Y) N - N/A					
	ines from surface - Sand/sil					
Comments: N Side	of R47 alo	ng sence				
3. Are there signs of wind eros						
Loss of fines on surface - I	Dunes - Soil on leaves - Oth	ner				
Comments:						
4. Are there areas of ponding	? Y/N Size	and depth:				
5. Work Areas						
	with wattles, covered, com	pacted, not present? (Circle applicable)				
Describe: N//	Describe: N/A					
6. Do you have other erosion	concerns?					
No						
Note: Photograph all BMPs are parts of the development parts		become concentrated. In IAR photograph the steep, bare				

ESCA RP Erosion Monitor	ing Form	Cond	nducted By: Tallis			
MRA: FEG Grenade Range Monitoring Date: 8/26/2014						
Type of Monitoring: Pre-rain event - Post rain-event - Routine Other Pre - Winter						
1. Existing Erosion/Sediment Control M	easures Present (Y	or N. If N s	skip to 2.			
Type Functioning Properly? (Evidence of overtopping undermining or flow arounds)	g, repair or	Comments/I	/Notes			
Wattles	Y					
Blanket	Y	See	photo. Needs repair	12		
Silt Fence						
Sand Bags	Y					
7						
2. Are there signs of water erosion (Y)	district the second sec					
Rilling - gullying - Loss of fines from	surface - Sand/silt o	deposit in fa	ans/basins	_		
Comments:						
3. Are there signs of wind erosion? Y	N)- N/A					
Loss of fines on surface - Dunes - S	oil on leaves - Othe	Γ				
Comments:	Comments:					
4. Are there areas of ponding?	Y (N) Size a	nd depth:				
5. Work Areas				-		
	es. covered. compa	acted, not pr	present? (Circle applicable)			
Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable) Describe:						
l l						
6. Do you have other erosion concerns	?					
N						
Note: Photograph all BMPs and areas v parts of the development parcel adjace		come conce	centrated. In IAR photograph the steep, bar	re		

MRA: FEG Type of Monitoring: Pre-rain event - Post rain-event - Routine Other pre-winter 1. Existing Erosion/Sediment Control Measures Present? Y or N. If N skip to 2. Type Functioning Properly? (Evidence of overtopping, undermining or flow around?) Wattles Oroman agentic features - no longer needed - nemoved as necessary - needs of plants and soft of the decompose in with the particle of the state of of		ESCA	RP Erosion Monitoring Form		Conducted By: Doug	FISCHER
1. Existing Erosion/Sediment Control Measures Present? Y or N. If N skip to 2. Type		MRA: FE	6			10.27
Type Functioning Properly? Need Comments/Notes (Evidence of overtopping, undermining or flow around?) Wattles Oround agustic fecture Need Comments/Notes Commen		Type of Mo	nitoring: Pre-rain event - Post rain-	event - Routine	Other pre-winter	٦
(Evidence of overtopping, undermining or flow around?) Wattles One with or operative features - no longer needed - removed as recessary - work left to be on pare in situ. Blanket Wattles One with public implices on receptant longe. Combe addrired in the combined and only formal to the part to be the address of the address and the place and the place of the address of the place o	1.	Existing Ero	sion/Sediment Control Measures P	Present? Y or N	I. If N skip to 2,	
Blanket involved to decompose is with involved on head of the addressed with pills implaced on head addressed blanket and only how he stilling and spharing additional blanket and forly how he will be added above current upper how - all placed - to be staked restricted by the added above current upper how - all placed - to be staked restricted by the added above current upper how - all placed - to be staked restricted by the added above current upper how - all placed - to be staked restricted by the added to make the removed and signal to place and to make the staked restricted and upper three and to provide a staked and upper three and to hood by the added to provide a staked on upper three and to hood the following by the staked on upper three and to hood a staked on upper three and the hood of the staked on upper three and the hood of the staked on upper three and to hood a staked on upper three and to hood a staked on upper three and the hood of the staked on upper three and the hood of the staked on upper three and the hood of the staked on upper three and the hood of the staked on upper three and the hood of the staked on upper three and the hood of the hood of the staked on upper three and the hood of the		Туре	(Evidence of overtopping, rep	pair or	ments/Notes	
infull or by slitting and splacing additional blacked and long with the state of th		Wattles			0_	d as necessary-
Wottles to be added above current upper row - all placed - to be the directions Sand Bags placify begin all med to be removed and directly and will be used to reinforce and by berness around agent features with any distinct word in force and to be a story being a story broad. 2. Are there signs of water erosion? N - N/A [Milling] gullying - Loss of fines from surface Sand/sill deposit in fans/basins Comments mostly well controlled. 3. Are there signs of wind erosion? N - N/A [Loss of fines on surface - Dunes - Soil on leaves - Other Comments: minor aeblian deposition around none abstractions 4. Are there areas of ponding? Into outure applicable of Size and depth: Size and depth: 5. Work Areas Stockpiles are surrounded with wattles, covered, compacted, out present? Circle applicable) Describe: 6. Do you have other erosion concerns? Step eart alope needs additional hydronucle Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare			inderent with rills in uphill as by slitting a	and splace	ing addition plan	
Reinforch Asnables bearing again to features waterbest 4 materbars need reinforcement with Asnables at low points. 2 electron water from a resident on upper turiare and through the features and through the features. 2 and there signs of water erosion (N - N/A) Rilling-gullying - Loss of fines from surface Sand/silideposit in fans/basins Comments: world with erosion (N - N/A) Loss of fines on surface - Dunes - Soil on leaves - Other Comments: wire a cellian deposition around some altructions 4. Are there areas of ponding? Not enture apparting factures 5. Work Areas Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable) Describe: 6. Do you have other erosion concerns? Step eart plops needs additional hydronucles Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare		Wattles	to be added above curre	The state of the s		
2. Are there signs of water erosion IN - N/A Rilling-gullying - Loss of fines from surface Sand/silideposit in fans/basins Comments: worthy well - controlled - 3. Are there signs of wind erosion IN - N/A Loss of fines on surface - Dunes - Soil on leaves - Other Comments: wino aedian deposition around rome districtions 4. Are there areas of ponding? Not out who apparation find the size and depth: Describe: 6. Do you have other erosion concerns? Stup sant slope meds additional hydronules Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare		Sand Bags	The contract of the contract o	rus aro	und aquatic fe	ntures
Are there areas of ponding? 1. Are there areas of ponding? 1. When there areas of ponding? 1. When there are are are surrounded with wattles, covered, compacted, not present? Circle applicable) 1. Describe: 1. Do you have other erosion concerns? 1. Step east plope meds additional hydronulch 1. Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare		water berg	2 additional water bo	forcement	with sond bogs a	tow points.
Are there areas of ponding? Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare						
Are there areas of ponding? Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare						
3. Are there signs of wind erosion? N - N/A Loss of fines on surface - Dunes - Soil on leaves - Other Comments: minor aeblian deposition around some abstructions 4. Are there areas of ponding? Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare	2.			5-11-10-1	it in familia aire	
3. Are there signs of wind erosion? N - N/A Loss of fines on surface - Dunes - Soil on leaves - Other Comments: wind aedian deposition around name distructions 4. Are there areas of ponding? Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare	(AA AA		sit in tans/dasins	
Loss of fines on surface - Dunes - Soil on leaves - Other Comments: Minn aethian deposition around some abstructions 4. Are there areas of ponding? Not suturbo agreatic festures 5. Work Areas Stockpiles are surrounded with wattles, covered, compacted, not present? Circle applicable) Describe: 6. Do you have other erosion concerns? Step eart slope needs additional hydronulch Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare		Comments	mostly well-controll	ld -		
4. Are there areas of ponding? Not outris agratic festures 5. Work Areas Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable) Describe: 6. Do you have other erosion concerns? Step east plope needs additional hydronulch Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare	3.	Are there sig	gns of wind erosion N - N/A			
4. Are there areas of ponding? Not sutrick aquatic festures 5. Work Areas Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable) Describe: 6. Do you have other erosion concerns? Steep eart slope needs additional hydronucleh Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare		Loss of fine	s on surface - Dunes - Soil on leav	es - Other		
5. Work Areas Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable) Describe: 6. Do you have other erosion concerns? Step eart slope weeks additional hydronnulch Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare		Comments	minor aeblian depos	ition aro	nd some obstruction	ous
Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable) Describe: 6. Do you have other erosion concerns? Steep eart blope week additional hydronucleh Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare	4.	Are there ar	eas of ponding? You You festures	N Size and de	epth: 🚁	
Describe: 6. Do you have other erosion concerns? Steep eart slope week addition by hydronulch Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare	5.	Work Areas				
6. Do you have other erosion concerns? Steep eart slope needs addition by hydronulch Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare	l	Stockpiles	are surrounded with wattles, covere	ed, compacted	not present? Circle applic	cable)
Steep eart slope needs additional hydronulch Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare		Describe:				
	6.	Do you have	e other erosion concerns?. A slope needs addition) hydroni	alch	
					e concentrated. In IAR pho	tograph the steep, bare

