

M 87-1

C. Murray

C.C. PL. F. ...
Henry S. McKay
... Kilgore
Tom J. Murray
Lawrence
Briker
Chuck Illsley
Reckwell

BOARD OF ADJUSTMENT COMMENTS
April 22, 1987

CASE NO: M87-1
OPERATOR: Coal Creek Sand and Gravel
SURFACE OWNER: U.S. Department of Energy
MINERAL RIGHTS OWNER: Marcus F. Church Estate
LOCATION: North of Rocky Flats (D.O.E.) west entrance road and 1/4 mile east of Highway 93, along Highway 93
EXISTING ZONING: Mineral Conservation
PURPOSE: Request for a Special Exception to mine sand, gravel, and clay
DISTURBED AREA: 223.43 acres

I. PROPOSAL SUMMARY:

The applicant is requesting that the Board of Adjustment approve Case No. M87-1 to allow the following:

- (1) That upon completion of sand and gravel mining in the recently approved BOA Case M79-1-A-1, the operator be allowed to continue mining sand and gravel on 223.43 acres in stages, requested in this case, M87-1. This mining will remove approximately 9 million cubic yards of sand and gravel, disturb approximately 200 acres, and could take up to 40 years to mine.
- (2) That the operator will continue to use the same equipment, office buildings and scale house, access road, and same number of gravel hauling trucks as those permitted by the BOA in Case No. M79-1-A-1.
- (3) That reclamation of the mined areas will be performed upon the completion of each mining stage in the same manner as that approved in BOA case M79-1-A-1 and with any stipulations required by the State Mined Land Reclamation Board.

II. ZONING AND LAND USE:

Best Available Copy

Subject property: M-C/sand, gravel, and clay mining
Surrounding area:
North: A-2, I-1/vacant, Dept. of Energy
South: M-C/clay mining, vacant
East: I-2/vacant, Dept. of Energy
West: I-1, I-3/vacant, Church Ranch, and D.R.G. and Western Railroad

The closest residential zone district is approximately one-half mile northwest. The closest residence is approximately one mile south.

DOCUMENT CLASSIFICATION:
REVIEW WAIVER PER
CLASSIFICATION OFFICE

ADMIN RECCRD

SN-A-003008

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III. ANALYSIS OF PROPOSAL

(1) Location/Surrounding Land Use Compatibility

Proposed: The applicant proposes to mine 223.43 acres of currently vacant land for sand, gravel, and possibly clay. The applicant is proposing to enclose three sides of the Church Pit mining area (BOA Case No. M79-1-A-1) with this mining operation (See page 32 in the application for map). As stated in this application and in meetings with the applicant, it would not be economically justifiable to build a new access road and set up a crushing/screening plant to mine only the 75 acres of the Church Pit. Therefore, the applicant would like to be able to mine the additional acreage of M87-1, the Rocky Flats Pit, in order to justify the expense of setting up a gravel mining operation.

Staff Comment: Staff has no objection to the location or size of the proposed gravel mining operation. Similar and nearby gravel operations are 300-400 acres in size and their projected lifespans are 30 to 60 years. The site is suitable for this type of mining, as evidenced by the approved zoning change from I-2 to M-C (County Zoning Case No. 286-14) in June of 1986. Due to the lack of residential build-up and scenic resources, this location is ideally suited to gravel mining. Gravel mining at this location fulfills the intent of HB 1529, passed in 1974, in that a local and convenient source of gravel will be initially mined and reclaimed, followed by residential or commercial development, if so desired. This type of logical progression in the use of an area with mineable gravel resources will preclude any future conflicts regarding incompatible, adjacent land uses.

(2) Access Road

Proposed: The applicant proposes to utilize the recently approved new access road from Highway 93 to the site of operations (See Map on page 32 in the application). This access was approved by the BOA in Case M79-1-A-1, contingent upon approval from the State Highway Department. This approval has been received (See letter from State Highway Department to Kevin Kuhl, dated April 13, 1987, in the case file). The applicant further requests the overall paved length of this access road be reduced from 1700 ft. to 1300 ft. The reduction in 400 ft. of pavement is due to this section of pavement being a part of the mined portion of this application (M87-1, Rocky Flats Pit).

