FILED
SEP 1 6 1997
STATE ENGINEER'S OFFICE

IN THE OFFICE OF THE STATE ENGINEER
OF THE STATE OF NEVADA

IN THE MATTER OF APPLICATION NUMBER 62997
FILED BY NEVADA POWER COMPANY
OF LAS VEGAS, STATE OF NEVADA,
ON APRIL 3, 1997, TO APPROPRIATE
THE WATERS OF UNDERGROUND

PROTEST

Comes now Charles W. Pettee, on behalf of the United States Department of the Interior, National Park Service, whose post office address is 1201 Oak Ridge Drive, Suite 250, Fort Collins, Colorado, 80525, whose occupation is Chief, Water Rights Branch, Water Resources Division, National Park Service, and protests the granting of Application Number 62997 filed on April 3, 1997, by Nevada Power Company of Las Vegas State of Nevada, to appropriate the waters of Underground, situated in Clark County, State of Nevada, for the following reasons and on the following grounds, to wit:

See Exhibit A attached.

THEREFORE the protestant requests that the application be denied, unless it can be reasonably demonstrated that the proposed appropriation would not affect the discharge of the Muddy River and.

Signed Charles W. Pettee
Agent or protestant

Charles W. Pettee
Printed or typed name, if agent

Address 1201 Oak Ridge Drive, Suite 250
Street No. or P.O. Box No.

Fort Collins, CO 80525
City, State and Zip Code No.

Subscribed and sworn to before me this 10th day of September, 1997.

Olga R Lee
Notary Public

State of Colorado

County of Larimer

My Commission expires 5-8-2001

NSR

IN THE MATTER OF APPLICATION 62997
EXHIBIT A

Protest by Charles W. Pettee
on behalf of the United States, Department of the Interior, National Park Service

GENERAL

I. The mission of the National Park Service (NPS) may be paraphrased from 16 U.S.C. 1, as conserving scenery, natural and historic objects, and wildlife, and providing for enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations.

II. Since 1936, the National Park Service has managed the recreational activities within the Boulder Canyon Project area now known as Lake Mead National Recreation Area (NRA). Lake Mead NRA was established on October 8, 1964 (78 Stat. 1039) to be administered for "...general purposes of public recreation, benefit, and use, and in a manner that will preserve, develop, and enhance, so far as practicable, the recreation potential, and in a manner that will preserve the scenic, historic, scientific, and other important features of the area.... The Secretary shall permit hunting, fishing, and trapping on the lands and waters under his jurisdiction within the recreation area."

III. The NPS is entitled to Federal reserved water rights for reserved lands within Lake Mead NRA. The priority dates for these reserved rights are the dates when the lands were reserved and are senior to the appropriation sought by the Nevada Power Company. These rights have not been judicially quantified.

IV. The Muddy River, which originates from large discharge springs located northwest of Moapa, Nevada, flows into Lake Mead NRA at the north end of the lake's Overton Arm. The State of Nevada, Department of Wildlife, is leasing part of Lake Mead NRA adjoining the Muddy River for the purposes of the Overton Wildlife Management Area. This area supports a variety of waterfowl and vegetation. The United States has a State appropriative water right to water in the Muddy River, Certificate No. 5126. The point of diversion is located in the NW¼ SE¼, Sec. 19, T. 16 S., R. 68 E., M.D.B.M.

V. Springs and water-related resource attributes are important features of Lake Mead NRA. The springs provide water for vegetation and wildlife habitat and create an environment that many visitors use and enjoy. Most springs are not fed by water from Lake Mead and could be affected by up-gradient diversions.

Springs include Blue Point, Rogers, Corral, and Kelsey's Springs, and other smaller, unnamed springs. Visitation to Blue Point and Rogers Springs has been estimated at 5,000 visitors/year. Desert bighorn sheep are also dependent upon the springs in Lake Mead NRA.