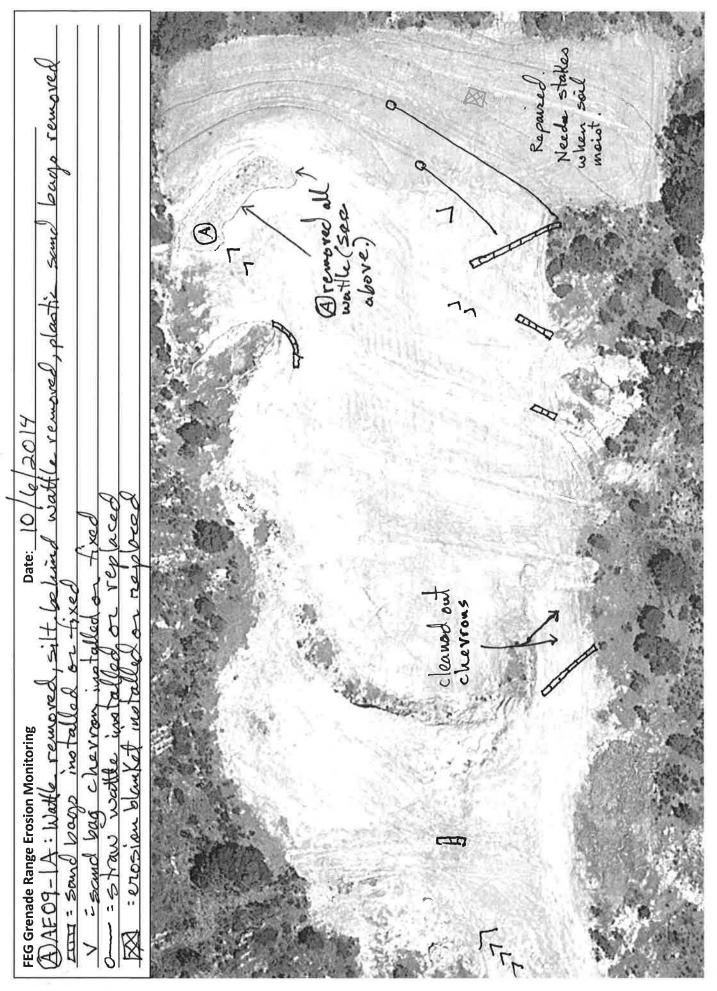
	ESCA	RP Erosion Monitoring F	orm	Conducted By: Dong Figure R	
	MRA: A	DEVELOPMENT PARCE	T.	Monitoring Date: 9/9/14	
	Type of Mo	nitoring: Pre-rain event - Post r	coutine Other Pre-Winter		
1. Existing Erosion/Sediment Control Measures Present? For N. If N skip to 2.					
	Туре	Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comments/Notes	
	Wattles	-			
	Blanket				
	Silt Fence	_			
	Sand Bags				
	water	multiple breaches in upper one & smaller) SEcomer road has lar	reaches à	tarnini of each lower one	
		gns of water erosion (V) N - N			
<		lying - Loss of fines from surface	ce - Sand/silt	deposit in fans/basins	
	23)77.1160	see above			
3.		gns of wind erosion?(Y)- N - N/			
		s on surface Dunes - Soil on	leaves - Oth	er	
	Comments:				
4.	Are there ar	eas of ponding?	Y/N Size	and depth:	
5.	Work Areas				
	Stockpiles	are surrounded with wattles, co	vered, comp	pacted, not present? (Circle applicable)	
	Describe:	V/A			
6.	Do you have	e other erosion concerns?			
	Ν	Jo			
N	ote: Photogra	aph all BMPs and areas where	flow might b	ecome concentrated. In IAR photograph the steep, bare	
		velopment parcel adjacent to r			

