Montana Department of
ENVIRONMENTAL QUALITY
Brian Schweitzer, Governor

P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.mt.gov

FINAL ENVIRONMENTAL ASSESSMENT
BIG HORN LIMESTONE COMPANY
OPERATING PERMIT 00008
AMENDMENT FOR LIMESTONE QUARRY EXPANSION
WARREN, MT

February 14, 2007

Dear Reader:

Big Horn Limestone Company (Big Horn) filed an application on June 20, 2005 for an amendment to Operating Permit 00008 from the Montana Department of Environmental Quality (DEQ), Environmental Management Bureau (EMB) in Helena. Big Horn operates a limestone quarry, lime kiln dust disposal site, and rail loadout. The quarry site is located approximately six miles northeast of Warren, MT at the base of the foothills to the Pryor Mountains. The rail loadout area is located adjacent to US Highway 310 at the town site of Warren, MT.

Big Horn requested a 283 acre increase in the existing limestone quarry permit area and inclusion of 10 acres of the existing rail loadout area. The Proposed Action would extend the quarry life to at least 2025 and disturb an additional 188.1 acres. DEQ published a Draft EA on September 21, 2006. The Draft EA analyzed the potential impacts of the Proposed Action, as well as two alternatives: 1) No Action (continuing with the currently approved plan), and 2) Agency Modifications to the Proposed Action.

Public comments concerning the adequacy and accuracy of the Draft EA were received from one local rancher and DEQ's responses to the comments are contained in Appendix A attached to the Draft EA. The public comments resulted in two changes being made to the Draft EA.

During the inspection of the site in December 2006, lime kiln dust was sampled by DEQ. The recent piles of lime kiln dust observed that day had not been watered to prevent blowing dust. As a result,

- DEQ would require Big Horn to more aggressively water lime kiln dust deposited in portions of the site where quarrying is completed. Big Horn would have to water the lime kiln dust within one hour of deposition to control dust blowing off the site.

DEQ is requiring all kiln dust dumps regulated under the Metal Mine Reclamation Act to comply with Montana Solid Waste Management Act soil cover requirements at closure.

- DEQ would require Big Horn to cover any exposed lime kiln dust at closure with two feet of approved reclamation materials.

The public comments did not substantially change the conclusions in the Draft EA. DEQ has decided to adopt the Draft EA as Final and approve the Amendment for Limestone Quarry Expansion to Operating Permit 00008 with Agency Modifications to the Proposed Action with the two additional modifications listed above. See Appendix B to the Draft EA approving Amendment 002 to Operating Permit 00008.

Questions on the decision to approve the amendment should be directed to Herb Rolfes, Operating Permit Section Supervisor, DEQ/EMB, P.O. Box 200901, Helena, MT 59620-0901, phone (406)444-3481, or e-mailed to hrolfes@mt.gov. Copies of the Appendix A and B and the Draft EA can be obtained by contacting Mr. Rolfes or by accessing the DEQ website at http://www.deq.mt.gov/ea/hardrock.asp.

Sincerely,

Warren D. McCullough

Warren D. McCullough
Chief Environmental Management Bureau

APPENDIX A

BIG HORN LIMESTONE COMPANY
OPERATING PERMIT 00008
AMENDMENT FOR LIMESTONE QUARRY EXPANSION
WARREN, MT

DEQ RESPONSES TO PUBLIC COMMENTS RECEIVED ON THE DRAFT EA

DEQ published a Draft EA in September 2006 for the Expansion for Limestone Quarry Application for Big Horn Limestone Company's (Big Horn) Warren Quarry, Operating Permit 00008. DEQ received one e-mail from a local rancher on the Draft EA.

The down-gradient rancher is concerned with lime kiln dust, bottom ash, and fly ash deposition in and near the quarry. Lime kiln dust is being deposited in mined out portions of the quarry. The lime kiln dust is from the lime kiln at Frannie, WY. Bottom ash and fly ash from the Yellowstone Electric Limited Partnership's (YELP) power generating facility at Billings is being deposited in a valley adjacent to the limestone quarry. The local rancher believes the dust and ash are toxic and hazardous wastes and should not be used as backfill in the limestone quarry or deposited in the adjacent valley. The comments and responses to comments are presented below.

Comment 1: The BGI dust is the most distressing to the ranchers as they can see what the dust has done to the vegetation around the pit where it is currently being dumped. The vegetation has been killed. While BGI has tried to keep the dust minimal with watering and with certain dumping guidelines, they don't seem to be able to explain the dead and dying vegetation. As concerned neighbors, the ranchers would like to see the dumping of any and all ash stopped within the quarry. They feel that the dumping of all ash has absolutely no benefits and is very harmful to animals and vegetation.

Response:

Part A: YELP bottom ash and fly ash:

BGI (now Yellowstone Energy Limited Partnership (YELP)) is not regulated by the DEQ under the Metal Mine Reclamation Act, the Montana Solid Waste Management Act, or the Montana Air Quality Act. It is regulated by the DEQ Water Protection Bureau under a Montana Ground Water Pollution Control System (MGWPCS) ground water discharge permit number -MTX000061. Under the Permit, YELP is authorized to dispose of bottom ash, fly ash, and wastewater from the coal- and petroleum refining 'coke'-fired Yellowstone Power Plant in Billings, MT in an ash monofill (landfill or ashfill) located in

L. BYPASSING

Any diversion from or bypass of treatment or control facilities or systems necessary to maintain compliance with the terms and conditions of this permit is prohibited.

If, for any reason, a partial or complete bypass of the wastewater or holding facilities is considered necessary, a request for such bypass shall be submitted to the Department at least sixty (60) days prior to the proposed bypass. If the proposed bypass is judged acceptable by the Department, the bypass will be allowed subject to limitations imposed by the Department.

If, after review and consideration, the proposed bypass is determined to be unacceptable by the Department, or if the limitations imposed on an approved bypass are violated, such bypass shall be considered a violation of this permit; and the fact that application was made, or that a partial bypass was approved, shall not be defense to any action brought thereunder.