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EXHIBIT A - CONTINUED

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A herd of approximately 150 use springs in the northern part of the National Recreation Area. The relict Las Vegas Valley leopard frog, *Rana onca*, has been found at Rogers, Corral, and Blue Point Springs. Current taxonomic studies indicate a high potential for listing of this relict population, previously believed extinct, as protected under the Endangered Species Act.

The United States has State appropriative water rights to two springs near the mouth of the Muddy River, which could be impaired by the appropriation and diversion proposed by this application: Kelsey's Springs, located in the SW¼ NW¼, Sec 20, T.16 S., R.68 E., M.D.B.M., Certificate No. 296; and Rogers Spring, located in SE¼ SE¼, Sec. 12, T.18 S., R.67 E., M.D.B.M., Certificate No. 4476.

VI. Nevada Power Company filed Application No. 62997 along with Applications Nos. 62996, 62998, and 62999 to withdraw ground water in Hidden and Garnet valleys, Hydrographic Areas 217 and 216, respectively.

VII. The NPS reserves the right to amend this exhibit as more information becomes available.

FINDINGS

I. The proposed appropriation is located in Hidden Valley. Rush (1968) estimated that 400 acre-feet per year recharges the aquifers beneath valley mostly from local mountain ranges. Discharge from the valley (also about 400 acre-feet per year) is by subsurface outflow to Garnet Valley to the east. In Garnet Valley, the estimated annual recharge is 400 acre-feet. Discharge from Garnet Valley (about 800 acre-feet per year) is by subsurface outflow to California Wash to the east and from California Wash to the Muddy River (Rush, 1968).[1]

A small amount of subsurface inflow from adjacent Coyote Spring Valley to the north may also enter the Hidden Valley (Burbey, 1997). The main body of ground water in Coyote Spring Valley discharges through the Muddy River springs and constitutes most of the base flow of the Muddy River (see Eakin, 1964; and Burbey, 1997).

[1] See Burbey (1997) for further detail regarding the geology and hydrology of Hidden and Garnet valleys and Prudic and others (1995) for a description of the regional ground-water flow system.

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EXHIBIT A - CONTINUED

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The ground-water reservoirs of Hidden, Garnet, and Coyote Spring valleys are tributary to the Muddy River. According to the Muddy River Decree, there is no water available for appropriation in the Muddy River, its headwaters, sources of supply, and tributaries.

II. Committed ground-water resources are reported to be 0 acre-feet per year in Hidden Valley and 930 acre-feet per year in Garnet Valley (Nevada Department of Conservation and Natural Resources, 1992). Committed ground-water resources exceed the ground-water recharge rate of Hidden and Garnet valleys, combined.

III. The Las Vegas Valley Water District (LVVWD) filed senior applications to withdraw 10 cubic feet per second of ground water from Hidden Valley, 10 cubic feet per second from Garnet Valley, and 38 cubic feet per second of ground water in Coyote Spring Valley. LVVWD seeks a total of 2,000 acre-feet per year from Hidden Valley and 2,000 acre-feet per year from Garnet Valley (Schaefer and Harrill, 1995). These proposed withdrawals, senior to that of the subject application, exceed the recharge rate of Hidden and Garnet valleys.

IV. The proposed withdrawal rate of this application is 5.57 cubic feet per second or 4,032 acre-feet per year. The proposed withdrawal rate exceeds the recharge rate of Hidden Valley and that of Hidden and Garnet valleys combined.

V. The proposed annual duty of this application and Applications Nos. 62996, 62998, and 62999 is 16,131 acre-feet per year. The annual duty exceeds the recharge rate of Hidden Valley and that of Hidden and Garnet valleys combined.

VI. The ground-water withdrawal proposed by this application and Applications Nos. 62996, 62998, and 62999, in combination with existing and pending applications (including those of LVVWD), will capture ground water in Hidden and Garnet valleys, which naturally discharges into the Muddy River and thus will reduce the discharge of the river.

VII. The ground-water reservoir in Coyote Spring Valley is connected to the ground-water reservoir in Hidden Valley (Burbey, 1997). The ground-water withdrawal proposed by this application and Applications Nos. 62996, 62998, and 62999, in combination with existing and pending applications (including those of LVVWD), will capture ground water in Coyote Spring Valley which naturally discharges into the Muddy River and thus will reduce the discharge of the river.