ESCA	RP Erosion Monitoring F	orm	Conducted By:	
MRA:	FR Development	ancel	Monitoring Date: 9/17/2014	
Type of Mor	nitoring Pre-rain event Post		Routine-Other Pre-Winfer	
1. Existing Ero	sion/Sediment Control Measur	res Present		
Туре	Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comments/Notes	
Wattles	N	Y	down watter-set map	
Blanket	NA		V	
Silt Fence	N/A			
Sand Bags	N	7	Need to add booss of sand	
			4	
	gns of water erosion? Y - N			
Rilling - gul	lying - Loss of fines from surfa	ce - Sand/silf	deposit in fans/basins	
Comments				
3. Are there sign	gns of wind erosion? N - N	/A		
	es on surface Dunes - Soil on			
Comments	Comments: Hydromulch from 2013 is yone in most areas, especially near connex and pump house.			
4. Are there ar	4. Are there areas of ponding? Y/N Size and depth:			
5. Work Areas	S			
		overed, comp	pacted not present? (Circle applicable)	
Describe: Need to add plastic over sand ple @ weston trailer, Need sand bags on wattle.				
6. Do you have	Do you have other erosion concerns? Alvaro is going to fix.			
			pecome concentrated. In IAR photograph the steep, bare	
parts of the de	evelopment parcel adjacent to	range 4/		

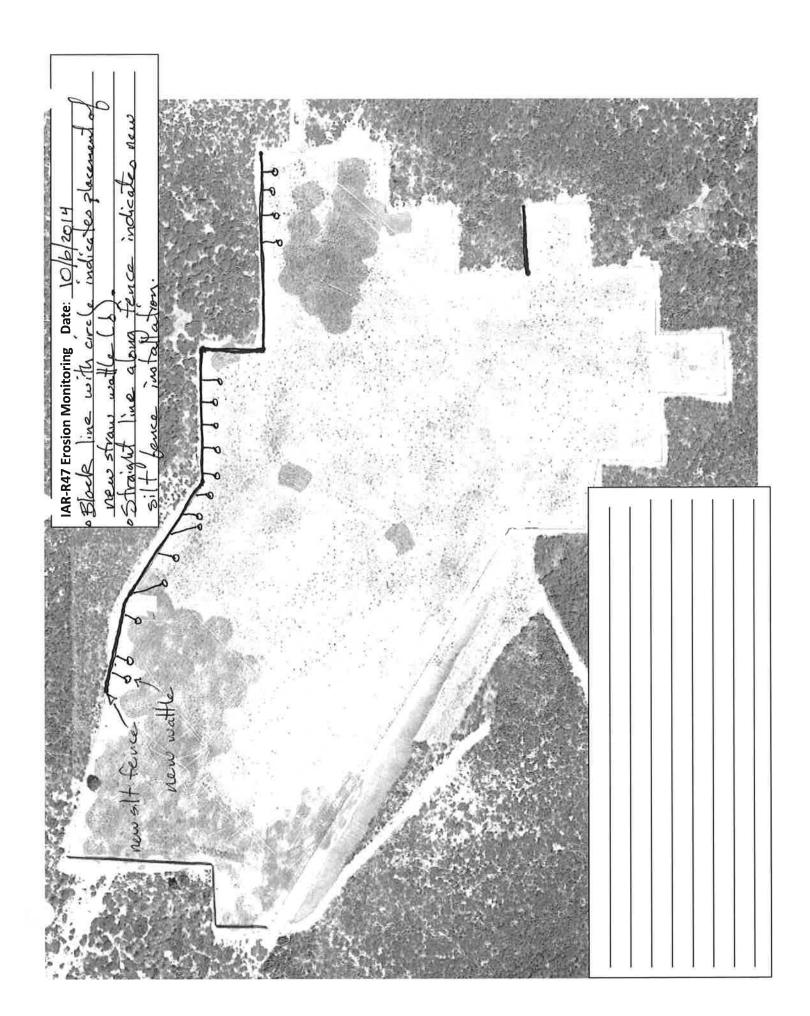


ESCA	RP Erosion Monitoring F	orm	Conducted By:		
MRA:	1R R44 S.	who who	Monitoring Date: 9/17/2014		
Type of Mor	nitoring. Pre-rain event Post r				
1. Existing Eros	sion/Sediment Control Measur	es Present?	Y of N. If N skip to 2.		
	Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comments/Notes		
Wattles					
Blanket	,				
Silt Fence					
Sand Bags					
	-				
	gns of water erosion? Y N		dense this few allegation		
	ying - Loss of fines from surfac	ce - Sand/silt	deposit in fans/pasins		
Comments:					
3. Are there sig	ns of wind erosion? Y (N) N/	Α			
Loss of fine	s on surface - Dunes - Soil on	leaves - Othe	er		
Comments:	Comments:				
4. Are there are	4. Are there areas of ponding? YN Size and depth:				
5. Work Areas					
Stockpiles a	are surrounded with wattles, co	overed, comp	pacted, not present? (Circle applicable)		
Describe:					
6. Do you have	e other erosion concerns?				
No.					
	Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.				