Staff Comment: Staff has no objection to either of these requests. Because the State Highway Department has approved the new access, there will be no need to attempt to acquire approval from the D.O.E. to increase gravel truck traffic on the DOE road. The

Lakeview

six clay trucks/day will still be allowed to use the D.O.E. road, as their mining operation is currently in the south-central portion of the Church Pit, but will eventually also utilize the north access road. The reduction of 400 ft. of paved access road on the east side will create no major problems, as long as this portion is kept watered to suppress dust, as required in a State Fugitive Dust Permit. The remaining 1300 ft. of paved access will serve to minimize fugitive dust, clean loose gravel and mud from the tire treads, and provide a location for the scales and scalehouse.

(3) Truck Traffic

Proposed: The maximum allowable per day truck count leaving and entering the mine will not exceed 120 trucks/per day (clay and gravel). This amount is the same as recently approved by the BOA in Case No. M79-1-A-1.

Staff-Comment: Staff has no objection to this part of the request.

(4) Equipment

Proposed: The applicant proposes to utilize the same equipment as that approved for M79-1-A-1, the Church Pit. This equipment consists of, but is not limited to, front-end loaders, bulldozers, scrapers, haul trucks, screens, crushers, conveyors, stackers, water truck, and oiler truck. The crushing, screening, and sorting operation will take place in the bottom of the initial pit and will remain in that location until a major move to another portion of the permitted area is required. *Security Trailers, SPRAY BARS, SCALE HOUSE*

Staff Comment: The size of the gravel operation dictates the amount of equipment. Because the operation is limited to 120 trucks/day leaving the site, the operator will mine only the amount he can remove from the site soon after the material is processed. Stockpiling to any great extent is inefficient and expensive to prolong over any period of time. Therefore, in order for the operator to increase production to any great extent, he will have to increase his truck traffic. This increase can only be approved as an amendment to this case by BOA authority.

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(5) Mining Plan

Proposed: Mining is proposed to occur in a manner identical to that requested and approved in BOA case M79-1-A-1. Upon the completion of mining and the

majority of reclamation on the Church Pit mine permit, M79-1-A-1 (approximately seven to ten years from start-up), mining will begin on the Rocky Flats Pit. Mining will begin in Stage 1 in the southeast portion of the permitted area (See Mining Plan Map, D-1, in pocket of application). Upon completion of mining in this stage, mining will proceed north into Stage 2, and again upon completion of mining in this stage, move into Stage 3. One location for crushing/screening/stockpiling will be used for these three stages. Upon completion of mining in Stage 3, the entire operation will move to the west side of the permitted mining area and beginning mining Stage 4. Upon completion of mining in Stage 4, mining will move north into Stage 5 and the operation will begin mining there. This sequence will continue north until mining is complete, through Stage 7. Only one processing location (crushing/screening, etc.) will be maintained on this western side. Each mining stage will last between three to five years, encompass areas from approximately 23 to 38 acres, and contain between 1 and 1.5 million cubic yards of gravel. Topsoil and overburden will be stripped and stored in surrounding berms before actual mining of the underlying sand, gravel, and cobbles begins in each stage. The mining setback will be a minimum of 30 ft. from the lease line, except where this operation is adjacent to the Church Pit (M79-1-A-1). Mining will adjoin at this location and create one long pit in this area. Slopes in the pits will remain at 2:1 or be backfilled to this slope.

The applicant believes that mineable claybeds exist in the eastern portion of the site (Stages 1, 2, and 3). Should clay of mineable quality be found underlying the aggregate deposit, these beds will most likely also be mined. Mining of the clay will occur subsequent to aggregate mining, but prior to reclamation. Occasional blasting may be required to fracture hard areas of clay. This blasting will be performed a maximum of 12 times per year. Personnel at the D.O.E. Rocky Flats Plant will be notified prior to blasting. Blasting will be accomplished within the State permit requirements and will have no affect on off-site land uses.

