

0019

Document Information Form

Mine Number: C/015/018

File Name: Incoming

To: DOGM

From:

Person N/A

Company United States Department of the Interior

Date Sent: N/A

Explanation:

Mine Site Evaluation Inspection Report

cc:

File in: C/015/018, Incoming

Refer to:

- Confidential
- Shelf
- Expandable

Date _____ For additional information



U. S. DEPT. OF THE INTERIOR

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Mine-Site Evaluation Inspection Report



1. Permittee/Person
 PACIFICORP ELECTRIC OPERA

2. Address
 201 SOUTH MAIN SUITE 2100

3. City
 SALT LAKE CITY

4. State
 UT

5. Zip Code
 84140-0021

6. Phone Number
 801-220-4618

7. Operator if Different than Permittee
 ENERGY WEST MINING

8. Mine Name
 DEER CREEK

9. Permit Number
 ACT/015/018

10. Type
 a. Permit b. RA
 PP 5

11. Inspection Date
 09-17-92
MM DD YY

12. Inspection Type
 C

13. Joint Inspection
 Y YIN

14. Permit Status
 A

15. Site Status
 AP

16. Facility Type
 B

17. OSM Office #
 020

18. RSI #

19. Land Code
 F

20. M.S.H.A. ID #
 42-00121

21. State Code
 UT

22. County Code
 015

23. AVS Permittee Entity ID Number
 118429

24. Performance Standard Categories

Codes: 1=Compliance, 2=Noncompliance, 3=Not Planned, 4=Not Started, 5=Noncompliance Identified Elsewhere

<p>A. Administrative</p> <p>1. <input type="checkbox"/> Mining within Valid Permit</p> <p>2. <input type="checkbox"/> Mining within Bonded Area</p> <p>3. <input type="checkbox"/> Terms & Conditions of Permit</p> <p>4. <input type="checkbox"/> Liability Insurance</p> <p>5. <input type="checkbox"/> Ownership and Control</p> <p>6. <input checked="" type="checkbox"/> Temporary Cessation</p>	<p>D. Backfilling & Grading</p> <p>1. <input type="checkbox"/> Exposed Openings</p> <p>2. <input type="checkbox"/> Contemporaneous Reclamation</p> <p>3. <input type="checkbox"/> Approximate Original Contour</p> <p>4. <input type="checkbox"/> Highwall Elimination</p> <p>5. <input type="checkbox"/> Steep Slopes (includes downslope)</p> <p>6. <input type="checkbox"/> Handling of Acid & Toxic Materials</p> <p>7. <input type="checkbox"/> Stabilization (rills and gullies)</p>	<p>H. <input type="checkbox"/> Subsidence Control Plan</p>
<p>B. Hydrologic Balance</p> <p>1. <input type="checkbox"/> Drainage Control</p> <p>2. <input type="checkbox"/> Inspections & Certifications</p> <p>3. <input type="checkbox"/> Siltation Structures</p> <p>4. <input type="checkbox"/> Discharge Structures</p> <p>5. <input checked="" type="checkbox"/> Diversions</p> <p>6. <input type="checkbox"/> Effluent Limits</p> <p>7. <input type="checkbox"/> Ground Water Monitoring</p> <p>8. <input type="checkbox"/> Surface Water Monitoring</p> <p>9. <input type="checkbox"/> Drainage - Acid-Toxic Materials</p> <p>10. <input type="checkbox"/> Impoundments</p> <p>11. <input type="checkbox"/> Stream Buffer Zones</p>	<p>E. Excess Spoil Disposal</p> <p>1. <input checked="" type="checkbox"/> Placement</p> <p>2. <input checked="" type="checkbox"/> Drainage Control</p> <p>3. <input checked="" type="checkbox"/> Surface Stabilization</p> <p>4. <input checked="" type="checkbox"/> Inspections & Certifications</p>	<p>I. Roads</p> <p>1. <input type="checkbox"/> Road Construction</p> <p>2. <input type="checkbox"/> Certification</p> <p>3. <input type="checkbox"/> Drainage</p> <p>4. <input type="checkbox"/> Surfacing and Maintenance</p> <p>5. <input type="checkbox"/> Reclamation</p>
<p>C. Topsoil & Subsoil</p> <p>1. <input type="checkbox"/> Removal</p> <p>2. <input type="checkbox"/> Substitute Materials</p> <p>3. <input type="checkbox"/> Storage and Protection</p> <p>4. <input type="checkbox"/> Redistribution</p>	<p>F. Coal Mine Waste (Refuse Piles/Impoundments)</p> <p>1. <input type="checkbox"/> Drainage Control</p> <p>2. <input type="checkbox"/> Surface Stabilization</p> <p>3. <input type="checkbox"/> Placement</p> <p>4. <input type="checkbox"/> Inspections and Certifications</p> <p>5. <input checked="" type="checkbox"/> Impounding Structures</p>	<p>J. Signs & Markers</p> <p>1. <input type="checkbox"/> Signs</p> <p>2. <input type="checkbox"/> Markers</p>
	<p>G. Use Of Explosives</p> <p>1. <input checked="" type="checkbox"/> Blaster Certification</p> <p>2. <input checked="" type="checkbox"/> Distance Prohibitions</p> <p>3. <input checked="" type="checkbox"/> Blast Survey/Schedule</p> <p>4. <input checked="" type="checkbox"/> Warnings & Records</p> <p>5. <input checked="" type="checkbox"/> Control of Adverse Effects</p>	<p>K. <input type="checkbox"/> Distance Prohibitions</p>
		<p>L. Revegetation</p> <p>1. <input type="checkbox"/> Vegetative Cover</p> <p>2. <input type="checkbox"/> Timing</p>
		<p>M. <input type="checkbox"/> Postmining Land Use</p>
		<p>N. Other</p> <p>1)</p>