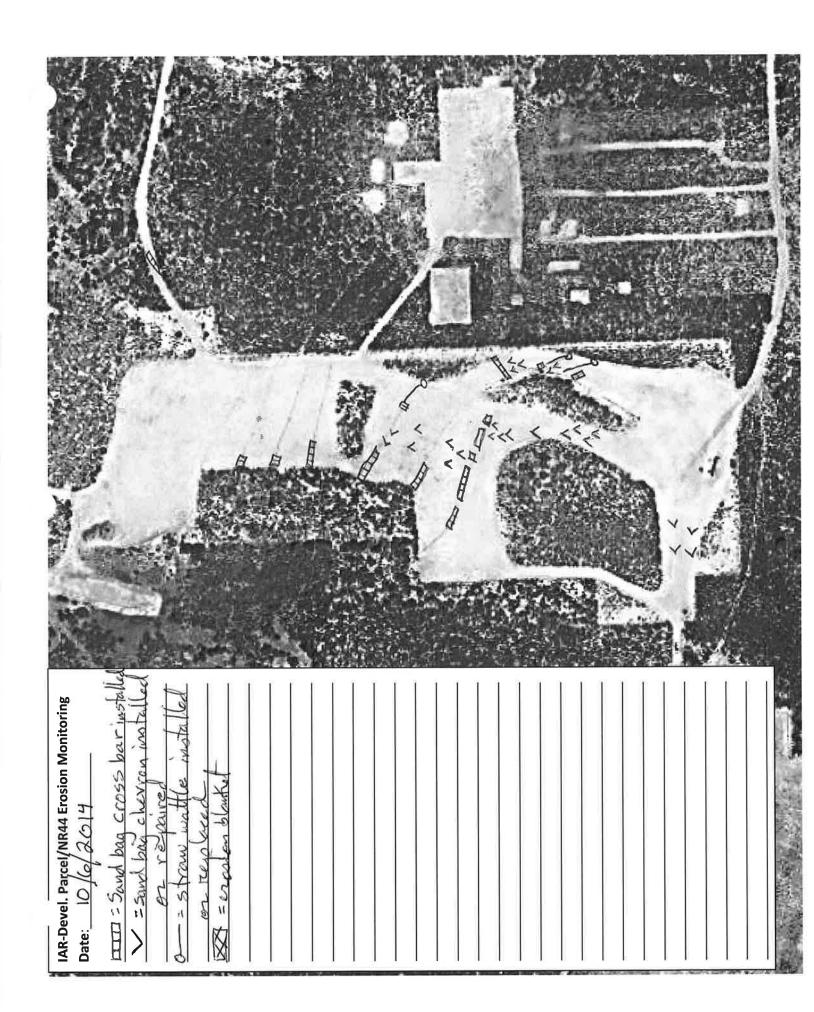
ESCA	RP Erosion Monitoring Form Conducted By: Jallis				
MRA:	- FEG-Grenade Runge Monitoring Date: 10/6/2014				
Type of Mo	nitoring: Pre-rain event - Post rain-event - Routine Other Pre - Winter				
1. Existing Ero	sion/Sediment Control Measures Present (Yor N. If N skip to 2.				
Туре	Functioning Properly? (Evidence of overtopping, undermining or flow around? Need Comments/Notes repair or correction?				
Wattles	New wattles installed as per map. Existing wattles functionings well. Removed all wattles.				
Blanket	Repaired blanket where undercutting occurring by stilling rolled blanket in gulls. Soil too hand for				
Silt Fence	None				
Sand Bags	New bags installed as per map. Plantic bugs replaced w/ bustap.				
35	gns of water erosion? Y N/A				
	lying - Loss of fines from surface - Sand/silt deposit in fans/basins				
Comments					
	gns of wind erosion? Y -(N)- N/A				
	es on surface - Dunes - Soil on leaves - Other				
Comments:	Comments:				
4. Are there ar	4. Are there areas of ponding? Y (N) Size and depth:				
5. Work Areas					
	Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable)				
Describe: A					
6. Do you have	e other erosion concerns?				
l ~					
	aph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare evelopment parcel adjacent to range 47.				



ESC	A RP Erosion Monitoring Form	Conducted By: TTallis
MRA:	AR -R47	Monitoring Date: 10/6/2014
Type of Mo	onitoring: Pre-rain event - Post rain-event - F	Routine Other Pre-Winter repairs
==	osion/Sediment Control Measures Present	
Туре	Functioning Properly? (Evidence of overtopping, undermining or flow around? Need repair or correction?	Comments/Notes
Wattles	New wattles installed at	ong N side of R47 as per
Blanket		
Silt Fence	additional (2nd) silt 6 fence on N side 65il	ence installed upslope of existing 247 as per map. New silt buch
Sand Bags		
		9
	igns of water erosion (Y)- N - N/A	
	llying - Loss of fines from surface (Sand/silt	
Comments	Addressed w/ wattles	and silt fence as per map.
3. Are there s	igns of wind erosion? Y -(N)- N/A	
	es on surface - Dunes - Soil on leaves - Oth	er
Comments	S:	
4. Are there a	reas of ponding? Y N Size	and depth:
5. Work Area		
	are surrounded with wattles, covered, comp	pacted, not present? (Circle applicable)
Describe:	NA	
6. Do you hav	re other erosion concerns?	
	No	
Note: Photogi	raph all BMPs and areas where flow might b	pecome concentrated. In IAR photograph the steep, bare
	evelopment parcel adjacent to range 47.	



	ESCA	A RP Erosion Monitoring Form	Conducted By: TTALLIS				
	MRA: JA	R- Development Parcel	Monitoring Date: 10/6/2014				
-	Гуре of Mo	onitoring: Pre-rain event - Post rain-event - Rou	utine Other Pre-Winter Repairs				
1. Existing Erosion/Sediment Control Measures Present? Yor N. If N skip to 2.							
	Гуре	(Evidence of overtopping, repair or undermining or flow around? correction?	omments/Notes				
	Nattles	New watter installed as	per majo.				
Ē	Blanket	None					
	Silt Fence	None					
1	Sand Bags	New sand bags installe	l as per map.				
2. A	re there si	gns of water erosion N - N/A					
		llying Loss of fines from surface - Sand/silt de	eposit in fans/basins				
		addressed w/ sund bays					
3.	re there si	gns of wind erosion?Y)- N - N/A					
(1	Loss of fine	es on surface 7 Dunes - Soil on leaves - Other					
1	Comments: Driving routes marked out in Southern development parcel to limit soil disturbance.						
4. <i>F</i>	4. Are there areas of ponding? Y/NSize and depth:						
5. V	Vork Areas	S					
:	Stockpiles	are surrounded with wattles, covered, compac	ted, not present? (Circle applicable)				
Ī	Describe:						
		10/14					
6. E	o you have	e other erosion concerns?					
		No					
	_	raph all BMPs and areas where flow might bec evelopment parcel adjacent to range 47.	ome concentrated. In IAR photograph the steep, bare				