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EXHIBIT A - CONTINUED

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VIII. It is not clear, based on recent scientific literature, that the springs within Lake Mead NRA, which are discharge areas for regional ground-water flow systems, would be affected by the proposed appropriation. Prudic and others (1995) suggest that the waters issuing from Rogers and Bluepoint springs originate in the Mormon Mountains and Beaver Dam Wash in the Virgin River basin. It appears that water issuing from the springs may originate in three areas: (1) Mormon Mountains, (2) Beaver Dam Wash, and (3) the Muddy Mountains. The National Park Service, in cooperation with the Desert Research Institute, initiated an investigation to determine where water issuing from the springs originates. A report is due in the near future.

IX. Ground-water withdrawal rates larger than the recharge rate to Hidden and Garnet valleys would come from storage and constitute ground-water mining.[2] The proposed appropriation, if approved and developed, will mine ground water.

X. In Ruling No. 4548, the State Engineer concluded "...that it is not in the public interest to approve applications for use on lands where the applicant does not control both the proposed well locations and the proposed places of use." The proposed point of diversion and place of use of the application appear to be located on land controlled by the Bureau of Land Management (see surface-management map of the State of Nevada prepared by the Bureau of Land Management, 1990).

XI. The water and water-related resources of Lake Mead National Recreation Area are locally and nationally important.

CONCLUSIONS

I. There is no water available for appropriation in Hidden Valley, because:

A. The Muddy River and its tributaries are fully appropriated.

B. The committed ground-water resources of Hidden and Garnet valleys exceed the natural recharge rate of the two valleys.

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[2] If such mining were to occur, it would take thousands of years for the aquifers beneath Hidden and Garnet valleys to be replenished (Burbey, 1997).

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EXHIBIT A - CONTINUED

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C. The ground-water withdrawals proposed by the Nevada Power Company in Hidden and Garnet valleys exceed the natural recharge rate.

II. The approval and development of the appropriation proposed by this application will impair the water rights of the United States, because:

A. The appropriation and diversion proposed by the Nevada Power Company will further reduce the discharge of the Muddy River. Thus, the United States' senior water right and other existing rights to the Muddy River will be impaired, if the appropriation is approved and developed. The proposed appropriation also could impact the springs at Lake Mead NRA, and associated water rights, water resources, and water-related resource attributes.

B. The proposed appropriation, in combination with existing appropriations and pending applications in the Muddy River area (including those of LVVWD), if approved and developed, could reduce the discharge of the springs, because of the large potential withdrawal rate. The drawdown caused by such large withdrawals would extend to capture ground water that naturally discharges through the springs.

C. The effects of the appropriation proposed by this application, when combined with other existing and proposed appropriations, could impair the senior water rights of Lake Mead NRA more quickly and/or to a degree greater than the diversion proposed under this application alone.

III. The public interest would not be served, by granting a permit to this application, because:

A. The ground-water reservoir in Hidden and Garnet valleys, a replenishable resource, would be mined.

B. The application is for using water on lands where the applicant does not control both the proposed well location and the proposed place of use.

C. The water and water-related resources in the nationally important Lake Mead NRA would be diminished or impaired, as a result of the appropriation proposed by this application.

IN THE MATTER OF APPLICATION 62997
EXHIBIT A - CONTINUED

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LITERATURE CITED

Burbey, T.J., 1997, Hydrogeology and potential for ground-water development, carbonate-rock aquifers, southern Nevada and southeastern California: U.S. Geological Survey Water-Resources Investigations 95-4168, 65 p.

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Prudic, D.E., Harrill, J.R., and Burbey, T.J., 1995, Conceptual evaluation of regional ground-water flow in the carbonate-rock province of the Great Basin, Nevada, Utah, and adjacent states: U.S. Geological Survey Professional Paper 1409-D, pp. D1-D102.

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