File in:

Confidential

Shelf

Expandable

Refer to Record No. 0019 Date _____

In C/ 015, 018, Incoming

For additional information _____

25. Inspection Frequency

a. Date of Last State Complete Inspection
 05-20-92

Frequency for previous 4 Calendar Qtrs.

b. Number of required complete inspections
 01

Number of complete inspections conducted
 01

c. Number of required partial inspections
 02

Number of partial inspections conducted
 00

26. Inspection Hours

a. Permit Review
 16.0

b. Inspection Time
 12.0

c. Travel Time
 08.0

d. Report Writing
 04.0

27. Bond

a. Permit Review
 []

b. Phase I released
 []

c. Phase II released
 []

d. Phase III released
 []

14400 []

[] 70.0 b. Disturbed (Estimated)



U. S. DEPT. OF THE INTERIOR

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Mine-Site Evaluation Inspection Report



1. Permittee/Person
 PACIFICORP ELECTRIC OPERA

2. Address
 2011 SOUTH MAIN SUITE 2100

3. City
 SALT LAKE CITY

4. State
 UT

5. Zip Code
 84140-0021

6. Phone Number
 801-220-4618

7. Operator if Different than Permittee
 ENERGY WEST MINING

8. Mine Name
 DEER CREEK

9. Permit Number
 ACT/015/018

10. Type
 a. Permit b. RA
 PP 5

11. Inspection Date
 09-17-92
MM DD YY

12. Inspection Type
 C

13. Joint Inspection
 Y YIN

14. Permit Status
 A

15. Site Status
 AP

16. Facility Type
 B

17. OSM Office #
 020

18. RSI #

19. Land Code
 F

20. M.S.H.A. ID #
 42-00121

21. State Code
 UT

22. County Code
 DIS

23. AVS Permittee Entity ID Number
 118429

24. Performance Standard Categories

Codes: 1=Compliance, 2=Noncompliance, 3=Not Planned, 4=Not Started, 5=Noncompliance Identified Elsewhere