M. REMOVED SUBSTANCES

Solids, sludges, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering state waters.

N. TRANSFER OF OWNERSHIP OR CONTROL

In the event of any change in control or ownership of the source authorized by this permit, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Department.

O. AVAILABILITY OF REPORTS

Except for data determined to be confidential under Section 75-5-105, MCA, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. Monitoring data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 75-5-633, MCA.

P. PERMIT MODIFICATION

After notice and opportunity for a hearing, this MGWPCS permit may be modified, suspended, or revoked in whole or in part during its term under provisions of Sections 75-5-403 and 75-5-404, MCA, for cause, including, but not limited to, any of the following:

the SE ¼ of Section 24 and the NE ¼ of Section 25, Township 8 South and Range 25 East in Carbon County, MT in accordance with water discharge limitations, water monitoring requirements, and other conditions set forth in the Permit. A copy of the permit is attached for your review (See Attachment 1). The MPDES Permit is dated 2001. YELP is in good standing and the Permit has been administratively extended and all conditions still apply.

The Yellowstone Power Plant mixes crushed limestone with the coal and petroleum coke to minimize sulfur dioxide emissions. The 54 megawatt power generating plant produces 140,000 tons of bottom ash and fly ash per year, at an approximate rate of 400-500 tons of ash per day for a proposed 20-year plant life expectancy. The design capacity of the ashfill is 2.4 to 2.6 million tons. In addition to the ash, the power generation plant produces 115 gallons of wastewater per minute (gpm). This water is generated during blowdown of the cooling towers and cleaning of the demineralization system at the plant. The waste water stream is concentrated to 20 gpm by reverse osmosis. The concentrated wastewater stream is approximately 28,800 gallons per day (gpd). The wastewater is trucked to the ashfill and used to hydrate the ash along with additional water from onsite sources.

The ashfill does not have an air quality permit from DEQ. Under the ground water discharge permit in Section U on page 7, YELP is required to use best management practices, (BMPs) to control fugitive dust emissions from ash hauling and landfill operations.

DEQ and US Forest Service personnel inspected the YELP ashfill and Big Horn Limestone Company Warren Quarry sites on December 7, 2006. During the inspection, agency personnel reviewed YELP's dust control BMPs (See the attached inspection report in Attachment 2). The DEQ Water Protection Bureau has been copied with the inspection report.

It was the inspectors' opinion that YELP is doing a reasonable job of controlling dust with the BMPs. Small amounts of dust were noted off of the landfill, which is to be expected as some dust escapes the site on windy days before the dust is wetted.

Sampling of the ash indicates the ash is neither toxic nor hazardous as defined by the EPA. The ash is alkaline and consists mainly of calcium sulfate (gypsum) and calcium carbonate (limestone). The ash is caustic and has a pH above 12 when wetted. YELP personnel that work with the ash must wear protective gear. If the ash gets on the skin it will hydrate and heat up, sucking moisture out of the skin and causing burns. This same reaction would occur on vegetation. The inspectors noted that woody coniferous vegetation near the ashfill especially immediately downwind of the site was about 70% dead. This would be expected in the zone immediately adjacent to the site from the small amounts of dust that escape the site before the dust is wetted. Dormant non-woody, grass and forb vegetation species were observed growing on soil stockpiles immediately adjacent to the quarry site.

The inspectors also noted that a large percentage (30-40%) of woody coniferous vegetation in all directions around the site was dead. This was a matter of concern until the inspectors completed the rest of the inspection and USFS personnel took another side trip several miles north of the ashfill and noted that the same percentage of dead woody vegetation was noted everywhere. The inspectors concluded the loss of vegetation around the site was largely due to a combination of effects from drought and pathogens.

The inspectors concluded that the loss of woody coniferous vegetation immediately around the site was an unavoidable impact of permitting this facility. If YELP continues its aggressive management of ash deposition and wetting, impacts will be limited to reasonable amounts. DEQ's Water Protection Bureau will have to do its own inspection of the facility in 2007 and see if it concurs with the 2006 DEQ and USFS inspection conclusions. If you do not agree with the conclusion of the inspectors, you may contact the DEQ Water Protection Bureau c/o Paul Skubinna at 444-6752 or the DEQ Enforcement Division with your concerns at 444-0379.

Part B: Wyoming Lime Producers lime kiln dust

Wyoming Lime Producers operate a lime kiln at Frannie, WY. Big Horn Limestone is permitted to dispose of lime kiln dust in mined out portions of the Warren Quarry. The kiln dust is trucked in with tarp covered belly dump trucks by a contractor. Big Horn inspects the trucking process to help prevent dust spillage. The current dust control practices are effective (Big Horn Limestone, Steve LeBlanc, personal communication to DEQ, December 6, 2006).

Big Horn plans on continuing to put the lime kiln dust in the quarry. This material helps fill depressions in the acreage to be reclaimed. The waste is watered when put down and then worked up and watered again until the surface is crusted. This prevents windblown materials.

All of the lime kiln dust (about 5,000 tons in 2006) is currently picked up at the kiln by Environmental Materials, Inc. (EMI) and sold for remediation projects. EMI sells the lime kiln dust to Earthworks Company. Earthworks uses the dust on oil and gas sites in Wyoming with Wyoming DEQ oversight. EMI currently uses all lime kiln dust produced. DEQ expects little of the lime kiln dust produced at Frannie will be deposited back in the quarry in the future. The same thing is happening at the Graymont Western US Inc. limestone quarry near Townsend.

DEQ and USFS personnel inspected the lime kiln dust deposit site during the December 7, 2006 inspection. The site is completely surrounded by the limestone quarry disturbance so vegetation is absent. The lime kiln dust is also caustic when wetted and would produce the same effect on woody coniferous vegetation as YELP's bottom and fly ash. Site inspectors noted that the most recent loads of lime kiln dust at the site were not watered. DEQ has added a mitigation to the approval of this amendment to

require Big Horn Limestone to water the kiln dust within one hour of dumping. This will minimize any cumulative effects of caustic dust getting on nearby plants.

