



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Reply to:
301 E. Stewart Ave., #203
Las Vegas, Nevada 89101
Tel: (702) 388-6125
FTS: 598-6125

TO: Joseph Holonich, Acting Director, HLPD, M/S 4 H 3
FROM: Paul T. Prestholt, Sr. On-Site Licensing Representative
DATE: June 19, 1991
SUBJECT: NOTICE OF PROPOSED ACTION AND PUBLIC HEARING BY THE
STATE OF NEVADA, and STATE OF NEVADA DIVISION OF
ENVIRONMENTAL PROTECTION LETTER TO GERTZ (6/12/91)

Please find enclosed the above-referenced documents.
These were also "faxed" to you.

PTP:nan

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PDR WASTE
WM-11 PDR

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NH03

NOTICE OF PROPOSED ACTION
AND PUBLIC HEARING

by the

State of Nevada
Department of Conservation and Natural Resources
Division of Environmental Protection
123 W. Nye Lane
Capitol Complex
Carson City, Nevada 89710

P U B L I C N O T I C E

The Administrator, Division of Environmental Protection, Department of Conservation and Natural Resources, Carson City, Nevada is issuing the following notice of proposed action under the Nevada Revised Statutes, the Safe Drinking Water Act, and Nevada Administrative Code 445.4253.

The Administrator has received a request for an underground injection control permit (NEV89031) which was applied for by the following applicant:

Department of Energy
Yucca Mountain Project
P.O. Box 98608
Las Vegas, NV 89193-8608

The Administrator has prepared tentative determinations regarding the permit which, in brief, are:

The applicant has applied for an area permit to inject into three injection wells located at the Yucca Mountain Project Area, NE½ Sec.14, T.13S., R.49E. The applicant proposes to inject tracers and water produced from well J-13 into various formations in order to determine the hydrogeologic conditions within the project area. A maximum of 40 individual tests will be conducted using packers to isolate selected intervals within each well. Tracers will be injected into non-pumping wells and will be recovered through the pumping well and the water discharged to the ground surface. The water from well J-13 meets drinking water standards. The water from the injection zone is of similar quality. The tracer amounts added will not result in the injected water exceeding the drinking water standards or degradation of waters of the State.

On the basis of preliminary review of the requirements of the Nevada Revised Statutes (NRS), the Safe Drinking Water Act and the implementing regulations, the Administrator proposes to issue permit NEV89031 as stated above.

Persons wishing to comment upon or object to the proposed determinations by the Administrator regarding permit issuance should submit their comments or objections in writing, within thirty (30) days either in person or by mail to:

L.H. Dodgion
Division of Environmental Protection
123 W. Nye Lane
Capitol Complex
Carson City, NV 89710
ATTN: Bureau of Water Permits
and Compliance/UIC

A public hearing has been scheduled to obtain oral comments relevant to the terms and conditions of the proposed permit. The hearing officer will open the hearing at:

7:00 p.m., July 16, 1991
State Industrial Insurance System Offices
1700 W. Charleston Blvd.
Las Vegas, Nevada

All comments or objections received between the date of this notice and the close of the public hearing on July 16, 1991 will be considered in the formulation of final determinations regarding the application.

The application, proposed permit, comments received, and other information are on file and may be copied at the office of the Division of Environmental Protection, 123 W. Nye Lane, Carson City, Nevada, or copies may be obtained by writing to the above address or by calling Marcia Greybeck of the Bureau of Water Permits and Compliance of the Division of Environmental Protection at (702) 687-4670.

Please bring the foregoing notice to the attention of all persons whom you know would be interested in this matter. Copies of the notice are posted in the following locations: Offices of the Nevada Division of Environmental Protection, Carson City and Las Vegas; Nevada State Library, Carson City; Washoe County Library, Reno; City Hall, Las Vegas; and the State Industrial Insurance Office, Las Vegas.

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET
(Pursuant to NAC 445.42525)

Permittee Name: Department of Energy, Yucca Mountain Project

Permit Number: NEV89031

A. Description of Discharge

Location: Three injection wells, UE-25C #1, UE-25c #2, and UE-25c #3, located at Yucca Mountain, NE1/4 Section 14, T13S, R49E, Nye County, Nevada.