<p>A. Administrative</p> <p>1. <input type="checkbox"/> Mining within Valid Permit</p> <p>2. <input type="checkbox"/> Mining within Bonded Area</p> <p>3. <input type="checkbox"/> Terms & Conditions of Permit</p> <p>4. <input type="checkbox"/> Liability Insurance</p> <p>5. <input type="checkbox"/> Ownership and Control</p> <p>6. <input checked="" type="checkbox"/> Temporary Cessation</p>	<p>D. Backfilling & Grading</p> <p>1. <input type="checkbox"/> Exposed Openings</p> <p>2. <input type="checkbox"/> Contemporaneous Reclamation</p> <p>3. <input type="checkbox"/> Approximate Original Contour</p> <p>4. <input type="checkbox"/> Highwall Elimination</p> <p>5. <input type="checkbox"/> Steep Slopes (includes downslope)</p> <p>6. <input type="checkbox"/> Handling of Acid & Toxic Materials</p> <p>7. <input type="checkbox"/> Stabilization (rills and gullies)</p>	<p>H. <input type="checkbox"/> Subsidence Control Plan</p>
<p>B. Hydrologic Balance</p> <p>1. <input type="checkbox"/> Drainage Control</p> <p>2. <input type="checkbox"/> Inspections & Certifications</p> <p>3. <input type="checkbox"/> Siltation Structures</p> <p>4. <input type="checkbox"/> Discharge Structures</p> <p>5. <input checked="" type="checkbox"/> Diversions</p> <p>6. <input type="checkbox"/> Effluent Limits</p> <p>7. <input type="checkbox"/> Ground Water Monitoring</p> <p>8. <input type="checkbox"/> Surface Water Monitoring</p> <p>9. <input type="checkbox"/> Drainage -- Acid-Toxic Materials</p> <p>10. <input type="checkbox"/> Impoundments</p> <p>11. <input type="checkbox"/> Stream Buffer Zones</p>	<p>E. Excess Spoil Disposal</p> <p>1. <input checked="" type="checkbox"/> Placement</p> <p>2. <input checked="" type="checkbox"/> Drainage Control</p> <p>3. <input checked="" type="checkbox"/> Surface Stabilization</p> <p>4. <input checked="" type="checkbox"/> Inspections & Certifications</p>	<p>I. Roads</p> <p>1. <input type="checkbox"/> Road Construction</p> <p>2. <input type="checkbox"/> Certification</p> <p>3. <input type="checkbox"/> Drainage</p> <p>4. <input type="checkbox"/> Surfacing and Maintenance</p> <p>5. <input type="checkbox"/> Reclamation</p>
<p>C. Topsoil & Subsoil</p> <p>1. <input type="checkbox"/> Removal</p> <p>2. <input type="checkbox"/> Substitute Materials</p> <p>3. <input type="checkbox"/> Storage and Protection</p> <p>4. <input type="checkbox"/> Redistribution</p>	<p>F. Coal Mine Waste (Refuse Piles/Impoundments)</p> <p>1. <input type="checkbox"/> Drainage Control</p> <p>2. <input type="checkbox"/> Surface Stabilization</p> <p>3. <input type="checkbox"/> Placement</p> <p>4. <input type="checkbox"/> Inspections and Certifications</p> <p>5. <input checked="" type="checkbox"/> Impounding Structures</p>	<p>J. Signs & Markers</p> <p>1. <input type="checkbox"/> Signs</p> <p>2. <input type="checkbox"/> Markers</p>
	<p>G. Use Of Explosives</p> <p>1. <input checked="" type="checkbox"/> Blaster Certification</p> <p>2. <input checked="" type="checkbox"/> Distance Prohibitions</p> <p>3. <input checked="" type="checkbox"/> Blast Survey/Schedule</p> <p>4. <input checked="" type="checkbox"/> Warnings & Records</p> <p>5. <input checked="" type="checkbox"/> Control of Adverse Effects</p>	<p>K. <input type="checkbox"/> Distance Prohibitions</p>
		<p>L. Revegetation</p> <p>1. <input type="checkbox"/> Vegetative Cover</p> <p>2. <input type="checkbox"/> Timing</p>
		<p>M. <input type="checkbox"/> Postmining Land Use</p>
		<p>N. Other</p> <p>1) _____</p> <p>2) _____</p> <p>3) _____</p>