The inspectors concluded the lime kiln dust and bottom and fly ash would have minimal impacts to animals in the area because of the lack of water near the deposit locations. The activity at the quarry and in the ashfill keeps most animals away from the sites.

Comment 2: The ranchers would appreciate it if at some point DEQ could look into the dumping of ash byproducts and hopefully put a stop to it. The ranchers do not want the ash used as fill in any areas slated for reclamation. They would like quarry operator, Montana Limestone Company, to follow the state guidelines and use fill dirt and NOT ASH. The ranchers are a multiple use family ran ranch and want nothing more than to have good relations with our neighbors. They would however like to see the ash that is currently being dumped looked into more closely with their ultimate goal being the halt of all ash being dumped. They as ranchers feel they truly are stewards of the land and have always strived to keep the land as it is and improve it. The ranchers feel MLC needs to do the same and that the dumping of toxic ash is not in keeping with preservation of the ranchers' lands.

Sampling of the ash and lime kiln dust indicates the materials are neither toxic nor hazardous as defined by the EPA. The DEQ Environmental Management Bureau has collected another round of samples from all of our ash and dust disposal sites including: lime kiln dust at Big Horn Limestone near Warren; cement kiln dust at Ash Grove Cement near Montana City; cement kiln dust from Holcim Inc. near Trident; and lime kiln dust from Graymont Western US, Inc. near Townsend. We also collected a sample from the YELP facility for comparison purposes. We will send a copy of the analysis report to the local rancher when the sample results are completed.

DEQ is also concerned with ash and dust deposits and potential environmental impacts. DEQ recently proposed new legislation for coal combustion waste from electrical generating facilities which would include the ash from YELP's facility. The legislation would require that future ash deposits be placed in lined facilities with leak collection systems. YELP's facility already meets those requirements.

The DEQ Environmental Management Bureau requires ash and dust deposits covered by Metal Mine Reclamation Act permits to comply with Montana Solid Waste Management Act requirements for soil covers. This includes two feet of growth medium over the deposit. A mitigation has been added to this amendment approval to ensure all exposed lime kiln dust in the Warren Quarry at closure is covered with at least two feet of approved reclamation materials. This would limit the potential for water seeping into the lime kiln dust at closure and enhance revegetation success.

Even though the lime kiln dust and bottom and fly ash are not toxic or hazardous, they have the potential for water quality violations if seepage would ever develop at the base of the deposits. Ground water monitoring at YELP's ashfill was initiated prior to usage

of the disposal site in the summer of 1994. Quarterly, as well as annual, monitoring has been on-going since the operation of the ashfill began. Monitoring includes several on-site wells such as the Big Horn Limestone office well, Piney Spring, and the underdrain/sub-drain. The underdrain (an 18 inch diameter-polyethylene pipe) removes any potential surface water from the area between the primary diversion ditch and the northern edge of the ashfill. It also collects water that may migrate through fractures in the compacted ash pile. Extensive and ongoing leachate tests of the hydrated ash (hydrated with the wastewater) were a requirement of the original ground water permit, but have been reduced to annual sampling in the current permit. Comparing water quality at sampling points from 1994 and 2004, the water quality has improved at the site. Permit discharge limits consist of "no degradation of state waters beyond the property boundary". No violations have occurred to date.

Based on a review of existing water quality leachate data from Montana lime kiln dust, cement kiln dust, and bottom and fly ash samples from electrical generating facilities, if a water discharge occurred it would exceed water quality standards for pH and several metals. Fortunately, the ash and dust sites regulated by the Metal Mine Reclamation Act near Warren, Montana City, Townsend, and Trident are in areas with low precipitation and high evapotranspiration. No seeps have ever developed. Long term problems with seepage are not anticipated and no long term water treatment bonds have been required at any of the approved facilities.

If DEQ had a concern with a proposed location that had the potential to impact water quality, DEQ would request that future expansions of lime kiln dust, cement kiln dust, and bottom and fly ash landfills be placed on a prepared base that is lined with a low permeability material, that is graded to drain and that contains a leak detection system.

If you do not agree with the conclusion of the inspectors, you may contact the DEQ Enforcement Division with your concerns at 444-0379.

APPENDIX A
ATTACHMENT 1

Permit No.: MGWPCS-0061

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTANA GROUND WATER POLLUTION CONTROL SYSTEM PERMIT

In compliance with Section 75-5-101 et seq., MCA, and ARM 17.30.1001, et seq.,

Yellowstone Energy Limited Partnership
1087 West River Street, Suite 230
Boise, Idaho 83702

is authorized to dispose of bottom ash, fly ash and wastewater in a landfill located in the SE 1/4 of Section 24 and the NE 1/4 of Section 25, T8S, R25E, Carbon County, Montana in accordance with discharge limitations, monitoring requirements, and other conditions set forth herein.

This permit shall become effective on the date of issuance.

This permit and the authorization to operate shall expire at midnight, August 1, 2001.

FOR THE MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

Frederick C. Shewman

Frederick C. Shewman
MPDES Permits Manager
Permitting and Compliance Division
Department of Environmental Quality

Dated this 17th day of October, 1996

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. There will be no degradation of state waters beyond the property boundary.

2. Samples will be collected from the water production wells designated BG-4 and BG-5, which have a single monitoring point, the Bighorn Limestone office well, Piney Spring, the under drain beneath the impoundment and any other monitoring sites deemed necessary by the department on a quarterly basis and analyzed for: pH, Specific Conductance, Total Dissolved Solids, Sulfate, Sodium, Chloride, Arsenic, Barium, Strontium, Mercury, and Vanadium and other constituents deemed necessary by the department in the future.

3. The same monitoring sites described in requirement Number 2 above will be analyzed on an annual basis for: Total Hardness, Total Alkalinity, Calcium, Magnesium, Potassium, Nitrogen, Carbonate, Bicarbonate, Cadmium, Lead, Molybdenum, Selenium, Silver, and Zinc in addition to the parameters listed in requirement Number 2 above.