Characteristics: Injectate consists of ground water from well J-13, located over two miles away near Fortymile Wash, and various ground water tracers. Chemical analysis from well J-13 meets drinking water standards. All tracers to be used are commonly used and recognized in the scientific community for their intended purposes. The proposed tracers are: benzoic acid (3 trifloromethylbenzoate), pyridone, sodium chloride, lithium bromide, boric acid, fluorescent microspheres and polystyrene spheres.

B. Synopsis

The U.S. Department of Energy desires to conduct ground water tracer studies at the Yucca Mountain Project. There are three existing wells, known as the C-hole complex wells. These wells were completed in 1983 and 1984 to provide geologic and hydrologic information on the Yucca Mountain site. The wells are located within 100 feet of each other and are drilled to a depth of 3000 feet. The wells are open hole completion from approximately 1300 feet to total depth into volcanic rocks composed of nonwelded to densely welded ash-flow tuffs and bedded, reworked, and air-fall tuffs which are intersected by at least two sets of faults and fractures (USGS Water-Resources Report 84-4267, 1984).

The applicant proposes to conduct a maximum of 40 individual convergent, drift pump-back and recirculating tracer tests which will last from 3-14 days each. Water will be pumped from intervals isolated by packers at rates dependent upon the transmissive character of the rock such that total drawdown does not exceed 100 feet. The pumping rate will be constant during each test and will be between 50 and 200 gpm. Recovered waters will be discharged to the ground surface near the test wells. When drawdown stabilizes, a tracer will be injected with minimal pressure into a test interval of one of the nonpumping wells. Pumping will continue until tracer concentrations in the pumped water are negligible. The tracer amounts added will not result in the injected water exceeding State or federal drinking water standards or in degradation of waters of the State.

C. Receiving Water Characteristics

The water table is approximately 1,320 feet below the surface of the C-hole complex. Water quality analysis of the formation waters indicates water meets drinking water standards.

D. Procedures for Public Comment

The Notice of the Department's intent to issue a permit authorizing the facility to discharge to the ground water of the State of Nevada subject to the conditions contained within the permit, is being sent to the Las Vegas Review-Journal, Las Vegas Sun, Pahrump Valley Times, Elko Daily Free Press, and Reno Gazette-Journal for publication no later than June 16, 1991. The notice is being mailed to interested persons on our mailing list (see Attachment A). Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of the public notice.

All written and oral comments received during the comment period will be retained and considered in the final determination. A public hearing on the proposed determination will be held on July 16, 1991, at the State Industrial Insurance System Offices located at 1700 W. Charleston Blvd., Las Vegas, Nevada. The hearing will begin at 7:00 p.m.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445.274.

E. Proposed Determination

The Department has made the tentative determination to issue the proposed permit contingent upon comments received during the public comment period and the public hearing. If no significant negative impacts due to injection are identified during this process, it is the intent to the Administrator to issue the permit.

F. Proposed Effluent Limitations and Special Conditions

See Part I.A of the permit.

G. Rationale for Permit Requirements

Verification that the quality of the fluid discharged to the injection wells remains constant. Confirmation that fluids disposal does not adversely affect the existing hydrogeologic regime.

Prepared for: L.H. Dodgion

Date: June, 1991
MG/to:57

ATTACHMENT A

Mailing List for Injection Permit #NEV89031

Clark County Sanitation District
5857 E. Flamingo Road
Las Vegas, NV 89122

California State Water
Resources Control Board
Attn: Walter G. Pettit
Deputy Executive Director
P.O. Box 100
Sacramento, CA 95801