25. Inspection Frequency

a. Date of Last State Complete Inspection
 05-20-92

Frequency for previous 4 Calendar Qtrs.

b. Number of required complete inspections
 01

Number of complete inspections conducted
 01

c. Number of required partial inspections
 02

Number of partial inspections conducted
 00

26. Inspection Hours

a. Permit Review
 16.0

b. Inspection Time
 12.0

c. Travel Time
 08.0

d. Report Writing
 04.0

27. Bonded Acres

a. Total bonded
 78.0

b. Phase I released

c. Phase II released

d. Phase III released

28. Acres

a. Permitted
 14,668.0

b. Disturbed (Estimated)
 70.0

U. S. DEPT. OF THE INTERIOR

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Mine-Site Evaluation Inspection Report

Permit Number: ACT/015/018

Inspection Date: 09-17-92

9. Identified Violation Data.

- List (only once) all violations;
- where State enforcement was required and taken during the LSCI, even if violation was terminated during or before this inspection (does not include violations that have been vacated);
 - recorded in the LSCI report but the State failed to take enforcement;
 - observed during this inspection which clearly existed during the LSCI but the State failed to take enforcement; or;
 - existing during this inspection which are not already listed under one of the categories above.

- AND / OR
- List all Federal actions issued this inspection;
 - List all Federal actions reviewed on this follow-up inspection.

B Per. Std. Category	C Abated (Y/N)	D State Action	E Reason if Uncited	F Cause	G Seriousness		I OSM Action	J OSM Action Number				K Optional
					PEO	Impact						
A. Specific State Law/Regulations Violated: <u>R645-30(-)742.300</u> Description: <u>Fail. to main. sed. cont. measures.</u>												
1.	<u>B5</u>	<u>N</u>	<u>A</u>	<u>-</u>	<u>4</u>	<u>3</u>	<u>1</u>					
A. Specific State Law/Regulations Violated: _____ Description: _____												
2.												
A. Specific State Law/Regulations Violated: _____ Description: _____												
3.												
A. Specific State Law/Regulations Violated: _____ Description: _____												
4.												
A. Specific State Law/Regulations Violated: _____ Description: _____												
5.												
A. Specific State Law/Regulations Violated: _____ Description: _____												
6.												
A. Specific State Law/Regulations Violated: _____ Description: _____												
7.												

- | | | | |
|---|--|--|--|
| <p>D. State Action</p> <ol style="list-style-type: none"> 1) Existed on LSCI, Cited 2) Existed on LSCI, Not Cited 3) Cited Prior to LSCI, Abatement Pending 4) Occurred Since LSCI 5) N/A Federal Program | <p>E. State's Reason for not Citing Violation</p> <ol style="list-style-type: none"> 1) Not a Violation 2) Precluded by State Policy 3) Not Included under State Program 4) Warning Given in Lieu of a Citation 5) Violation Not Recognized 6) Practice Allowed under Approved Permit 7) Too Minor to Cite 8) Working with Operator to Correct 9) Other _____ | <p>F. Cause</p> <ol style="list-style-type: none"> 1) Permit Defect 2) Unusual Weather Conditions 3) Unofficial Waiver 4) Operator Negligence 5) Other _____ | <p>G. Probability of Event Occurrence</p> <ol style="list-style-type: none"> 1) None or Unlikely 2) Likely 3) Occurred |
| <p>H. Impact</p> <p><u>Damage Remains Within the Permit Area</u></p> <ol style="list-style-type: none"> 1) None or Minor 2) Moderate 3) Considerable <p><u>Damage Extends Beyond the Permit Area</u></p> <ol style="list-style-type: none"> 4) None or Minor 5) Moderate 6) Considerable <p><u>Obstruction to Enforcement</u></p> <ol style="list-style-type: none"> 7) None or Minor 8) Moderate 9) Considerable | <p>I. OSM Action This Inspection</p> <ol style="list-style-type: none"> 1) Deferred to State Action 2) TDN Issued 3) NOV Issued 4) FTA-CO Issued 5) IH-CO Issued (Imminent Environmental Harm) 6) ID-CO Issued (Imminent Danger to Public) 7) Previously Cited by RA, Abatement Pending 8) Abated during or before OSM Inspection 9) Follow-up of Federal Action | | |

