

Los Angeles  Department of Water & Power

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September 22, 2015

**Sent via Email on September 22, 2015**

Utah Division of Oil, Gas & Mining Coal Program (DOGM)  
1594 West North Temple, Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

Dear Permit Supervisor:

Subject: Intermountain Power Agency (IPA) Response to Deficiencies Identified in your September 4, 2015 DOGM letter Task ID #4895 to IPA regarding Wildcat Loadout Facility, C/007/0033

IPA is respectfully submitting, via email, additional information to our DOGM Permit C/007/0033 Wildcat Loadout Mining and Reclamation Plan. This additional information is in response to DOGM's September 4, 2015 letter, Task ID #4895, to IPA regarding deficiencies identified in IPA's permit amendment in response to NOV # 10132.

For your convenience, an electronic copy of all submittal materials have been sent to DOGM via email to [ogmcoal@utah.gov](mailto:ogmcoal@utah.gov) on September 22, 2015.

If you have any comments or questions, please contact me at (801) 748-1471.

Sincerely,



Lance C. Lee  
Project Manager  
Intermountain Power Project

cc: James A. Hewlett (via email)  
Intermountain Power Agency  
Minh T. Le (via email)  
William W. Engels (via email)

**Los Angeles Aqueduct Centennial Celebrating 100 Years of Water 1913-2013**

111 N. Hope Street, Los Angeles, California 90012-2607 Mailing address: Box 51111, Los Angeles, CA 90051-5700  
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## APPLICATION FOR COAL PERMIT PROCESSING

Permit Change  New Permit  Renewal  Exploration  Bond Release  Transfer

**Permittee:** INTERMOUNTAIN POWER AGENCY

**Mine:** WILDCAT LOADOUT

**Permit Number:** C/007/0033

**Title:** RESPONSE TO TASK ID #4895 DEFICIENCY

**Description,** Include reason for application and timing required to implement:

PROPOSAL TO EXPAND EXISTING PERMIT BOUNDARY AND DISTURBED AREA BY 23 ACRES

**Instructions:** If you answer yes to any of the first eight questions, this application may require Public Notice publication.

- Yes  No 1. Change in the size of the Permit Area? Acres: 23.00 Disturbed Area: 23.00  increase  decrease.
- Yes  No 2. Is the application submitted as a result of a Division Order? DO# \_\_\_\_\_
- Yes  No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
- Yes  No 4. Does the application include operations in hydrologic basins other than as currently approved?
- Yes  No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
- Yes  No 6. Does the application require or include public notice publication?
- Yes  No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
- Yes  No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
- Yes  No 9. Is the application submitted as a result of a Violation? NOV # \_\_\_\_\_
- Yes  No 10. Is the application submitted as a result of other laws or regulations or policies?

*Explain:* \_\_\_\_\_

- Yes  No 11. Does the application affect the surface landowner or change the post mining land use?
- Yes  No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
- Yes  No 13. Does the application require or include collection and reporting of any baseline information?
- Yes  No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
- Yes  No 15. Does the application require or include soil removal, storage or placement?
- Yes  No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
- Yes  No 17. Does the application require or include construction, modification, or removal of surface facilities?
- Yes  No 18. Does the application require or include water monitoring, sediment or drainage control measures?
- Yes  No 19. Does the application require or include certified designs, maps or calculation?
- Yes  No 20. Does the application require or include subsidence control or monitoring?
- Yes  No 21. Have reclamation costs for bonding been provided?
- Yes  No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
- Yes  No 23. Does the application affect permits issued by other agencies or permits issued to other entities?
- Yes  No 24. Does the application include confidential information and is it clearly marked and separated in the plan?

**Please attach three (3) review copies of the application. If the mine is on or adjacent to Forest Service land please submit four (4) copies, thank you.** (These numbers include a copy for the Price Field Office)

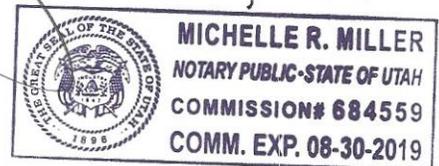
I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

JAMES HEWLETT RESIDENT AGENT 9-22-15 [Signature]  
 Print Name Position Date Signature (Right-click above choose certify then have notary sign below)

Subscribed and sworn to before me this 20 day of September 2015

Notary Public: Michelle R. Miller, state of Utah.

My commission Expires: 03/30/2019 }  
 Commission Number: 684559 } ss:  
 Address: 10653 S. River Front Parkway }  
 City: South Jordan State: ut Zip: 84095 }



**For Office Use Only:**

**Assigned Tracking Number:**

**Received by Oil, Gas & Mining**



ASCA-A- This will be a new ASCA located in the northernmost drainage of the proposed expansion area. It will have an area of approximately 3.62 acres and will be treated by vegetation and excelsior logs.