J	ESCA RP Erosion Monitoring Form			Conducted By:) Tallis		
Г	MRA: IAR - Dovel Pancel			Monitoring Date: 10/27/2014		
	Type of Mo	nitoring: Pre-rain event Post	rain-event) F	Routine - Other		
1.	Existing Ero	Existing Erosion/Sediment Control Measures Present? Y or N. If N skip to 2.				
	Туре	Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comments/Notes		
	Wattles	Not inspected Not Present				
	Blanket					
	Silt Fence	Not present				
	Sand Bags	N	Y	Recent 1/4" rain event on 10/25/1		
				behind sand bag cherron		
				to run around them. So was removed from beh		
				chevrons and more bag-		
2.		ns of water erosion (Y) N - N/				
		ying - Loss of fines from surfac	e - Sand/silt	deposit in tans/basins		
		See above				
3. /		ns of wind erosion? Y (N -) N/A				
		s on surface - Dunes - Soil on l	eaves - Othe			
	Comments:					
4. /	Are there are	as of ponding?	Y / N Size a	nd depth:		
	Work Areas					
-		re surrounded with wattles, cov	ered, compa	acted, not present (Circle applicable)		
	Describe:					
 6. [o you have	other erosion concerns?				
	N 1					
	176					
Vote	e: Photograp	h all BMPs and areas where fl	ow might be	come concentrated. In IAR photograph		
		parts of the development parce				

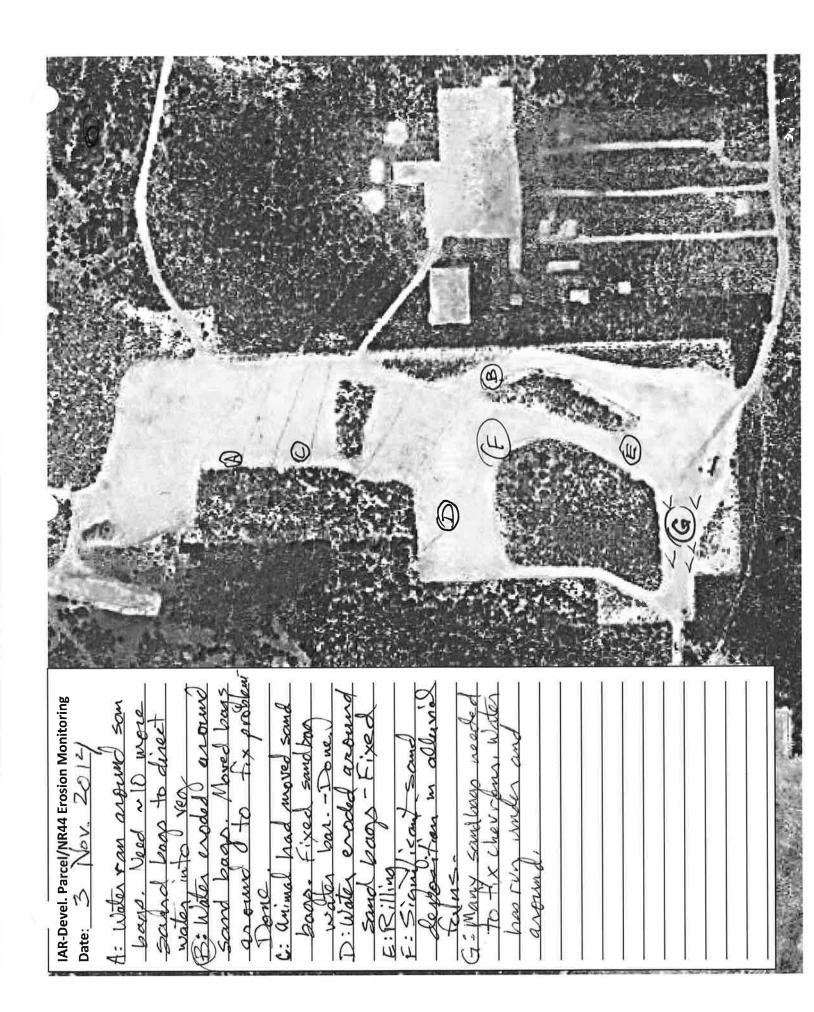
IAR-Devel. Parcel/NR44 Erosion Monitoring Date: 10/27/2014 "<" indicates leading of aspained Sound Observed Long to be been been been been been been been			

ESC	A RP Erosion Monitoring F	form	Conducted By: Jallis			
MRA:	SEA-Blue 1	ine Rd	Monitoring Date: 11/3/2014			
Type of Mo	onitoring: Pre-rain event Post		1 /			
I. Existing En	osion/Sediment Control Measur	res Present?	Y or N. If N skip to 2.			
Туре	Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comments/Notes			
Wattles						
Blanket	_					
Silt Fence	_					
Sand Bags						
Rolling	Y	N	Located near watkins Gai			
1						
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	N. N.					
	Are there signs of water erosion?(Y)- N - N/A Rilling gullying - Loss of fines from surface - Sand/silt deposit in fans/basins					
1 - 1 -			Line od at north end.			
	Are there signs of wind erosion? Y (N)- N/A					
	Loss of fines on surface - Dunes - Soil on leaves - Other					
Comments						
		· · · · · · ·				
. Are there ar	eas of ponding?	Y (N)Size a	ind depth:			
. Work Areas						
Stockpiles a	Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable)					
Describe:						
De ver bare	other erosion concerns?					
. Do you have						
. Do you nave						
. Do you have						
No you have						

