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STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

County
W. Div. _____ Dist. _____
Stream No. _____

APPLICATION FOR EROSION CONTROL DAM: Nolte Pit Erosion Control Dam
Name of Dam

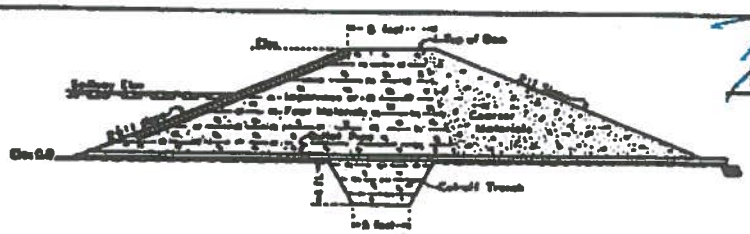
This application and statement is made in conformity with the provisions of the Erosion Control Dam Act of Colorado, CRS 37-87-122.

This application must be accompanied by a filing fee of fifteen dollars, payable to the State Engineer of Colorado, AND FILED IN TRIPLICATE. Type or use ink.

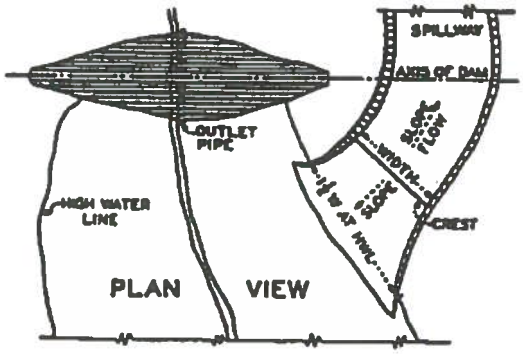
Puckett Land Company (Name of Owner) 5460 S. Quebec St., Suite 250 (Address) Questions call 303 854-7499
Greenwood Village (City) CO (State) 80111 (Zip) Bruce Humphries Consultant

Tank located in the SE1/4 Quarter of Section 14, Township 7S, Range 96W 6th P.M.
Water course on which tank is located Upland drainage Trib. to Colorado River.
Is water course normally dry? Yes. (Estimated to be dry 80 percent of time)
Approximate area of drainage basin above tank Less than 15 Acres.
Vegetative cover above tank: Cultivated _____, Pasture Range 15%, Forest 5%, Brush 10%.
Topography of drainage basin: Steep X, Medium _____, Flat _____.
Character of surface formation of drainage basin: Rock _____, Rocky Soil X, Soil _____.
Approximate elevation of drainage basin above sea level 5156 feet.
Height of top of dam above bottom of water course 0.0 feet. (NOTE: Basin dug into land no actual dam structure
Height of bottom of spillway above bottom of water course Minus One feet.
Approximate capacity of tank .24 acre feet, High water line area .1 acres.
Location of spillway with respect to dam West side of structure.
Bottom width of spillway at narrowest point 3.0 feet.
Distance of lower end of spillway below dam 25 feet. (Must be at least 20 feet)
Formations in which spillway is located: Rock _____, Shale _____, Clay _____, Earth X
or Mixture of Soil and Rock _____.
Width of top of dam soil surface feet. Length of dam 92 feet.
Slope of upstream face of dam 3H:1V. Slope of downstream face of dam Natural soil surface, 2-3% slope
Kind and size of outlet pipe None installed.
Nature of riprap or other protection to be placed over water face of dam None placed virgin soil, no fill.
Give location by section, township and range of every other stock tank now constructed on drainage basin on which this tank will be located None known.

Puckett Land Company
Owner



MINIMUM DIMENSIONS OF MAXIMUM CROSS-SECTION OF DAM



W.C. _____ Initials Eng. _____ Date of Approval

Date of Approval _____

File Number _____

STATE ENGINEER _____

Division Engineer _____

STATE OF COLORADO

DIVISION OF WATER RESOURCES

OFFICE OF STATE ENGINEER

SPECIFICATIONS TO GOVERN THE CONSTRUCTION OF AN EROSION CONTROL DAM

Preparation of Foundation for Dam--All vegetable matter of every description, including roots to a depth of two feet, shall be removed from the entire area upon which the dam will rest, together with boggy or unstable materials and deposited outside the toes of the dam. The banks of the stream channel shall be dressed to a slope of about 1½:1. A cutoff trench, with sloping sides and a bottom width of not less than 5 feet and depth of 4 feet, shall then be excavated beneath the center line of the dam the full length thereof, which trench shall be refilled with the most impervious materials available. The foundation of the dam shall then be lightly plowed lengthwise of the dam, to provide proper contact between the foundation and the dam embankment.