ASCA-B- This will be a new ASCA located in the center drainage of the proposed expansion area. It will have an area of approximately 6.84 acres and will be treated by vegetation and excelsior logs.

ASCA-C- This will be a new ASCA located in the southernmost drainage of the proposed expansion area. It will have an area of approximately 6.43 acres and will be treated by vegetation and excelsior logs.

The locations of the proposed new ASCA locations can be found on Plate 2a – Drainage Map

SEDCAD Calculations for proposed ASCA's A, B, and C are included.

A summary of the results and conclusions supporting the use of waddles as the primary method of sediment control in ASCA's A, B, and C follows on Page 10b, with Soil Erosion Calculations following on Pages 10c, 10d, and 10e.

Three ASCA areas have been added to the Wildcat surface facilities map to control runoff and sediment. These areas have been designated as follows: Area "A", Area "B" and Area "C". Waddles have been installed in the drainage to reduce the sediment leaving the areas.

Area " A" - The waddles would be placed approximately 90 to 100 feet apart and are approximately 140 to 180 feet in width, refer to Drainage Map (Plate 2A) in original submittal. The waddles are 9" in diameter logs and comprised of excelsior. Based upon the Universal Soil Loss Equation (see attached sheet titled "Soil Erosion for ASCA Area "A"), the sediment load per year in this area would be about 80.13 cubic feet per year or around to 80 cu.ft./yr. Total sediment containment forms an area of 9 inches in depth, 26 feet in length and 8 feet in width. Each waddle would contain a small portion of the sediment. The average width of the waddle would be about 160 feet and based on using 8 feet per year for sediment retention the waddle would last about 20 years. Additional waddles could be added if sediment continues to develop over the years.

Area " B" - The waddles would be placed approximately 60 to 95 feet apart and approximately 80 feet in width, refer to Drainage Map (Plate 2A) in original submittal. The waddles are 9" in diameter logs and comprised of excelsior. Based upon the Universal Soil Loss Equation (see attached sheet titled "Soil Erosion for ASCA Area "B"), the sediment load per year in this area would be about 484.94 cubic feet per year or around to 485 cu.ft./yr. There are six waddles in this area. Total sediment containment for each waddle forms an area of 9 inches in depth, 26 feet in length and 8 feet in width and holds approximately 81 cubic feet. Each waddle would contain a small portion of the sediment. The average width of the waddle would be about 78 feet and based on using 8 feet per year for sediment retention the waddle would last about 9¾ years. Additional waddles could be added if sediment continues to develop over the years.

Area " C" - The waddles have been placed approximately 30 to 50 feet apart and approximately 224 feet in width, refer to Drainage Map (Plate 2A) in original submittal. The waddles are 9" in diameter logs and comprised of excelsior. Based upon the Universal Soil Loss Equation (see attached sheet titled "Soil Erosion for ASCA Area "C"), the sediment load per year in this area would be about 291.67 cubic feet per year or around to 292 cu.ft./yr. There are four waddles in this area. Total sediment containment forms an area of 9 inches in depth, 24 feet in length and 8 feet in width and holds approximately 73 cubic feet. Each waddle would contain a small portion of the sediment. The average width of the waddle would be about 40 feet and based on using 8 feet per year for sediment retention the waddle would last about 5 years. Additional waddles could be added if sediment continues to develop over the years.

**SOIL EROSION FOR ASCA AREA "A"**

Use the modified Universal Soil Loss Equation:

$$A = R * K * LS * VM$$

Ref: Israelsen, C. E., Fletcher, J. E., Haws, F. W., E. K. Israelsen, 1984 Erosion and Sedimentation in Utah: A Guide for Control, Utah Water Research Laboratories, Logan, Utah

- A = Amount of Soil loss per unit area
- R = Rainfall Factor
- K= Soil Erodibility Factor
- LS = Topographic Factor
- VM = Erosion Control Factor  
= 0.9 for barel

For ASCA "A"

- R = 17.79 Foot-Ton/Acre/Hour
- K= 0.16 Tons/Acre/EI

$$LS = \frac{(65.41s^2+4.56s+0.065)}{s^2+10,000+s^2 * 10,000} * \left( \frac{l}{72.6} \right)^m$$

- l = slope length – 1,688 ft,
- s = slope gradient – 5.08%
- m = 0.2 for 0<s<1  
0.3 for 1<s<3  
0.4 for 3.5<s<4.5  
0.5 for s>5

$$LS = \frac{(65.41(5.08)^2+4.56(5.08)+0.065)}{(5.08)^2+10,000+(5.08)^2 *(10,000)^{0.5}} * \frac{650^{0.5}}{72.6}$$

DRAINAGE AREA	SLOPE LENGTH	SLOPE %	R	K	LS	VM	Tons/acre/ Yr (A)	ACRES	Tons/yr (A)
ASCA "A"	650	5.08	17.79	0.16	.27	0.9	.69	3.62	2.50

Determine cubic feet per year

Weight of Soil

Specific gravity of Soil = 1.0

Specific weight of Soil = 62.4lb/cu. ft. x 1.0 = 62.4 lbs./cu.ft.