4. Static water levels from monitoring wells BG-2, BG-3 and the Bighorn Limestone office well will be measured on a quarterly basis. The quarterly samples and static water levels will be collected in March (1st quarter), June (2nd quarter), September (3rd quarter), and December (4th quarter). The annual sample will be collected in June.

5. Samples of the hydrated ash disposed of at the landfill site will be collected on an annual basis (June) and analyzed for the entire suite of constituents listed in requirements Numbers 2 and 3 above.

B. REPORTING REQUIREMENTS

Self-monitoring reports shall be submitted to the Department quarterly and annually. Monitoring results obtained during the previous reporting period shall be summarized and reported to the Department, postmarked no later than the 28th day of the month following the completed reporting period. Signed copies of these, and all other reports required herein, shall be submitted to the Department at the following address:

Montana Department of Environmental Quality
Permits and Compliance Division
Metcalf Building, P.O. Box 200901
Helena, Montana 59620-0909
Phone: (406) 444-2406

C. DEFINITIONS

1. The "Department" means the Montana Department of Environmental Quality.

2. "Quarterly" for monitoring requirements, is defined as: first quarter January through March, second quarter April through June, third quarter July through September, and fourth quarter October through December.

3. "State Waters" means any body of water, irrigation system, or drainage system, either surface or underground; however, this subsection does not apply to irrigation waters where the waters are used up within the irrigation system and the waters are not returned to any other state waters.

D. TEST PROCEDURES

Unless otherwise stated, test procedures for the analysis of pollutants shall conform to regulations published in, or subsequent revisions to, Part 136, Title 40 of the Code of Federal Regulations. Sample collection and preservation shall be in accordance with EPA methods or the best methods technologically feasible, and shall be in a manner acceptable to the Department. (The Department's Treatment and Preservation Guide should be consulted for acceptable sample collection and preservation techniques.)

E. RECORDING OF RESULTS

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

1. Description of sampling site (Township, Range, Section 1/4 Section, and Site Name), date, and time of sampling;

2. The dates the analyses were performed;

3. The person(s) or laboratory who performed the analyses;

4. The analytical techniques or methods used; and

5. The results of all required analyses.

F. ADDITIONAL MONITORING BY PERMITTEE

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the monitoring report. Such increased frequency shall also be indicated.

G. RECORDS RETENTION

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation, shall be retained for a minimum of three (3) years, or longer if requested by the Department.

H. CHANGE IN OPERATION

Operation of the facility must be consistent with the conditions of the permit; any sewerage system, treatment works or disposal system expansions, production increases or process modifications which may result in a change of operation must be reported to the Department. After review of this information, the Department will determine whether submission of a new or modified MGWPCS permit application is necessary.

I. NONCOMPLIANCE NOTIFICATION

If, for any reason, the permittee does not comply with or will be unable to comply with any condition specified in this permit, the permittee shall provide the Department with the following information, immediately by telephone and in writing, within five (5) days of becoming aware of such noncompliance:

1. A description and cause of noncompliance; and

2. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the problem.

J. FACILITIES OPERATION

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

K. ADVERSE IMPACT

The permittee shall take all reasonable steps to minimize any adverse impact to state waters resulting from noncompliance with any discharge limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

1. Violation of any conditions of this permit;

2. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

3. A change in any condition or a violation of state water quality standards or degradation of high quality state waters caused by this discharge that requires either a temporary or permanent reduction or elimination of the authorized discharge.

4. A failure or refusal by the permittee to comply with the requirements of Section 75-5-602, MCA.

Q. ACCESS

The permittee shall allow personnel of the Department, and/or their authorized representatives, upon the presentation of credentials:

1. To enter upon the permittee's premises where source is located or in which any records are kept; and

2. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any discharge of pollutants.

R. PROPERTY RIGHTS

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

S. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

T. REAPPLICATION

If the permittee desires to continue to discharge beyond the expiration date of this permit, he shall reapply, in writing, to the Department at least one hundred-eighty (180) days prior to the expiration date of this permit.

U. OTHER REQUIREMENTS

1. Best management practices (BMPs) shall be required to control fugitive dust emissions from ash hauling and landfill operations. The BMPs will include but are not limited to the following:

   a) Normal operating hours, for ash unloading, will be between 6 AM and 3 PM six days a week.

   b) Ash must be completely hydrated promptly after being deposited in the impoundment. If ash is visibly blowing off the permit boundary the ash must be wetted immediately upon deposition.

   c) Trucks that arrive after 3 PM will only unload after a water truck is available and the deposited ash can be wetted promptly (within 20 minuets) to prevent fugitive dust emissions. Complete hydration can be finished during normal operating hours.

   d) Operators will begin hydrating the ash within 20 minutes of being deposited in the impoundment. YELP will supply a written summary of incidents where ash is left unwetted for more than one hour. This written summary must be included in the quarterly monitoring report, and must include an explanation for the delay and corrective action taken to prevent future incidents.

   e) Ash hauling will be minimized on excessively windy days.

2. All design criteria, engineering specifications, reclamation procedures and operating procedures contained in the supplemental application documents and outlined in the Environmental Assessment shall be followed and shall be considered part of the permit.

3. Post reclamation monitoring, including: ground water, surface water, erosion control, and vegetative cover, shall continue until approved by the Department.

4. Best management practices (BMP,s) shall be required to control sedimentation and erosion.

5. Water to hydrate the ash may be drawn from the water production well identified as BG 4 and the Bighorn Limestone office well. Blow down water may also be transported from the Billings Facility to be used to hydrate the ash.

6. Top soil will be transported to the site to be used during reclamation. Top soil stripping will not be required.

APPENDIX B

BIG HORN LIMESTONE COMPANY
OPERATING PERMIT 00008
AMENDMENT FOR LIMESTONE QUARRY EXPANSION
WARREN, MT

APPROVAL FOR AMENDMENT 002 TO OPERATING PERMIT 00008 AND THE FINDING OF NO SIGNIFICANT IMPACT (FONSI)

Operating Permit 00008 is revised to allow expansion of the Warren Limestone Quarry as described in the Expansion to Limestone Quarry Application for Big Horn Limestone Company's (Big Horn) Warren Quarry. The application was received on June 20, 2005. The amendment is approved as changed by modifications analyzed in the September 21, 2006 Draft Environmental Assessment (EA) and as modified in this Final EA. As a result of the amendment approval, Big Horn can quarry limestone in the 283-acre expansion area.