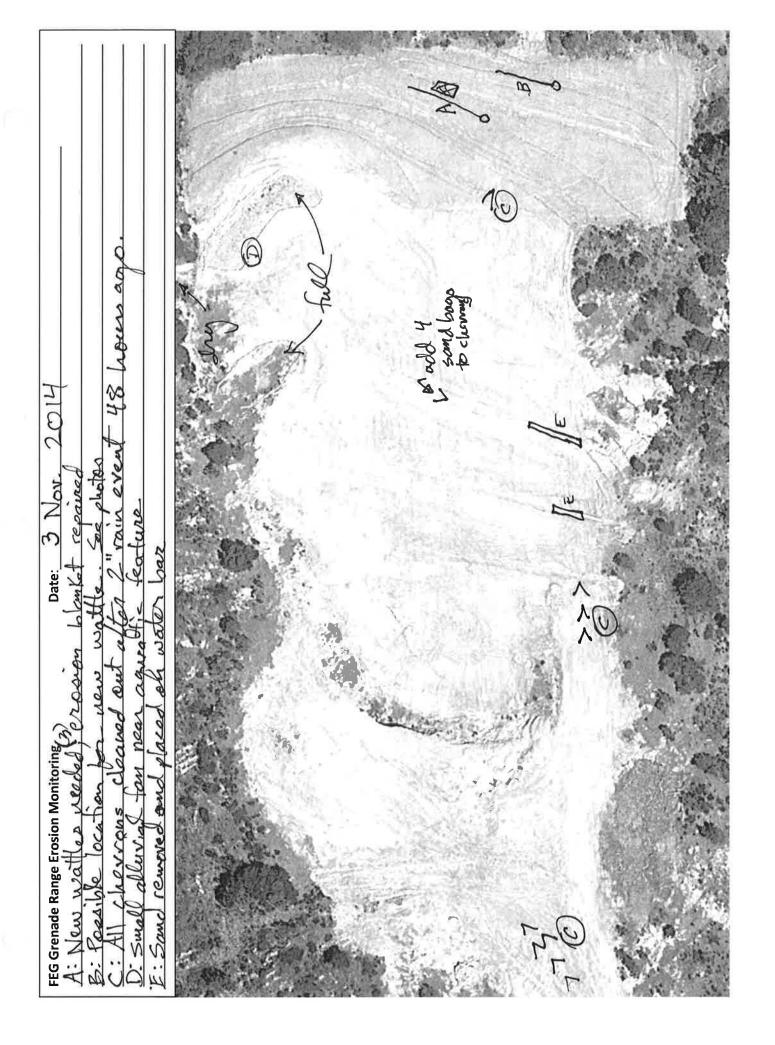
	ESCA	ARP Erosion Monitoring F	orm	Conducted By: J. Tallis		
Г	MRA: A	R -R47		Monitoring Date: 3 Nov. 2014		
	Type of Mo	nitoring: Pre-rain event (Post r	ain-event) F			
1.	. Existing Erosion/Sediment Control Measures Present? Yor N. If N skip to 2.					
Type Functioning Properly? Need Comments/Notes (Evidence of overtopping, repair or						
	Wattles	Flow around sear at 4 wattles	Y	All four wattles repaired by placing sand bags to prevent re		
	Blanket	one small gully	+ Y	Photos taken		
	Silt Fence	Y	N			
	Sand Bags	Y	N			
2	Are there sig	ns of water erosion? N - N/	Α			
		ing (Loss of fines from surfac		deposit in fans/basins)		
	Comments:	See map				
3.	re there signs of wind erosion? Y -(N -) N/A					
	Loss of fines	s on surface - Dunes - Soil on l	eaves - Othe	er		
	Comments:	*				
L	owest	point of Ry	Y/N Size a 7 it ater.	nd depth: appears there was about		
10	Vork Arelas Stockpiles ar	re surrounded with wattles, cov	ered, compa	acted, not present? (Circle applicable)		
	Describe:			The state of the s		
6. E	o you have	other erosion concerns?		24		
		$\mathcal{V}_{\mathcal{O}}$		8.		
			12			
				come concentrated. In IAR photograph		
		parts of the development parce				

IAR-R47 Erosion Monitoring Date: 3 Nov- 2014			Photo rilling in AMP polygon	
	Most walker	E No problem. photo of mallyway.		A= Add I'M wattle - 2 and of straw bails E= Add 2 sand bags of end of straw bails C: Add 2 sand bags - Down

	ESCA	RP Erosion Monitoring F	orm	Conducted By: J. Tallis	,
Γ	MRA:	AR - Developmen	flare		2014
l	Type of Mo	nitoring: Pre-rain event Post			
1.	Existing Ero	sion/Sediment Control Measur	es Present?	Y or N. If N skip to 2.	
l	Туре	Functioning Properly?	Need	Comments/Notes	
ı		(Evidence of overtopping, undermining or flow around?	repair or correction?		
	Wattles	Y	N		
	Blanket	N/A			
	Silt Fence	N/A			125
l	Sand Bags	N	У	Most sand bogs well. Many sand were moved to func	working
l		, ,		well. many sama	tion better
l				More bugs needed @	1
l				More bugs needed (a)	A on may
l					·
2	Are there six	gns of water erosion (Y)N - N	1/A		
<u>'</u>		lying Loss of fines from surface		deposit in fans/basins	
(Comments		<u> </u>		
3.	Are there sign	gns of wind erosion? Y (N) N/	A		
ı		s on surface - Dunes - Soil on		er	
l	Comments:				
l					
	Are there ar	eas of ponding?	Y N Size	and depth:	
l	Ale there ar	cas or portaing:	0.20	and dopui.	
5.	Work Areas				
			overed, comp	acted, not present? (Circle applicable)	
	Describe:				
6.	Do you have	e other erosion concerns?			
	,				
		$N_{\mathcal{O}}$			
		aph all BMPs and areas where e parts of the development par		ecome concentrated. In IAR photograph	
I'''	o otoop, bare	bear to or the development par	oo, aajaoonii		