30. Signature

[Signature]

Inspector's Signature

MITCHELL S. ROLLINGS

Inspector's Printed Name

31. OSM Inspector ID #

Dated: 10-08-92 370

Reviewing Official: *[Signature]*

Review Date: 10-08-92

Page ___ of ___

CODE SHEET for the Mine-Site Evaluation Inspection Report

Permit Type and RA — Item 10 a. Permit Type IP = Interim Program, PP = Permanent Program, NP = No Permit
 b. Regulatory Authority ... S = State Program, F = Federal Program

Inspection Type Codes — Item 12

C Complete Random Sample
 COI Complete Other Inspection
 FC Federal Complete Inspection
 FP Federal Partial Inspection

FF Federal NOV and/or CO Follow-up
 CC Citizen Complaint
 CCF Citizen Complaint Follow-up
 DR Document Review
 RF Reclamation Fees

SOx Other
 1 Bond Release Review
 2 Bond Forfeiture Review
 OFx Other Follow-up
 1 State Enforcement Follow-up
 2 Ten-Day Notice Follow-up

Joint Inspection — Item 13 A joint inspection is when a state inspector accompanies an OSM inspector any time during the review of the mine site.

Permit Status — Item 14

A **Active:** Coal mining and reclamation activities occurring or permitted but not disturbed.
 IN **Inactive (Permanent Program Permit):** Phase II completed or state counterpart to 30 CFR 840.11(f).
 (Interim Program Permit): Coal mining completed and reclamation activities initiated.

NA **Not Applicable:** When site is unpermitted.
 BR **Bond Release:** Reclamation completed and State Regulatory Authority (RA) has released all of the bond (Phase III Release.)
 AB **Abandoned:** All surface and underground coal mining activities have ceased and operator has left the site without completing reclamation as stated in 30 CFR 840.11(f).
 BF **Bond Forfeiture:** Permittee rights terminated, permit revoked, and/or bond funds collected.

Site Status Codes — Item 15

ND **No Disturbance:** No coal mining and reclamation operations have been started.
 EX **Coal Exploration:** Coal exploration operations have started and where coal mining operations have not begun.
 AP **Active Coal Producing:** Coal surface mining activities are occurring.
 AN **Active Non-Producing:** Active non-producing facility such as tipple or preparation plant.
 NM **No Mining:** The Permit Status is active, site is not in Temporary Cessation, no surface coal mining activity, and site not regraded.

MC **Mining Complete:** No mining activity on site, site regraded and awaiting phase bond release.
 TC **Temporary Cessation:** The RA has granted cessation of mining pursuant to 30 CFR 816/817.131(b).
 P1 **Phase I Release:** At least Phase I bond release granted for entire permitted area. For interim permits, partial bond release.
 P2 **Phase II Release:** At least Phase II bond release for the entire permitted area.
 P3 **Phase III Release:** Reclamation completed and the RA has released all bond.

FP **Forfeiture Pending:** The RA is pursuing actions to revoke the permit, collect the performance bond(s), and/or reclamation of forfeited site is in progress.
 FR **Forfeited and Reclaimed:** Forfeiture reclamation completed.
 WC **Wildcat:** Coal mining and reclamation operations have or are taking place and the activity is not covered by the required permits from the RA.