Placing of Dam Embankment--The materials shall be placed in the cutoff trench and in the embankment of the dam in layers not exceeding 6 inches in thickness, after which each layer shall be thoroughly compacted by a heavily loaded disc cultivator, a corrugated or sheep's foot roller, the treads of a caterpillar or trucks, or by livestock used in the construction. During the construction period, the top of the embankment shall be maintained as a horizontal plane the full width and length thereof, and no side dumping of materials shall be permitted. The materials shall at all times contain sufficient moisture to provide proper compaction. Puddling of material with water shall not be permitted. No frozen material or large clods or stones shall be incorporated in the dam. The upstream face of the dam shall be constructed with a slope not steeper than 2½:1, and the downstream face on a slope not steeper than 2:1. The crest or top of the finished dam shall be not less than 8 feet in width.

The upstream two-thirds of the dam shall be constructed of the most impervious materials, such as clay loam, or a mixture of clay and sand, and the downstream one-third of more pervious material, such as sand or gravel. The upstream face of the dam shall be adequately protected against wave action by stone riprap, or other suitable materials when required.

Outlet--There shall be located beneath the dam an ungated outlet pipe not less than 12 inches in diameter and large enough to drain within thirty-six hours any impoundment in excess of two acre-feet. Such outlet pipe shall be provided with cutoff collars. The pipe shall be placed in a trench bottomed in stable formation, and shall be completely surrounded with well compacted impervious materials.

Spillway--For the protection of the dam, an adequate spillway shall be constructed around one or both ends of the dam, of sufficient width to provide a capacity to carry the entire discharge from the drainage basin above the dam during periods of unusual runoff. The spillway shall be located in stable formations not easily eroded, and shall extend to a point well downstream from the dam. The following table shall be used to determine the necessary width of spillway to meet the above requirements. The top of the dam at all points shall be not less than 4 feet above the bottom of the spillway.

The following table shows the widths of spillways for corresponding drainage areas with an allowance of a minimum freeboard between the maximum high water line and top of dam, of 2.3 feet, and maximum velocities of 3.5 feet per second of time.

AREAS OF LOW RAINFALL INTENSITY		*AREAS OF HIGH RAINFALL INTENSITY*			
AREA OF DRAINAGE BASIN ABOVE DAM IN ACRES	REQUIRED WIDTH OF SPILLWAY "W" AT NARROWEST POINT IN FEET	AREA OF DRAINAGE BASIN ABOVE DAM IN ACRES	REQUIRED WIDTH OF SPILLWAY "W" AT NARROWEST POINT IN FEET	AREA OF DRAINAGE BASIN ABOVE DAM IN ACRES	REQUIRED WIDTH OF SPILLWAY "W" AT NARROWEST POINT IN FEET
20	8	20	8	400	75
30	9	30	9	450	84
40	11	40	11	500	93
50	13	50	13	550	102
60	15	60	15	600	111
70	17	70	17	650	120
80	19	80	19	700	129
90	21	90	21	750	138
100	23	100	23	800	147
110	25	110	25	850	156
120	27	120	27	900	165
130	29	130	29	950	174
140	31	140	31	1000	183
150	33	150	33	1050	192
160	35	160	35	1100	201
170	37	170	37	1150	210
180	39	180	39	1200	219
190	41	190	41	1250	228
200	43	200	43	1300	237
210	45	210	45	1350	246
220	47	220	47	1400	255
230	49	230	49	1450	264
240	51	240	51	1500	273
250	53	250	53	1550	282
260	55	260	55	1600	291
270	57	270	57	1650	300
280	59	280	59	1700	309
290	61	290	61	1750	318
300	63	300	63	1800	327
1000	66	300	73	2000	363

ALL AREAS EAST OF THE CONTINENTAL DIVIDE BELOW AN ELEVATION OF 7000 FEET, ARE CONSIDERED AS BEING IN THE HIGH RAINFALL INTENSITY ZONE.

The above spillway widths may be reduced at a point 50 feet below intake, by 25 per cent, where the spillway is located the full length thereof in hard clay or shale, and by 50 per cent when located in hard rock formations, if the slope or grade of the bottom is increased accordingly. The grade for clay and shale formations should be 0.30 foot per 100 feet, and for rock formations 0.90 foot per 100 feet. The width of the entrance to the spillway must in all cases be one-third wider than shown in the table, and the bottom should slope from the lower end of the funnel section, toward the reservoir 1.0 foot in the distance of 50 feet, and the slope downstream should be 0.25 foot in a distance of 100 feet.

Borrow Pits--Pits, from which materials are taken to build the dam, shall be cleared of all vegetable matter, and no material shall be borrowed within a distance of 50 feet of any part of the dam without approval. Materials excavated from the spillway, when suitable, may be used in building the dam.

Completion of Construction

RECEIPT NO. _____

Upon the completion of the construction of the _____
Nolte Pit _____ Erosion Control Dam, located in
Sec. 14 Twp. 7S Rng. 96W the approved
Plans and Specifications of which are hereto attached, indicate in the blank at the bottom of this form, the date of completion of construction and return to:

Date of Completion ? Early October 2012
DAY MONTH YEAR

Puckett Land Company
OWNER

The structure was built as part of the site reclamation once borrow material was removed for the highway construction project.

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