Staff Comment: Staff has no objection to the location, stages, or methods requested to mine this site. The applicant must receive, prior to mining of this site, approval by the Mined Land Reclamation Board (M.L.R.B.) for both the mining and reclamation plans for this site. It should be noted that the operator has received approval for both the mining and reclamation plans by the M.L.R.B. for his recently approved BOA Case No. M79-1-A-1, the Church Pit. As the mining application under consideration (M87-1) follows an identical method of mining and reclamation as that approved for M79-1-A-1 by the M.L.R.B., Staff feels that approval by the M.L.R.B. for M87-1 will be

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Reclamation

obtainable. A copy of both the M.L.R. B. approval for mining and reclamation and the State permit for blasting must be submitted to the County to be placed into the case file prior to the commencement of mining.

(6) Reclamation Plan

Proposed: The applicant proposes to begin a reclamation phase subsequent to mining of a stage. In practice, reclamation begins shortly after mining has excavated an area large enough for reclamation procedures to be implemented. Topsoil and overburden is removed and stockpiled in berms on the south and west sides of the permitted area. Instead of continuing to stockpile topsoil and overburden in the berms, the operator will begin backfilling and contouring slopes into the pit as part of the reclamation effort. Reclamation must be completed and vegetation permanently established within five years of the completion of a mining stage, per M.L.R.B. rules and regulations. Therefore, reclamation must be adequately underway prior to the completion of mining in each stage. The mining area will be returned to the present land use upon completion of reclamation: Habitat for non-critical wildlife and a buffer zone around the D.O.E. Rocky Flats Plant. Slopes will be contoured or backfilled to achieve a 2:1 grade, per M.L.R.B. regulations. Slopes will be graded 3:1 adjacent to any permanent water features, if any are to remain upon reclamation. If clay seams are to be mined in the eastern portion of the permitted area, reclamation will be performed for the gravel areas only. Backfilling, contouring, and revegetation of the mined gravel areas will be performed up to the edge of the working area of the clay seams. The clay operator will reclaim these areas upon completion of the clay mining.

Staff Comment: Staff has no objection to the applicant's proposal for reclamation. As with the mining plan, the applicant must receive approval by the M.L.R.B. for the reclamation plan on this site. Through the County's required yearly report from the operator and any necessary site visits, Staff will be able to ascertain the degree of success of the reclamation efforts.

(7) Floodplains/Drainage

Proposed: There are no 100-year floodplains within the lease area of the proposed mine. This operation is proposed to be a dry operation and no waters will be discharged into any State waters leaving the site. Therefore, no N.P.D.E.S. permit is required. The slope of the land grades gently to the northeast. The head of Rock Creek begins on the applicant's proposed mining area, draining to the northeast. Due to the

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permeability of the gravel deposits on Rocky Flats, surface drainage is ephemeral and occurs only during periods of intense rainfall or rapid snowmelt. The mining operation is expected to have little impact on drainage. During the wet months of spring, water may pond in the bottoms of either the gravel or clay pits. If the ponding impedes mining, a trash pump will be used to pump water out of one pit either into another pit, utilized in a sprinkler system, or out onto the existing ground level to flow overland and percolate into the soil.

Change

Staff Comment: Basically, Staff has no objection to the proposed mining operation and its effect on drainage of the site. Although reclamation is designed to return the land to its former use, two shallow, regraded, and revegetated pits will remain on the site. These pits will each have low points within them. Due to the permeability of the soils on Rocky Flats, any ponded water at these points will most likely percolate through the soils, dissipating relatively soon. These small ponds will be ephemeral. It is probable that surface drainage will be disrupted during and subsequent to mining and reclamation. The applicant has agreed to submit a final drainage design to the County regarding surface drainage on and off-site before mining on M87-1 begins. This drainage design is to be minimal in scope and is only to show that overland flow discharging into the mining area during intense runoff will be routed away from the pits to continue to the northeast to the head of Rock Creek. If the applicant has filed for and received rights to the inflowing water on this property, routing of flows to the northeast to the head of Rock Creek will not be necessary. A copy of the water right to this water must then be forwarded to the County to be placed into the case file.