Facility Type Codes — Item 16

A Surface
 B Underground
 C Preparation Plant

D Ancillary (Haulroad, Conveyor, and/or Rails)
 E Refuse and/or Impoundment
 F Loading Facility and/or Tipple
 G Stockpiles

H Exploration Permits
 I Notice of Intent to Explore
 J Exempt 16 and 2/3
 K Government Financed Construction Exemption

Land Code -- Item 19

S State/Private Lands

F Federal Lands

I Indian Lands

Performance Standard Categories --Item 24 30 CFR Counterpart

A. **Administrative** (816/817.22)
 1. Valid Permit 773.11
 2. Mining within Bonded Area 773.11
 3. Terms & Conditions of Permit 773.17
 4. Liability Insurance 800.60
 5. Ownership and Control 778.13
 6. Temporary Cessation 842.11(e) & 816/817.131
 B. **Hydrologic Balance** (816/817.41-57)
 1. Drainage Control 45
 2. Inspections & Certifications 49(a)(10)
 3. Siltation Structures 46
 4. Discharge Structures 47
 5. Diversions 43
 6. Effluent Limits 42
 7. Ground Water Monitoring 41(c)
 8. Surface Water Monitoring 41(e)
 9. Drainage—Acid - Toxic Materials 41(f)
 10. Impoundments 49
 11. Stream Buffer Zones 57
 C. **Topsoil & Subsoil** (816/817.22)
 1. Removal 22(a)
 2. Substitute Materials 22(c)
 3. Storage and Protection 22(c)
 4. Redistribution 22(d)
 D. **Backfilling & Grading** (816/817.95-107)
 1. Exposed Openings 816/817.13, 14, 15, & 823.11 & 21
 2. Contemporaneous Reclamation 100
 3. Approximate Original Contour 102(a)(1)
 4. Highwall Elimination 102(a)(2)
 5. Steep Slopes (includes downslope) 107
 6. Handling of Acid & Toxic Materials 102(c)
 7. Stabilization (rills and gullies) 95(b)

E. **Excess Spoil Disposal** (816/817.71-74)
 1. Placement 71(c)
 2. Drainage Control 71(f)
 3. Surface Stabilization 71(g)
 4. Inspections & Certifications 71(h)
 F. **Coal Mine Waste (Refuse Piles/Impoundments)** .. (816/817.81-84)
 1. Drainage Control 83(a)
 2. Surface Stabilization 83(b)
 3. Placement 83(c)
 4. Inspections and Certifications 83(d)
 5. Impounding Structures 84
 G. **Use Of Explosives** (816/817.61-68)
 1. Blaster Certification 61(c)
 2. Distance Prohibitions 61(d)
 3. Blast Survey/Schedule 62-64
 4. Warnings & Records 66 & 68
 5. Control of Adverse Effects 67
 H. **Subsidence Control Plan** (817.121-122)
 I. **Roads** (816/817.150-151)
 1. Road Construction 150(c)
 2. Certification 151(a)
 3. Drainage 150(b)-151(d)
 4. Surfacing and Maintenance 150(e)-151(d)
 5. Reclamation 150(f)
 J. **Signs & Markers** (816/817.11)
 1. Signs 11(a),(b), & (c)
 2. Markers 11(a),(b),(d),(e), & (f)
 K. **Distance Prohibitions** (761.11)
 L. **Revegetation** (816/817.111-116)
 1. Vegetative Cover 111 & 116
 2. Timing 113
 M. **Postmining Land Use** (816/817.133)

Pacificorp Electric Operations (PEO)
201 South Main, Suite 2100
Salt Lake City, UT 84140-0021
801-220-4618

Energy West Mining Co.
Box 310
Huntington, UT 84528
801-687-9821

ACT/015/018
Deer Creek Mine

9/17/92
Complete inspection

Mitchell S. Rollings, 370, OSM
Ken Wyatt, DOGM
Karl Housekeeper, Energy West
John Christensen, Energy West
Chuck Semborski, Energy West

Enforcement Actions

DOGM issued NOV 92-7-3-1 for failure to maintain sediment control measures. This violation was written to address erosion of the inlet to the sedimentation pond for the mine area. The design for the inlet channel shows grouted riprap for the channel lining. Runoff has eroded through the grout and has resulted in multiple abraded channels. The channels exhibit vertical sides, sloughing, and a lack of channel lining where the riprap and grout has washed away. The NOV gives PEO a month to reconstruct the inlet to design.