Jeff Harris
Comprehensive Planning
225 Bridger, 7th Floor
Las Vegas, NV 89106

Bureau of Reclamation
P.O. Box 640
Carson City, NV 89702

Clark County Health Dept.
P.O. Box 4426
Las Vegas, NV 89106

Bureau of Reclamation
P.O. Box 427
Boulder city, NV 89005

Las Vegas Valley Water District
3700 West Charleston Blvd.
Las Vegas, NV 89109

City of North Las Vegas
City Manager
P.O. Box 4086
North Las Vegas, NV 89030

Department of Wildlife
4747 W. Vegas Drive
Las Vegas, NV 89100

Boulder City
City Manager
P.O. Box 367
Boulder City, NV 89005

Bureau of Land Management
District Office
4765 Vegas Drive
Las Vegas, NV 89126

U.S. Fish & Wildlife Service
Great Basin Complex
4600 Kietzke Lane, Bldg.C
Reno, NV 89502

LAS VEGAS INDIAN CENTER, INC.
2300 W. Bonanza Road
Las Vegas, NV 89106

Colorado River
Commission of Nevada
Attn: Jack Stonehocker, Dir.
Mail Room Complex
Las Vegas, NV 89158

INTER-TRIBAL COUNCIL OF NV, INC.
P.O. Box 7440
Reno, NV 89510

Div. Env. Health Ser.
Office of Water & Waste
Quality Management
2005 N. Central Ave.
Phoenix, Arizona 85004

E.R.
P.O. Box 255
Logandale, NV 89021

Arizona Dept. of Water
Resources
99 East Virginia ave.
Phoenix, Arizona 85004

Donald R. Elle, Ph.D., Director
Environmental Protection Division
U.S. Department of Energy
Nevada Operations Office
P.O. Box 98518
Las Vegas, NV 89193-8518

Colorado River Board of Calif.
Attn: Richard E. Angelos
107 S. Broadway, Room 8103
Los Angeles, CA 90012

Consumer Health Protection Ser.
Attn: Jeff Fontaine
Inter-Office-Mail

The Metropolitan Water District
of Southern California
Attn: Myron B. Holburt
P.O. Box 54153, Terminal Annex
Los Angeles, CA 90054

League of Women Voters
P.O. Box 1436
Las Vegas, NV 89101

U.S. Dept. of the Interior
Lake Mead National rec. Area
Jerry D. Wagers, Superintendent
601 Nevada Highway
Boulder City, Nevada 89005

U.S. Army Corps of Engineers
Sacramento District
Division Engineer
650 Capitol Mall
Sacramento, CA 94814

National Park Service
600 Harrison St., Suite 600
San Francisco, CA 94107-1372

Mr. Jack A. Barnett
Executive Director, FORUM
106 W. 500 South, Ste.#101
Bountiful Utah 84010

John P. Whitescarver
Westec Corp.
6501 Loisdale Court, #500
Springfield, VA 22105

Bureau of Reclamation
P.O. Box 640
Carson City, NV 89702

Donna Rose
Nevada Indian Commission
3100 Mill St., Ste.#206
Reno, NV 89502

City of N. Las Vegas
City Manager
2200 Civic Center Drive
P.O. Box 4086
North Las Vegas, NV 89030

Division of Historical
Preservation & Archeology
ATTN: Alice Becker

U.S. Fish & Wildlife Services
Great Basin Complex
4600 Kietzke Lane, Building C
Reno, NV 89502

Interdepartmental Mail

Attn: Richard Navarre

Pat Shalmy
County Manager
225 Bridger, 6th Flr.
Las Vegas, NV 89155

Lockheed Eng. & Sciences Co.
James Wilson, Scientist
1050 E. Flamingo Rd.
Las Vegas, NV 89119

City Manager
City of Las Vegas
400 E. Stewart Avenue
Las Vegas, NV 89101

C.A.R.E.
Hugh J. Anderson, III
Merrill Lynch
300 S. Fourth St. Ste.#1200
Las Vegas, NV 89101

Chairman, EQPRB
225 Bridger, 6th Flr.
Las Vegas, NV 89155

LAS VEGAS COLONY
Margaret Henry, Chairman
1 Paiute Dr.
Las Vegas, NV 89102

City of Henderson
City Manager
243 Water Street
Henderson, NV 89015

MOAPA RIVER RESERVATION
Wallace Kay, Chairman
P.O. Box 340
Moapa, NV 89025

Department of Wildlife
P.O. Box 10678
Reno, NV 89520-0022

NEVADA URBAN INDIANS
401 W. 2nd St. Ste.#101
Reno, NV 89503

John Stout
Bureau of Land Management
Star Route 5, Box 1
Ely, NV 89301

Bureau of Land Management
Mineral Resources NV-920
Attn: Deputy State Director
P.O. Box 12000
Reno, Nevada 89520