(8) Ditches

Final of KLG/RCR

Proposed: The applicant proposes to mine within 30 to 50 ft. on either side of two ditches that cross the proposed gravel pits of the mining lease. This action will preserve the integrity of the ditches. The applicant is currently working with the City of Broomfield, who owns the ditches, on a plan to move the ditches to the south at the edge of the permit boundary, curving north around the southeast corner, and finally tying into the existing ditches just within the permit boundary.

Staff Comment: Staff has no objection to either proposals to maintain the integrity of the McKay and Church ditches. Staff feels that the plan to rebuild and relocate the ditches to the south and eastern boundary is the better proposal. This action will allow the operator to mine more gravel in the area of

the existing ditches, create one large pit to reclaim in the east versus one large and one small pit, and finally, would provide a new clay-lined ditch for the City of Broomfield.

(9) Air Quality

Proposed: The applicant will obtain the necessary Fugitive Dust Emission Permit prior to the commencement of mining. The applicant would like to receive County approval or denial for the M87-1 gravel mining operation before he applies for an expensive permit. The operator will water all interior haul roads as necessary, and may be required by the State to submit an interior road watering schedule along with the permit application. The applicant has an existing Emissions Permit for the scaled-down M79-1-A Church Pit mining operation (36 trucks/day).

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By Steve
CBR/mw*

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Staff Comment: Staff has no objection to the applicant's proposal to obtain the proper Fugitive Dust Emissions Permit from the State Health Department. This permit must be obtained by the applicant and a copy of the permit must be transmitted to the County to be placed into the case file prior to commencement of mining. Furthermore, because the applicant proposes to utilize the same office buildings, shops, etc., as those for the Church Pit (M79-1-A-1), and because this mining operation is so similar to M79-1-A-1, the operator will be required to maintain the wind anemometer adjacent to the office building at current ground level and monitor wind speeds and directions. If wind speed maintains a steady 35 miles per hour for a period of ten minutes, the operator must shut down all mining operations. The operator may continue to load and haul aggregates from existing stockpiles to off-site locations during this period of shut-down. A record must be kept of all wind speeds and directions, and any mining shut-downs due to excessive wind speeds, and be included in the operator's yearly report.

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The radiation report filed to the State Health Department for the initial M79-1-A-1 Church Pit mining operation will suffice for this proposed operation also. This finding is per the Jefferson County Health Department's comment of January 16, 1987. The report showed that analyzed lab samples from the area showed plutonium levels only slightly higher than background levels, but well below E.P.A. allowable levels.

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(10) Visual/Noise Impacts

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Proposed: The applicant proposes to partially screen the mining operation on the west and south boundaries through the use of "sight berms". These berms will require that the setbacks at these boundaries will be from 30 to 50 ft. The berms will average 6 to 8 ft. in height on the south boundary and 10 to 12 ft. high on the west boundary. The crest of the western berm will be wide enough to drive on. The berms will be adequately vegetated upon reclamation. Once mining progresses to the base of the gravel deposit (an average of 16 ft. deep), mining equipment will be essentially located below grade and will be predominately screened from view. Combined with "sight berms", especially on the west, visual impact will be minimal.

Due to the predominate east/southeast wind direction (carrying noise), isolation from residences, and located in M-C and I-2 zoned areas, noise impacts are expected to be minimal.