The following items were not in violation during this inspection but could develop into a violation:

The upper end of the terrace diversion was silted in and some water was going over the outslope. The lower end of the terrace diversion was blocked by sloughing from the cut slope and resulted in some impounded water. This diversion is shown on the mine map, but PEO disclaims responsibility because Peabody Coal Co., built the terrace during pre-law times. However, if PEO does not maintain the terrace diversion to ensure that runoff is directed to the appropriate mine diversion, watershed characteristics for the mine diversions may change and result in a failure. PEO would have to permit this terrace diversion to perform maintenance.

The berm that parallels the ROM belt has very little freeboard. This berm is in place to prevent coal fine runoff from going over the undisturbed slope. The berm should be built up to prevent this from occurring. Optimally, the drainage should be routed back down along the belt to the diversion along the road and then to the sedimentation pond. There does not appear to have been coal fine laden runoff over the slope recently.

The drainage berm to the ASCA at IU 27 needs to be built up. The CMP at IU 150 is about 1/4 full of sediment and the trash rack is partially blocked with debris. These should be cleaned out.

There are three trenches at the Waste Rock Pile that are going to have to be filled back in. The trenches were dug recently on top of the pile. It is necessary to fill these back in to maintain the integrity of the drainage on top of the pile and to lessen the amount of infiltration into the pile.

PEO is currently constructing a storage dock on top of the New Waste Rock Pile. There appears to be an area at the end of the pile that may drain towards the wall that the pile is against. Rock is stored at this location. PEO should grade this area, or build it up, to make sure that runoff goes off the pile rather than seeping into the pile.

This permit was issued 2/15/91, and expires 2/15/96. It includes 14,500 acres, of which 78 acres are disturbed for surface facilities.

Liability insurance is with Aegis Insurance Services for \$35,000,000. The policy, #X0296A1A92, expires 2/24/93.

Pond inspection reports were current; the last inspection was done 6/29/92. The last annual certification was dated 1/9/92. The waste rock disposal areas were last certified 7/6/92.

This mine is in fairly good condition. There are a number of pre-law features in and around the site that PEO does not have liability for. The most notable is the massive cuts (terraces) on the right side of the mine that Peabody Coal Co., constructed in the '70s.

The waste rock area on the county road is in an area that is predominately Mancos shale. It is questionable how successful revegetation efforts will be in this area. The road to the site is maintained well. The fill area has a 4" pipe that drains a pre-existing wet weather seep from under the fill. This pipe was covered with a clay liner to prevent water that infiltrates the fill from draining out the pipe.

Coal is sent to the power plant via a permitted conveyor. The permit boundary is near where the conveyor starts to rise to dump in the silos. This disturbed area is treated by silt fence and traps.

DOGM currently is awaiting response to a Division Order addressing a number of items including reclamation of the road. If PEO does not address the terrace diversion in their response to this Order, another Order will go to PEO requiring inclusion of this terrace in the permit, designs, etc.

I AM A REGISTERED
ENGINEER IN THE STATE OF
UTAH. I CERTIFY THAT THIS
DRAWING IS ACCURATE AS DEPICTED
AND IS RELATED WITH THE POND
OPERATING ACCORDING TO PRUDENT
ENGINEERING PRACTICES TO THE BEST OF
MY KNOWLEDGE AND BELIEF.

K. Larsen
7728 5/1/91
DATE



3-16

CAD FILE NAME/DISK#: C: IMPOUND

PACIFICORP ELECTRIC OPERATIONS
FUEL RESOURCES DEPARTMENT

P.O. BOX 26128 SALT LAKE CITY, UTAH 84126-0128

DEER CREEK MINE
STORM WATER DIVERSION SYSTEM
AND IMPOUNDMENT POND

DRAWN BY: K. LARSEN

CM-10867-DR

SCALE: 1"=20'

DRAWING #:

DATE: APRIL 12, 1991

SHEET 1 OF 1

REV. _____

REVISIONS

BY



WEIGH
BUILDING

3+10

3+43

36" CUIVFT

Area C is different in that it is drained by one inlet at the previously mentioned junction point. This inlet is a 24 inch CMP located in a small depression such that a headwater depth of 1.5 times the diameter is available for high flows. Additionally, any flow which exceeds the capacity at this inlet will flow down stream along the steep grade where another improved inlet is located 120 feet away.