PERMIT HISTORY AND PREVIOUS ENVIRONMENTAL ANALYSES:

Permit/Amendment/ Minor Revision	Date	Action
Permit 00008	January 3, 1972	Initial quarry approved, 10 permit acres, 10 disturbed acres
Permit 00008 New	March 9, 1977	Permit area and disturbed area increased to 72.8 acres
Permit 00008A	March 21, 1977	Permit area and disturbed area increased to 92.8 acres under two operating permits. Bond increased to $66,500. Preliminary Environmental Review released March 18, 1977.
Permit 00008 Amendment 001	August 4, 1996	Permits consolidated. Permit area increased to 192.8 acres. Permitted disturbance increased to 192.8 acres. Bond increased to $207,000. A Checklist Environmental Assessment was released on September 1, 1995.
1997 Annual Report Review		Bond increased $15,480 to $222,480.
Minor Revision 00-001	February 2, 2000	Approved the use of lime kiln dust for backslope and fill materials. No bond increase or increase in permit area or permitted disturbance.

Minor Revision 01-001	January 22, 2001	No change in permit area or permitted disturbance. Bond increased to $224,980.
Minor Revision 02-001	November 1, 2002	Permit Area increased by 6.1 acres to 198.1 acres and permitted disturbance increased by 198.1 acres. Bond increased to $263,206. Checklist Environmental Assessment released on December 12, 2002 for Minor Revisions MR 02-001 and 002.
Minor Revision 02-002	December 2, 2002	Revision allowed Big Horn to drill 14 exploration drill holes. Permit area and permitted disturbance increased to 198.9 acres.
Bond Increase	January 13, 2004	Bonded acres increased from 124.9 to 135. Bond increased from $263,206 to $284,490.
Bond Increase	September 12, 2006	Bonded acres increased to 141. Bond increased from $284,490 to $299,490.
Amendment 002	Date of Signature	Permit area would increase by 283 acres to 491.9 acres. Permitted disturbance would increase 188.1 acres to 387.0 acres. Bond would not be increased until Big Horn needed to disturb the expansion area.

Following is a summary of Big Horn's operating permit conditions before and after Amendment 002 is approved:

Operating Permit 00008	**Current Conditions**	**Expansion Amendment**
Permit Area:	198.9 acres	491.9 acres
Permitted Disturbance:	198.9 acres	387.0 acres
Bonded Acres:	141.0 acres	141.0 acres
Current Disturbance (as of January 2007)	131.4 acres	131.4 acres
Current Bond:	$299,490	(New bond being calculated)
Obligated Balance:	$299,490	
Unobligated Balance:	0	

STIPULATION HISTORY

Stipulation 008-MR00-001-001: Montana Limestone must revise page 16A of the Operating Permit to include lime kiln dust as material that can be used for backslope and fill materials in the quarry and page 6 of the Operating permit to indicate the permit Area is 192.8 acres.

Big Horn submitted the replacement pages. The stipulation is fulfilled.

Stipulation 008-MR02-001-001: Big Horn Limestone must submit a hydrogeological plan for agency review and approval within 30 days of Minor Revision 02-001 and 02-002 approval. The company must complete the hydrogeological evaluation before any future amendments are resubmitted.

Big Horn submitted the hydrogeological evaluation with the Amendment 002 application. The stipulation is fulfilled.

New Stipulations as a Result of Amendment 002 Draft EA

Stipulation 008-002-001: Big Horn met with DEQ and USFS in the proposed expansion area on December 7, 2006 and reviewed the ultimate highwall location, discussed a stability monitoring plan, a modified blasting plan, and a plan to increase the buffer area further from the rim. To prevent stability concerns near the King Canyon walls, Big Horn must submit a modified ultimate highwall location map, a conceptual stability monitoring plan, a modified blasting plan, and a plan to increase the buffer area farther from the King Canyon rim. The plans are due by the date of the next annual report.

Stipulation 008-002-002: Big Horn must spot spray annually for halogeton control on the site and along the access road disturbances.

Stipulation 008-002-003: Big Horn must annually reseed areas that have had halogeton controlled in the quarry area.

Stipulation 008-002-004: Big Horn must contact the USFS, BLM, Carbon County, YELP, and the Loyning Ranch and develop a coordinated noxious weed control program for the quarry area.

Stipulation 008-002-005: Big Horn must develop a conceptual mitigation plan to reduce the visual impact of the highwall at closure which would include backfilling some of the highwall cuts with rock to create talus slopes, to cast blast some highwalls down at closure to create a more natural looking highwall, and to create an undulating rather than the straight engineered highwall that is currently shown on EXHIBIT L.

Stipulation 008-002-006: Bighorn and DEQ would inspect and review final reclamation plans for the quarry and incorporate some buttressing of slopes at closure to minimize exposure to quarry rock faces to address potential safety concerns.

New Stipulations as a Result of Amendment 002 Final EA

Stipulation 008-0002-007: Big Horn must water the kiln dust within one hour of dumping. This will minimize any cumulative effects of caustic dust getting on nearby plants.

Stipulation 008-002-008: *amendment approval to ensure all exposed lime kiln dust in the Warren Quarry at closure is covered with at least two feet of approved reclamation materials.*

FINDING OF NO SIGNIFICANT IMPACT

Based on the analysis of potential environmental impacts and comments received on the environmental assessment (See attached responses to public comments in **APPENDIX A**), DEQ has determined that the proposed action with the mitigation measures described in the environmental assessment will not have any significant impacts on the human environment and the preparation of an environmental impact statement is not required.