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Staff Comment: Staff agrees with the applicant in his proposed visual impact mitigation techniques. The D.O.E. has commented that they are concerned that the construction of berms will impede the ability of their security patrols to survey the Rocky Flats Plant boundaries. The D.O.E. boundaries are also the boundaries of the mining lease. Staff understands that the security patrols may be able to drive on top of the berms to carry out their duties. In whatever case, the County must receive a letter from D.O.E. stating that an agreement has been reached between D.O.E. and the applicant regarding access for D.O.E. security patrols. All efforts to maintain the "sight berms", especially on the western lease boundary, should be made by the applicant in securing an agreement with D.O.E. The "sight berms" are an integral part of the County's position on the visual impact of mining along Highway 93 and the applicant should make every effort to ensure that the berms remain a part of the mining and reclamation plan.

IV. OTHER REQUIREMENTS

- Declared
Emergency*
- (1) Hours and days of operation shall be 6:00 a.m. to 6:00 p.m. Monday through Saturday, with blasting allowed only between 8:00 a.m. and 4:30 p.m. Monday through Friday, with maintenance work or emergency reponse work permitted on different hours and on Saturday and/or Sunday, if necessary.
 - (2) Subject property is owned by the Department of Energy, and whose property is completely fenced. The applicant shall provide safety and security fencing along the west side of the mining operation and shall

ensure that the fence along the west and south side of the mining operation is maintained. The applicant will further outline the total area of 223.43 acres with posts to designate all sides of the mining activity. The applicant shall maintain this fencing throughout the life of the mining operation. The operator shall post the peripheral of the mine with signs warning of the operation and shall restrict public access.

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operation*

(3) Any structure, machinery, or any other equipment associated with the mine shall be hidden from public view to the greatest extent possible.

(4) Hauling equipment shall be cleaned of loose materials to prevent spilling on the highways.

(5) The operator shall destroy the least practical amount of wildlife habitat during the life of the mine operation and shall carry out the reclamation plan with the intent of encouraging the re-establishment of certain wildlife communities.

(6) The mining operation shall not accelerate or decelerate geological processes such as erosion, sedimentation, and gravitational movement of earth and/or rock material to the point that such processes become a hazard to life or property.

(7) The operator shall abate any geological hazard on-site or off-site caused by the mining operation.

(8) That the applicant shall enter into a contract with the local fire district for fire protection prior to the due date for the First Annual report.

(9) That the applicant shall obtain approval from the Jefferson County Health Department for all drinking water and sanitary requirements on the mining site.

(10) If the Estate of Marcus F. Church enters into an agreement or a lease of any kind to permit a separate entity or person to mine the sand and gravel from the subject property, a copy of such an agreement or lease shall be provided to the Board of Adjustment, through its Executive Secretary, prior to the initiation of any sand and gravel operation, along with a document verifying that the operator of the sand and gravel operation has been fully advised of the conditions set forth by the Board of Adjustment.

(11) A copy of the performance bond provided to the Colorado Mined Land Reclamation Board shall be filed with the Board of Adjustment.

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- (12) The applicant shall furnish the Board of Adjustment with two copies of certificates of insurance which are acceptable and approved as to form and content by the County Attorney's Office within thirty days from the date of this Resolution or prior to commencing operation. Certificates of Insurance shall contain a provision for a ten (10) day written notice to the County of any cancellation or any material change in the policy.

Said insurance shall be comprehensive general liability and automobile liability insurance affording coverage for all claims for bodily injury including death and all claims in connection with any operations pursuant to granting this Special Exception, whether such operations be by the applicant or by subcontractors under it, or anyone directly or indirectly employed by the applicant or by a subcontractor under it. The limits of liability shall be no less than \$150,000 each person and \$400,000 each occurrence for claims arising out of bodily injury, and \$100,000 each occurrence and \$1000,000 aggregate occurrence for all damages arising out of injury to, or destruction of property. All such insurance shall be written on a comprehensive form of policy.

In the event any of the hazards or exposures normally listed in standard policies as "exclusions" are involved or required pursuant to granting this Special Exception, then such hazards or exposures shall be covered and protection afforded under the policy and such exclusions must be removed from the policy.