Design calculations for the flows from areas A, B and C are included as Appendices 1, 2 and 3 respectively. Because of the multiplicity of inlets and the fact that any over capacity flows will be collected by the next downstream inlet, the disturbed runoff will be adequately controlled to prevent any erosion or additional drainage caused by storm runoff.

Of the 123 acres of disturbed area, approximately 114 acres drain into the sediment pond via an open channel adjacent to the weight bin building at the tipple area. This channel is presently rock and concrete rubble lined with the steeper sections flowing over natural, in-place rock sections. It was previously proposed to replace this channel with a concrete lined channel which would convey the flow all the way to the pond. Because of the high velocity developed in the steep (30%) section, it is now proposed that only the upper portion of the channel be lined with concrete and rock/rubble roughness elements grouted in place. This upper portion will only slope 5% and will develop velocities up to 10 feet per second, which is acceptable for the 10 year return period of the design storm. The lower portion of the channel will remain as it is with some minor improvements to better define the channel and secure the loose rock and rubble presently in the channel. The natural rock faces and ledges will be used to provide the necessary roughness and non-erodible surfaces to ensure a stable channel. Design calculations for this channel are included as Appendix 4.

APPENDIX 4 - DRAINAGE DESIGN - GROUTED CHANNEL BEHIND THE WEIGH BIN BUILDING, DEER CREEK TIPPLE

1. Drainage Area - Conservatively take all the disturbed area from the permit (123 Acres) minus the area adjacent to the truck loadout (4.6 Acres) equals 118.4 acres or 0.185 square miles. (See Figure 1.)
2. Time of Concentration Reference Figure 15.7, Exhibit A

	<u>LENGTH</u>	<u>SLOPE</u>	<u>VELOCITY</u>	<u>TIME</u>
Natural Slope	2400 Ft	65%	8 fps	5.0 Min
Yard Area	800	5%	7.4	5.55 Min
Roadway	850	16%	4.1	3.45
Truck Loadout	100'	3%	1.7 fps	<u>.98</u>
				14.99 Min

Time of Concentration - 14.99 Min = .25 Hours

3. Curve Number - Reference Table 9.1, Exhibit B
The predominant soil type is rangeland, fair condition, soil group c, therefore use CN = 79.
4. Program Inputs
 - Storm Distribution - SCS Type B
 - Design Storm - 10 Year, 24 Hour
 - Precipitation - 2.3 Inches
 - Drainage Area - 0.185 Square Miles
 - Curve Number - 79
 - Time of Concentration - 0.25 Hours
5. Design Flow = 28.8 Cubic Feet Per Second (Reference Program Printout, Attached)
6. Open Channel Design

Manning's Equation

$$Q = \frac{1.49}{n} AR^{2/3} S^{1/2}$$

n = Mannings Roughness Coefficient
 n = 0.025 for concrete with rock/rubble roughness elements grouted in place.

A = Cross Sectional Area, Square Feet

R = Hydraulic Radius (Cross Sectional
Area Divided by the Wetted Perimeter)
Feet

S = Slope of the Channel

Q = Flow, Cubic Feet Per Second

For the trapazoidal channel, 2 foot bottom width, 1 to 1 side slopes, flow equal to 28.8 cfs, and channel slope equal to 5%, the velocity is 9.7 feet per second and the required depth is 0.99 feet.

The grouted channel will be constructed 1.5 feet deep to provide the required .3 feet of freeboard. The grouted channel will discharge into the existing rock, rubble and in-place-rock channel.