2.50 Tons/yr. x 2,000 lbs = 5,000 lbs/yr. ÷ 62.4lbs./cu.ft. = 80.13 cu. ft. / yr.

## SOIL EROSION FOR ASCA AREA "B"

Use the modified Universal Soil Loss Equation:

$$A = R * K * LS * VM$$

Ref: Israelsen, C. E., Fletcher, J. E., Haws, F. W., E. K. Israelsen, 1984 Erosion and Sedimentation in Utah: A Guide for Control, Utah Water Research Laboratories, Logan, Utah

- A = Amount of Soil loss per unit area
- R = Rainfall Factor
- K = Soil Erodibility Factor
- LS = Topographic Factor
- VM = Erosion Control Factor  
= 0.9 for barel

For ASCA "B"

- R = 17.79 Foot-Ton/Acre/Hour
- K = 0.16 Tons/Acre/EI

$$LS = \frac{(65.41s^2 + 4.56s + 0.065)}{s^2 + 10,000 + s^2 * 10,000} * \left( \frac{l}{72.6} \right)^m$$

- l = slope length – 715 ft,
- s = slope gradient – 5.59%

- m = 0.2 for 0 < s < 1
- 0.3 for 1 < s < 3
- 0.4 for 3.5 < s < 4.5
- 0.5 for s > 5

$$LS = \frac{(65.41(5.59)^2 + 4.56(5.59) + 0.065)}{(5.59)^2 + 10,000 + (5.59)^2 * (10,000)^{0.5}} * \frac{715^{0.5}}{72.6}$$

DRAINAGE AREA	SLOPE LENGTH	SLOPE %	R	K	LS	VM	Tons/acre/ Yr (A)	ACRES	Tons/yr (A)
ASCA "B"	715	5.59	17.79	0.16	.86	0.9	2.21	6.84	15.13

Determine cubic feet per year

Weight of Soil

Specific gravity of Soil = 1.0

Specific weight of Soil = 62.4lb/cu. ft. x 1.0 = 62.4 lbs./cu.ft.

15.13 Tons/yr. x 2,000 lbs = 30,260.00 lbs/yr. ÷ 62.4lbs./cu.ft. = 484.94 cu. ft. / yr.

**SOIL EROSION FOR ASCA AREA "C"**

Use the modified Universal Soil Loss Equation:

$$A = R * K * LS * VM$$

Ref: Israelsen, C. E., Fletcher, J. E., Haws, F. W., E. K. Israelsen, 1984 Erosion and Sedimentation in Utah: A Guide for Control, Utah Water Research Laboratories, Logan, Utah

- A = Amount of Soil loss per unit area
- R = Rainfall Factor
- K= Soil Erodibility Factor
- LS = Topographic Factor
- VM = Erosion Control Factor  
= 0.9 for barel

For ASCA "C"

- R = 17.79 Foot-Ton/Acre/Hour
- K= 0.16 Tons/Acre/EI

$$LS = \frac{(65.41s^2+4.56s+0.065)}{s^2+10,000+s^2 * 10,000} * \left( \frac{l}{72.6} \right)^m$$

- l = slope length – 900 ft,
- s = slope gradient – 4.44%
- m = 0.2 for 0<s<1  
0.3 for 1<s<3  
0.4 for 3.5<s<4.5  
0.5 for s>5

$$LS = \frac{(65.41(4.44)^2+4.56(4.44)+0.065)}{(4.44)^2+10,000+(4.44)^2 *(10,000)^{0.5}} * \frac{715^{0.4}}{72.6}$$

DRAINAGE AREA	SLOPE LENGTH	SLOPE %	R	K	LS	VM	Tons/acre/ Yr (A)	ACRES	Tons/yr (A)
ASCA "C"	900	4.44	17.79	0.16	.55	0.9	1.43	6.34	9.10

Determine cubic feet per year

Weight of Soil

Specific gravity of Soil = 1.0

Specific weight of Soil = 62.4lb/cu. ft. x 1.0 = 62.4 lbs./cu.ft.

9.10 Tons/yr. x 2,000 lbs = 18,200.00 lbs/yr. ÷ 62.4lbs./cu.ft. = 291.67 cu. ft. / yr.