ESCA RP Erosion Monitoring Form	Conducted By: J. Tallis				
MRA: FEGI-Grenade	Range	Monitoring Date: 3 Nov 2014			
Type of Monitoring: Pre-rain event - Rost rain-event - Routine - Other					
Existing Erosion/Sediment Control Measures F	xisting Erosion/Sediment Control Measures Present? Yor N. If N skip to 2.				
Type Functioning Properly? Ne (Evidence of overtopping, undermining or flow around? cor	ents/Notes				
Wattles No	y On topping	some old walles water is ever- ig. On some newer ones its running of staking to Socrievndermall			
Blanket	y Did	18 staking to Socrawnderwoodly 1801- More stakes needed			
Silt Fence N/A					
Sand Bags No	y Wos	+ soud bags working we			
	beh	and cherron. This was done			
	•				
		Th.			
2 Are there signs of water erosion?(Y) N - N/A	<u> </u>				
Rilling gullying (Loss of fines from surface - S	Sand/silt deposit	in fans/basins			
Comments: See map					
3. Are there signs of wind erosion? Y N/A					
Loss of fines on surface - Dunes - Soil on leave	es - Other				
Comments:					
4. Are there areas of ponding? only in two of fi	N Size and depti				
0,	a regin	witz :====================================			
5. Work Areas Stockpiles are surrounded with wattles, covered	d compacted no	of present? (Gircle applicable)			
Describe:	7				
6. Do you have other erosion concerns?					
$\bigcup_{\mathbf{A}}$					
, - 0					
Note: Photograph all BMPs and areas where flow r the steep, bare parts of the development parcel ad					



		RP Erosion Monitoring F	orm	Conducted By: Jalls			
١.	MRA:	FR - Devel. F	arcel	Monitoring Date: 12/1/2014			
L	Type of Mor	nitoring: Pre-rain event - Post r	ain-event)- R	outine - Other			
1.	1. Existing Erosion/Sediment Control Measures Present? Y or N. If N skip to 2.						
	Туре	Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comments/Notes			
	Wattles	Y	N				
	Blanket	,—-	_				
	Silt Fence	_	_				
	Sand Bags	7	N				
	by dro-	X	N				
2.	2. Are there signs of water erosion? Y (N) N/A						
	Rilling - gullying - Loss of fines from surface - Sand/silt deposit in fans/basins Comments:						
3	3. Are there signs of wind erosion? Y (N)- N/A						
١		s on surface - Dunes - Soil on		er			
	Comments:						
1	. Are there areas of ponding? Y/N Size and depth:						
1	Are there areas of ponding? Y/N Size and depth:						
5.	5. Work Areas						
	Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable)						
	Describe:						
6.	Do you have	e other erosion concerns?					
		110					
		100					

	ESCA	RP Erosion Monitoring F	orm	Conducted B	y. Jalal		
	MRA: 7	EG1 - Grena	le Ran	Monitoring Da	ate: 12/1/201		
		nitoring: Pre-rain event Post r					
1. Existing Erosion/Sediment Control Measures Present? For N. If N skip to 2.							
	(Evidence of overtopping,		Need repair or correction?	Comments/Notes			
	Wattles	Y	N				
	Blanket	Y	N				
	Silt Fence	-					
	Sand Bags	1	N				
	Hydro-J Seed	7	N				
		,					
2.		gns of water erosion? Y (N) N					
		ying - Loss of fines from surfac	ce - Sand/silt	eposit in fans/basins			
	Comments:						
3.	Are there sig	ns of wind erosion? Y - N - N/A	Α				
	Loss of fine	s on surface - Dunes - Soil on I	leaves - Othe				
	Comments:						
4.	Are there are	eas of ponding?	Y/(N) Size a	d depth:			
5.	Work Areas						
		re surrounded with wattles, cov	vered, compa	ted not present? (Circ	cle applicable)		
	Describe:						
6.	Do you have	other erosion concerns?					
	-	Vo					
A1-	to: Dhotos	oh oll DMDa and anaba subarra f	lave as late to				
the	steep, bare	ph all BMPs and areas where f parts of the development parce	el adjacent to	ome concentrated. In I range 47.	AR photograph		

	ESCA	RP Erosion Monitoring F	orm	Conducted By: J. Tellis		
MRA: FEG - Grenade Range Monitoring Date: 12/3/2014						
		nitoring: Pre-rain event - Post				
1. Existing Erosion/Sediment Control Measures Present? Y or N. If N skip to 2.						
		Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comments/Notes		
	Wattles	Y	N			
	Blanket	Y	N			
	Silt Fence					
	Sand Bags	Y	N	one sand bag had been driven over ver you enter orprenade vanige- ut wo		
	Hydro-	Y	N	Significant sprouting from		
2.		gns of water erosion? Y N-N	The second secon			
		ying - Loss of fines from surface	ce - Sand/siit	deposit in fans/basins		
L	Comments:					
3.		gns of wind erosion? Y (N - N/				
		s on surface - Dunes - Soil on	leaves - Oth	er		
	Comments:					
	A == 4b === ===	and of panding?	V M Circ	and donth:		
4.	4. Are there areas of ponding? YN Size and depth:					
5.	Work Areas					
	Stockpiles a	are surrounded with wattles, co	overed, comp	acted, not present? (Circle applicable)		
	Describe:					
6.	Do you have	other erosion concerns?				
	\sim					
	to. Dhatassa	nh all RMDs and areas where	flow might h	ecome concentrated in IAD photograph the steep have		
		velopment parcel adjacent to r		ecome concentrated. In IAR photograph the steep, bare		