Approved by:

Warren McCullough — 2/14/07

Warren McCullough, Chief
Environmental Management Bureau

Date

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APPENDIX B
ATTACHMENT 2

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
HARD ROCK PROGRAM
OPERATING PERMIT – FIELD INSPECTION REPORT

Operator: Big Horn Limestone Company							Inspection Date: December 7, 2007				
Operating Permit #:00008			Project: Warren Quarry				County: Carbon				
Nearest City or Town(s):Warren, MT											
Inspector(s):Patrick Plantenberg, DEQ; Dan Siefert, Pat Pierson, USFS							Company Rep(s): Willie Bridges				
Agencies w/overlapping Jurisdiction:			USFS		BLM		Other	x	None		
Minerals: limestone											
Status:		x	Active		Inactive		Suspended		Other		
Weather: clear cool 20-30 degrees, slight breeze											
Type of Operation :limestone quarry							Purpose of Inspection:				
x	Open Pit								Initial (Pre-permitting)		
	Underground						x		Regular Compliance		
	Placer						x		Amendment # 002 MR#		
	Heap Leach						x		Complaint Received		
	Vat Leach								Bond Release		
	Mill								Other (tour, data collection, baseline, etc.)		
	Other:								NON issued		

INSPECTION CHECKLIST
(N/O = Not Observed, N/A = Not Applicable)

GENERAL:											
	Yes		No		N/O		N/A	
	x							All mining-related disturbances within permitted and bounded areas
							x	Incremental bonding requirements have been submitted
	x							Following approved mining plan and permit conditions
	x							Following approved monitoring plans
	x							Reclamation concurrent with mining
MATERIAL HANDLING:											
	Yes		No		N/O		N/A	
	x							Soil salvage according to plan
	x							Soil stockpiles properly maintained
	x							Special handling/stockpiling of materials consistent with plan

							x	Acid rock drainage contained
FACILITIES:								
	Yes		No		N/O		N/A	
							x	Construction reports properly filed
							x	Acceptable liner integrity
	x							Tailing impoundment/heap leach/dump design as approved
	x							Road construction as approved
WATER CONTROLS:								
	Yes		No		N/O		N/A	
	x							Erosion-control measures concurrent with mining, BMP's in place
	x							Erosion/sedimentation mitigations acceptable
	x							Culverts installed and maintained as approved
	x							Water discharge(s) contained on-site
	x							Diversions maintained and functioning as approved
							x	Process/storage/settling pond(s) constructed, operating, and maintained
							x	Adequate freeboard in all solution storage and process facilities
AIR QUALITY:								
	Yes		No		N/O		N/A	
	x							Acceptable air quality
OTHER:								
	Yes		No		N/O		N/A	
	x							Noxious weeds controlled- some knapweed and halogeton observed
							x	Wildlife mitigations in place and functioning
							x	Cultural resource mitigations properly implemented
							x	Water sample(s) taken
	x							Materials sample(s) taken-lime kiln dust
	x							Photos taken
								Other:

DISCUSSION (Include the status of ongoing activities and compliance. If the site visit was a tour, include purpose of tour, participants, and related post-tour activities that would result.):

We received a complaint as part of responses to the Draft EA for Amendment 002 about the ashfill at the Yellowstone Electric Limited Partnership (YELP) facility adjacent to the Warren Quarry and the lime kiln dust being deposited in the quarry from the neighboring rancher. We inspected the two facilities.

YELP INSPECTION

We met YELP representatives from Rosebud Operating Services, Inc., Randal Blendu,

Facility Services Manager; Dan Gray Director of Operations; and Scott Siddoway Chief Engineer at the site. We discussed the complaint received from the local rancher and expressed our desire to review what YELP does to control dust and limit other impacts from the ashfill. The ash is considered non-toxic and non-hazardous by the EPA. The ash is being used in oil well closures in North Dakota and Wyoming. Fly ash is also being used as a cement additive on roads in other states.

They have 7-8 years of capacity left in the ashfill. They haul 400-500 tons per day to the ashfill. The company used to let the operator of the quarry Montana Limestone Company do the watering of the ashfill until 1996, but they were not happy with the performance, so now they do the ashfill management. The company conducted percolation tests in the ash as part of the original permit application. Since then, they have tried to excavate in the compacted ash fill and can not dig in it with an excavator. It is that hard.

Normal operating hours for ash unloading are from 6 am to 3 pm six days a week. Any exceptions to this must be noted in quarterly reports to DEQ. Ash must be hydrated promptly after being deposited. If ash is blowing off the permit boundary it must be wetted immediately upon deposition.

The ash is hauled in covered belly dump trucks. Trucks that arrive after 3 pm will only unload after a water truck is available and the deposited ash can be wetted promptly within 20 minutes. Complete hydration can be finished during normal operating hours. Operators will stay overtime until the ash is wetted.

Operators will begin hydrating the ash within 20 minutes of being deposited. YELP supplies a written summary of incidents where ash is left unwetted for more than an hour. This written summary is included in quarterly reports to DEQ. The report must include an explanation and corrective action to prevent future incidents.

YELP is regulated by DEQ under a ground water discharge permit. YELP complies with BMPs in the Permit.

Ash hauling will be minimized on excessively windy days. The company has a 40 mph cutoff for deposition. They have room to stockpile a couple of days of ash at the plant in Billings on windy days. The plant in Billings is in constant communication with the ashfill site about wind conditions.

We toured the site and watched a load of ash being wetted and compacted by the water trucks. A large cloud of steam that could be confused with dust from a distance was observed coming off the site as the ash was watered. No dust was leaving the site on the day of the inspection. We collected a sample of the dust to be tested to document that it is not toxic or hazardous. The company took a split sample as well.

We observed the surrounding vegetation adjacent to the site. It was covered with a light layer of dust. The amount of dust observed on the ground adjacent to the site appeared reasonable for a large operation depositing 400-500 tons of dusty materials per day.