- (13) Annual Reports on Operations shall be submitted by the applicant on or before April 1 of each operating year. The operator shall submit four copies of a written progress report to the Board of Adjustment. Said reports shall include but shall not be limited to the following:
- Records and reports on blasting including, but not limited to, a report identifying days of operation and identifying all days on which the detonation of blasting material within 200 ft. of the ground surface has occurred.
 - Explanation of reclamation efforts and progress made with reclamation including, but not limited to, a progress report on reclamation identifying areas being reclaimed, areas in which reclamation is complete, and the success and failure of all reclamation efforts to date.
 - Approximate amount of material removed during each preceding year.

INSURANCE

APPLICANT'S
OPERATION

Annual Report

- d. Record of number of trucks going in and out of the mine and directions of travel.
- e. A copy of the Certificate of Insurance to substantiate that the liability insurance remain in full force and effect.
- f. Copies of all documents filed with the Mined Land Reclamation Board.
- g. A log of dates, times, wind velocities, and directions for the year and a record of when sand and gravel mining operations were shut down due to excessive wind speeds of 35 miles per hour for a period of ten minutes.

(14) The Board of Adjustment shall have the power to conduct, after notice, any public hearings necessary concerning the mining operation and its compliance with the conditions and restrictions granting this Special Exception. Such hearing may be conducted at the request of the operator or the initiation of the Board of Adjustment.

V. CONCLUSION:

(1) In conclusion, the applicant's request for a County Special Exception to mine sand, gravel, and clay at this location is basically well thought-out and complete. The mining and reclamation plans are essentially thorough and detailed. Impacts such as visual, truck traffic, access and haul roads, and impacts to the ditches have been adequately addressed, either in the application or in meetings between County Staff and the applicant.

Staff feels that it is in the best interest of all parties involved that this Special Exception to mine sand, gravel, and clay should be approved contingent upon the foregoing Staff comments relative to the applicant's proposal requests. Before any mining or major pre-development activities occur on this site, the County must have copies of the following, to be placed on permanent record in the case file:

- a. M.L.R.B. approval letter for the Mining and Reclamation Plans for M87-1, the Rocky Flats Pit.
- b. Executed agreement between the City of Broomfield and Marcus F. Church Estate concerning the maintenance and/or relocation of the McKay and Church Ditches.
- c. Colorado State Department of Health Fugitive Dust Emissions Notice, allowing the mining operation to function at the proposed level of activity, including allowance for blasting. If applicable,

Required prior to operation

a copy of the watering schedule for interior roads and a copy of another permit allowing storage of petroleum distillates on the site should be transmitted to the County.

- d. Signed agreement between the D.O.E. and the applicant regarding D.O.E.'s requirement to be able to maintain security patrols in the areas of the proposed berms without any hindrance caused by the berms.
- e. Final approval letter from the State Department of Highways stating that the Highway Department has approved the road improvement plans for the access interchange between Highway 93 and the mining site. *Done*

VI. REFERRALS:

(1) Replies received at the time of writing:

- a. Urban Drainage and Flood Control District
- b. State Highway Department, #6
- c. Jefferson County Health Department
- d. Jefferson County Highways and Transportation (Drainage, Highways)
- e. City of Arvada (Planning)
- f. City of Broomfield
- g. D.O.E., Rocky Flats Plant
- h. Boulder County (Public Works Department)
- i. Colorado Department of Health (Air Quality)
- j. Church Ranch
- k. Environment, Inc.

(2) Replies not received at time of writing:

- a. Mined Land Reclamation Board
- b. City of Golden (Planning)
- c. City of Westminster (Planning)
- d. Denver Rio Grande & Western Railroad
- e. Denver Regional Council of Governments
- f. Colorado Division of Wildlife
- g. Blue Mountain Homeowners

Robert Laird,
County Geologist/Case Manager

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