		RP Erosion Monitoring F		Conducted By: J. Tallis		
	MRA:	tR - Development	- Parcel	Monitoring Date: 12/3/2014		
	Type of Monitoring: Pre-rain event - Post rain-event Routine - Other 1" rain since last monitoring					
1.	Existing Eros	sion/Sediment Control Measur	es Present?	Y or N. If N skip to 2		
		Functioning Properly?	Need	Comments/Notes		
		(Evidence of overtopping, undermining or flow around?	repair or correction?			
	Wattles	V	11			
	Blanket		10			
	Silt Fence					
	Sand Bags	Y	N			
	Water	Y	N			
	Hydro					
L	<u> </u>		The state of the s			
2.		gns of water erosion?(Y) N - N		deposit in fans/basins		
	Rilling - gullying - Loss of fines from surface (Sand/silt deposit in fans/basins) Comments: There was some sond deposition here and there but all BMPS were working well					
3.	3. Are there signs of wind erosion? Y N-N/A					
l	Loss of fines on surface - Dunes - Soil on leaves - Other					
	Comments:					
4.	Are there ar	eas of ponding?	Y / N Size	and depth:		
5.	Work Areas			not proporto (Cirola applicable)		
		are surrounded with wattles, co	overed, comp	pacted, not present? (Circle applicable)		
	Describe:					
L						
6.	Do you have	e other erosion concerns?				
	No.					
	Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare					
No	ote: Photogra	aph all BMPs and areas where velopment parcel adjacent to r	flow might brange 47.	ecome concentrated. In IAR photograph the steep, bare		
þ	parts of the development parcel adjacent to range 47.					

	ESCA RP Erosion Monitoring Form			Conducted By: Jallis	
	MRA:)	FR - Romose	47	Monitoring Date: 12/3/2014	
Type of Monitoring: Pre-rain event - Post rain-event - Routine - Other 1" rain since (aut menitori)					
1.	Existing Ero	sion/Sediment Control Measur	es Present	Y or N. If N skip to 2.	
	Туре	Functioning Properly? (Evidence of overtopping, undermining or flow around?	Need repair or correction?	Comments/Notes	
	Wattles	Y	N		
	Blanket	Y	N	on escarpment	
	Silt Fence	Y	N	Additional soul shoveled again silt in one location where minor evosion	
	Sand Bags	Y	N		
	Hydroseed	Y	N	major spronting from hydro-	
2.	1/2	ns of water erosion? Y (N) N	CONTRACTOR TO THE TOTAL PROPERTY OF THE PARTY OF THE PART		
		ying - Loss of fines from surface	ce - Sand/silt	deposit in fans/basins	
	Comments:				
3.	Are there sig	ns of wind erosion? Y N N	A		
	Loss of fines on surface - Dunes - Soil on leaves - Other				
	Comments:				
4. Are there areas of ponding? Y N Size and depth:					
5.	Work Areas				
	Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable)				
Describe:					
3. I	Do you have	other erosion concerns?			
		N			
Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare					
parts of the development parcel adjacent to range 47.					

	ESCA	RP Erosion Monitoring F	orm	Conducted By: Tallis		
	MRA: S	EA - Police Li	ne Ro	Monitoring Date: 12/2/2014		
l	Type of Mo	nitoring: Pre-rain event Post r	ain-event R	coutine - Other 14 rain since last monitoring		
1	Existing Ero	sion/Sediment Control Measur	es Present?/	Y of N. If N skip to 2.		
	Type Functioning Properly? Need Comments/Notes					
		(Evidence of overtopping, undermining or flow around?	repair or correction?			
l	Wattles					
	Blanket	None				
	L	None				
	Silt Fence	None				
	Sand Bags					
	1	None				
	Baro	/	Y	and there could be more		
				especially in the North part		
١	-		and the second s	is ining villing toulling		
				along vond.		
2		gns of water erosion?(Y)- N - N				
1		lying - Loss of fines from surface	ce - Sand/silt	deposit in fans/basins		
			10			
3	3. Are there signs of wind erosion? Y (N -)N/A Loss of fines on surface - Dunes - Soil on leaves - Other					
1	Comments					
١						
L	A th	reconstructions?	V / K di	and donth:		
4	. Are there ar	reas of ponding?	Y/N Size	and deptin.		
5	. Work Areas					
ľ	Stockpiles are surrounded with wattles, covered, compacted not present? (Circle applicable)					
١	Describe:					
ı						
6	Do you have	e other erosion concerns?				
		۸ ۱				
	No					
		aph all BMPs and areas where evelopment parcel adjacent to		become concentrated. In IAR photograph the steep, bare		
ľ	Part 5. 11.0 20.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1					

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Photograph 1

Future East Garrison MRA Grenade Range

Wattles installed in 2013 continue to function well in this location. Most flow has since been diverted away using water bars.

30 January 2014



Photograph 2

Future East Garrison MRA Grenade Range

2013 hydromulch continues to function properly, dispersing and slowing sheet flow.

30 January 2014









Photograph 3

Interim Action Ranges MRA Development Parcel

New sand bag chevrons installed to slow water and prevent gully formation.

24 February 2014



Photograph 4

Interim Action Ranges MRA Development Parcel

New sand bag chevrons installed to slow water and prevent gully formation.

24 February 2014









Photograph 5

Seaside MRA Blue Line Road

Early signs of gulling at north end of Seaside MRA.

27 February 2014



Photograph 6

Seaside MRA Blue Line Road

Rolling dip draining to right improved by Army.

27 February 2014









Photograph 7

Interim Action Ranges MRA Range 47

Erosion blanket natural degradation on escarpment, 1.5 years after installation.

25 August 2014



Photograph 8

Interim Action Ranges MRA Range 47

Erosion blanket natural degradation on escarpment, 1.5 years after installation.

25 August 2014









Photograph 9

Interim Action Ranges MRA Development Parcel

New sand bags installed to form a water bar to redirect flow.

6 October 2014



Photograph 10

Interim Action Ranges MRA Development Parcel

New sand bags installed to form water bar to redirect flow into vegetated area.

6 October 2014









Photograph 11

Future East Garrison MRA Grenade Range

Whole escarpment hydroseeded with wood fiber mulch, mycorrhizal inoculant, fertilizer, and native local seed to reinforce erosion control blanket.

11 November 2014



Photograph 12

Future East Garrison MRA Grenade Range

Two acres of grenade range hydroseeded with wood fiber mulch, mycorrhizal inoculant, fertilizer, and local native seed.

11 November 2014









Photograph 13

Future East Garrison MRA Grenade Range

Hydroseed beginning to sprout on east facing slope.

3 December 2014



Photograph 14

Future East Garrison MRA Grenade Range

Sand bag chevrons holding water shortly after it stopped raining.

3 December 2014