We estimated that up to 70% of the vegetation immediately adjacent to the quarry was dead. This is not surprising as bottom and fly ash, like cement kiln dust and lime kiln dust is highly caustic when wetted and gives off heat. Operators at any facility handling the dust and ash must wear protective clothing to prevent burns to the skin. This same reaction would occur to any vegetation exposed to the ash. We did not see excessive amounts of ash deposits around the facility from uncontrolled blowing dust. It appears YELP is operating within best management practices guidelines. Loss of a reasonable amount of adjacent vegetation is an unavoidable impact from permitting a facility like YELP.

There is no reason to believe that vegetation would not reestablish after ash deposition stops at the site. After touring the Big Horn Limestone Company quarry and expansion area and after the USFS made a side trip a couple of miles north of the quarry it was concluded that 30-40% of the coniferous vegetation in the area has died from a combination of drought and pathogens.

We will copy this inspection to the DEQ Water Protection Bureau so that after they inspect the site they concur with our observations.

BIG HORN LIMESTONE OPERATING PERMIT 00008 INSPECTION

Next, we toured the Big Horn Limestone Company Quarry. We collected a sample of the lime kiln dust. The company took a split to sample as well. The last couple of loads of lime kiln dust had not been watered. The wind was not blowing, but DEQ will add a mitigation to the Operating Permit Amendment 002, if it is approved, to water the ash within one hour of deposition like YELP has to do.

Next, we toured the proposed expansion area to address USFS concerns with the expansion being so close to King Canyon on the north and east sides. It is apparent that Big Horn can modify the conceptual design of the quarry on the north end to pull it back from the north rim of the canyon. It is also apparent that the engineered straight line in the operating plan can be modified to make the limestone highwall left at closure more closely resemble a natural limestone cliff or talus slope in the area.

We observed some knapweed near the mine office. We also stopped to observe the halogeton along the access road. DEQ will stipulate if the amendment is approved, that Big Horn has to control the halogeton during quarry life along the road and develop a coordinated plan with the USFS, BLM, Carbon County, YELP, and the Loyning Ranch to

control weeds in the area.			
Signature of Inspector(s):	Rod LPN	Date:	2/14/07
Signature of Supervisor:	Mark Rath	Date:	2/19/07
Copy reports to:	Permittee, file and field file, YELP, Water Protection Bureau, Custer National Forest		

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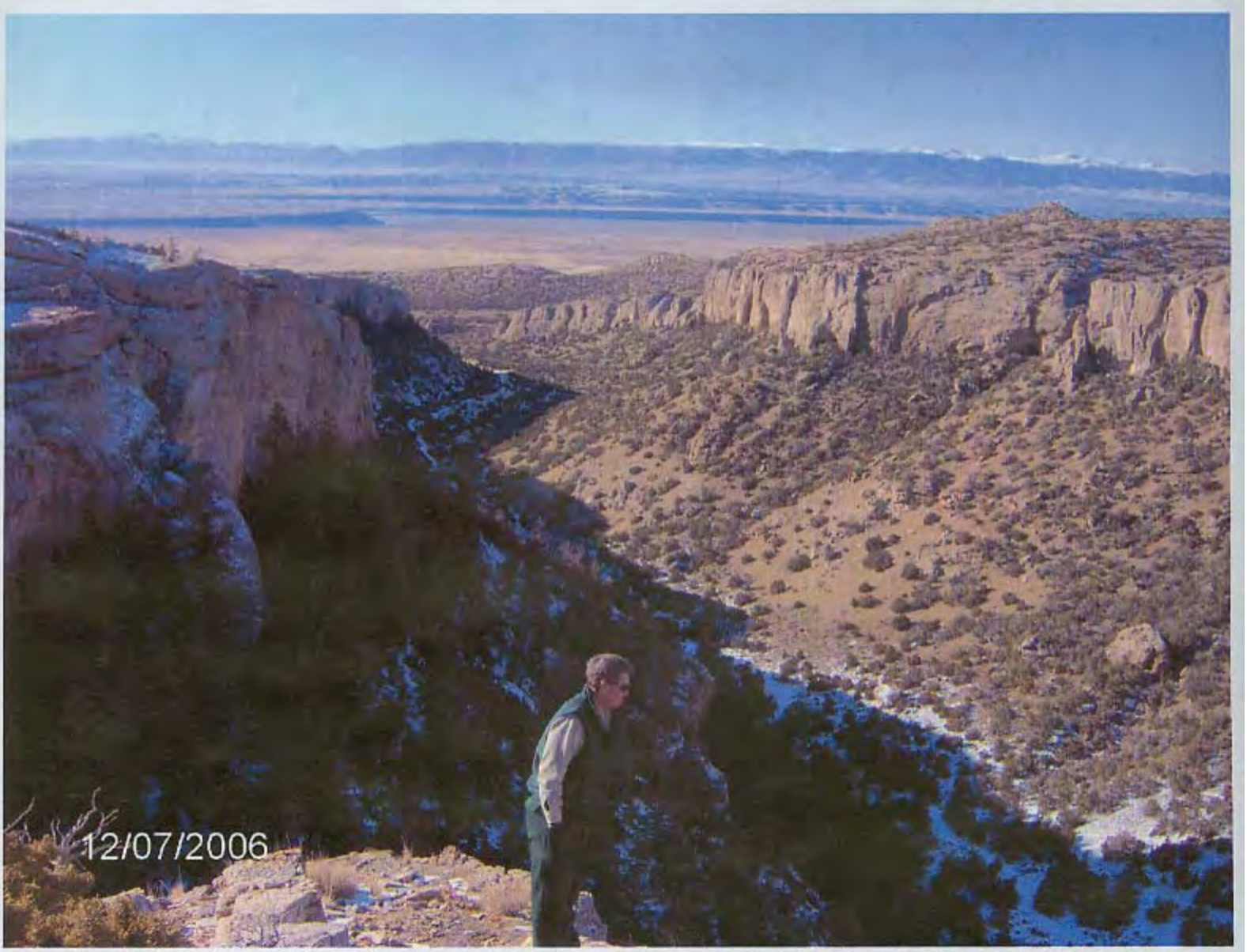
YELP Ashfill being compacted and leveled with water truck pulling a drag. The ash is giving off steam in the 20-30 degree temperatures. No dust.

- Photo of soil stockpile immediately adjacent to the YELP Ashfill. Note the vegetation on the pile just starting in the foreground and well established in the background.

- Another water truck on YELP Ashfill getting ready to water and drag Ashfill. We tried to dig a hole in the Ashfill to collect a sample and could not penetrate it. We had to go to the new load that they were watering to get a sample for chemical analysis.

- View of King Canyon from north edge of proposed Big Horn Limestone Company quarry expansion.



- Another view of King Canyon from edge of proposed Big Horn quarry expansion area.

- USFS Inspectors on trip, Dan Siefert and Pat Pierson from the Custer National Forest standing on boundary of National Forest property within hundreds of feet from proposed quarry expansion area.

- Another view of King Canyon from the northeast edge of the proposed quarry expansion area.

Another view of King Canyon from the northern edge of the proposed quarry expansion area.

- Another view of King Canyon from northeast edge of quarry expansion area.

- Another view of King Canyon adjacent to proposed expansion area.

USFS boundary near northeast edge of proposed expansion area.

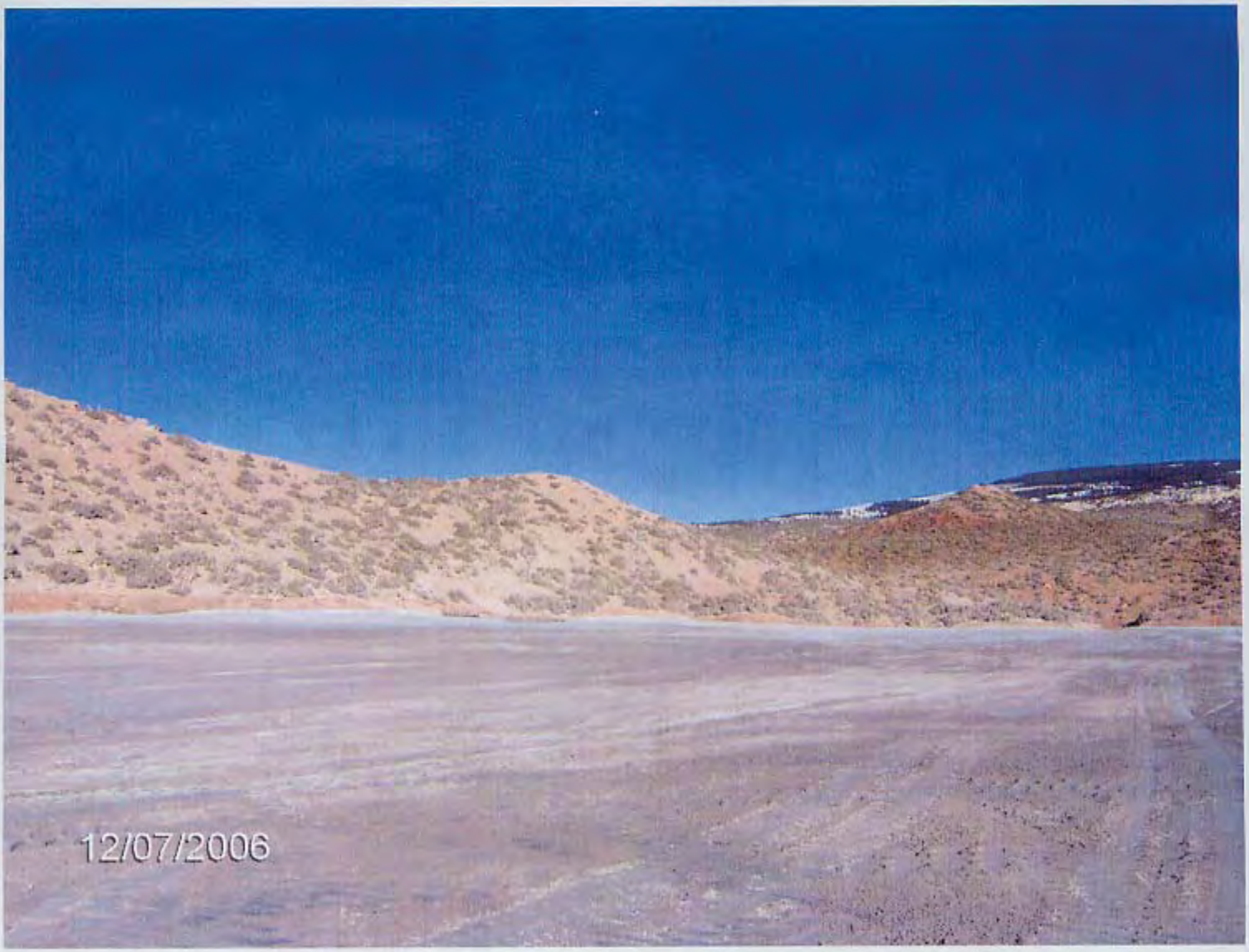
- Photo of water truck watering and dragging the YELP Ashfill. There is no dust. The steam cloud is from the ash reacting (hydrating) and giving off heat in the 20-30 degree temperatures.

- Flag marking the northeast edge of proposed quarry expansion area just a couple of hun feet from the USFS boundary.

- Another photo of water truck watering and dragging the YELP Ashfill.

- Another view of water truck dragging the ashfill at YELP.

- Another view of water truck watering and dragging ashfill at YELP



- View of YELP Ashfill in foreground and native hillside in background. Notice the white color of the hillside on the left. This is due to light coating of ash dust on ground and vegetation.

- Close up of vegetation on hillside with light coating of dust from the Ashfill.

- Close up of soil on hillside with light dusting of ash dust from Ashfill. The layer is very thin. BMPs were not being implemented the dust would be much thicker.

- Photo of some of the coniferous vegetation near the Ashfill with light coating of dust. Note other dead vegetation in the area. Some is from drought and disease and some is from exposure to caustic dust.