Cliff Lutich
Nye Co. Public Works
P.O. Box 151
Tonopah, NV 89049

Department of Minerals
Attn: Russell Fields, Dir.
Interdepartmental

Frank Luchetti
Sierra Pacific Power Co.
P.O. Box 10100
Reno, NV 89510

Sierra Club
P.O. Box 8096
Reno, Nevada 89502

Nye County Commissioners
P.O. Box 153
Tonopah, NV 89049

Dept. of Wildlife
Attn: William Molini
Interdepartmental

Public Service Commission
Attn: Tom Henderson

Div. of Water Resources
Attn: Hugh Ricci
Interdepartmental

Interdepartmental

Norma Cox
Nevada League of Women Voters
3096 E. Shadowridge Avenue
Las Vegas, Nevada 89120

League of Women Voters
612 Robinson Street
Carson City, NV 89701

Lester Kaufmann, W-6-2
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Pyramid Lake Tribal Council
P.O. Box 213
Nixon, NV 89424

Ted Angle
Bureau of Land Management
P.O. Box 911
Tonopah, NV 89049

Citizens Alert
Attn: Bob Fulkerson
P.O. Box 5391
Reno, NV 89513

GOVERNOR'S OFFICE

Attn: John Sarb

Interdepartmental

Nevada Conservation League
290 E. Plumb Lane #233
Reno, Nevada 89502

Superintendent
Bureau of Indian Affairs
Western Nevada Agency
1300 S. Curry Street
Carson City, NV 89703

Greg Fasano
Yucca Mountain Project
SAIC
101 Convention Center Dr.
Suite 407
Las Vegas, NV 89109

NUCLEAR WASTE PROJECT OFFICE
Attn: Bob Loux

Interdepartmental

DRAFT

Permit No. NEV89031

AUTHORIZATION TO INJECT

In compliance with the provisions of the Nevada Revised Statutes and the Nevada Injection Control Regulations,

U.S. Department of Energy
Yucca Mountain Project
P.O. Box 98608
Las Vegas, Nevada 89193-8608

is authorized to inject into three injection wells located at:

Yucca Mountain
NE 1/4 Section 14, T.13S., R.49E.,
Nye County, Nevada

in accordance with

limitations, requirements and other conditions
set forth in Parts I, II, and III hereof.

This permit shall become effective _____.

This permit shall expire at midnight, _____.

Signed this _____ day of _____.

DRAFT

L.H. Dodgion, Administrator
Nevada Division of Environmental Protection

MG/to:57
NEV89031.pmt

DRAFT

PART I

A. EFFLUENT LIMITATIONS, MONITORING AND OTHER REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting through the expiration date, the permittee is authorized to inject water produced from well J-13 and approved tracers into wells UE-25c #1, UE-25c #2 and UE-25c #3 located within the NE $\frac{1}{4}$ Section 14, T.13S, R.49E., Nye County, Nevada. The permittee is further authorized to dispose of waters produced during testing to the ground surface adjacent to each well.
2. All wastes shall be disposed of in accordance with the rules and regulations of this Division. All spills and releases shall be reported as required by NAC 445.238 to NAC 445.241.
3. Produced fluids shall be disposed in such a manner that they do not present a hazard to livestock, wildlife or the beneficial use of the waters of the State.
4. The following tracers are hereby approved; benzoic acid (3 trifloromethylbenzoate), pyridone, sodium chloride, lithium bromide, fluorescent microspheres and polystyrene spheres. No chemical additives or tracers shall be added to the fluids prior to injection or disposal other than those listed.
5. Samples taken in compliance with the monitoring requirements specified in this permit shall be taken at the following locations:
 - a) At the discharge pipe or hose prior to discharge to the ground surface.
6. Samples of fluid from the location identified in Part I.A.5 shall be collected and analyzed for each time a different tracer is used. The sample must be taken during peak tracer recovery and analyzed for the following:

Total Dissolved Solids	pH
Electrical Conductivity	Sodium
Boron	Potassium
Barium	Calcium
Cadmium	Magnesium
Chromium	Bicarbonate
Lead	Chloride
Selenium	Sulfate
Silver	Nitrate
Iron	Silica
Manganese	Fluoride
Copper	Arsenic
Zinc	Mercury
Lithium	Strontium
Gross Alpha	Gross Beta

The detection limits for the constituents listed above must be at least as low as primary or secondary drinking water standards when applicable. The Division may increase or decrease the monitoring of any constituents as listed for good cause.

7. The permittee shall make quarterly reports which contain the following data:
 - a) The results of the chemical analyses performed in that quarter.
 - b) Monthly summary containing the total volume of fluid produced or discharged to the ground surface (gal/month), and the date and duration of flow (hours).
 - c) Monthly summary containing the total volume injected (gal/month) and the amount and type of tracer injected.
 - d) A list of all production, injection, observation and test wells located within 2 miles of the project area and utilized by the permittee or their affiliates. Said list shall be chronological, listing the newest wells first, and shall include date of installation, depth, type of well, status (abandoned, plugged, not-in-use, etc.), well identification and location. All wells reported after the effective date of this permit will require submittal of a map indicating their location.

8. The permittee shall give 30 days advance notice to the Division of any planned major workover of any of the injection wells. Verbal approval may be given by the Division for such workovers. When standard or routine maintenance procedures for injection well cleanouts are developed, such procedures will be submitted to the Division for approval at least 48 hours in advance of commencement of workover.
9. The permittee is constrained to inject only those naturally produced fluids from well J-13 and those tracers listed in Part I.A.4.
10. The permittee shall construct all production, test and other wells in compliance with all State and federal regulations such that unauthorized releases do not occur. Following construction or reworking of production, test or other wells, the permittee shall submit plans and drawings of the completed well as constructed and chemical analysis of the production waters that includes the constituents identified in Part I.A.6 of this permit.
11. All facilities and ancillaries encompassed by this permit shall conform to the plans and specifications filed with the Division of Environmental Protection and shall be maintained in good working order at all times.
12. The permittee shall submit an annual report by January 28th of each year which contains a summary of the tracer tests and a discussion of the results of the tests relative to site hydrogeologic conditions.
13. The permittee must submit the annual review and service fee in accordance with NAC 445.42515 no later than July 1, 1992 and every year thereafter until the permit expires or is terminated.

B. MONITORING AND REPORTING

1. Samples and measurements taken as required herein shall be representative of the volume and/or nature of the subject of interest.

2. Test Procedures

Test Procedures for the analysis of the constituents shall conform to regulations (40 CFR, Part 136) published pursuant to Section 304(h) of the Clean Water Act, under which such procedures may be required, unless other procedures are approved by the Director.

3. Recording of Results

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

- a. the exact place, date, and time of sampling;
- b. the dates the analyses were performed;
- c. the person(s) who performed the analyses;
- d. the analytical techniques or methods used;
- e. the results of all required analyses; and
- f. the precision and accuracy of the analytical data.

4. Reporting

Monitoring results and other requirements obtained during the previous three months shall be summarized for each month and reported no later than the 28th day of the month following the completed reporting period. The first report is due on October 28, 1990. Signed copies of these, and all other reports required herein, shall be submitted to the UIC Program Officer at the following address:

Division of Environmental Protection
Bureau of Water Permits & Compliance
123 West Nye Lane, Room 241
Capitol Complex
Carson City, NV 89710

5. Additional Monitoring by Permittee

If the permittee monitors any constituent at the locations(s) designated herein more frequently than required by this permit, or monitors additional constituents than required by this permit, using approved analytical methods as specified above, the results of such monitoring results shall be made available to the Division upon request.

6. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records and 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 required by the Director.

7. Modification of Monitoring Frequency, Location and Sample Type

After considering monitoring data, stream flow, discharge flow and receiving water conditions, the Division may, for just cause, modify the monitoring frequency, location and/or sample type by issuing an Order to the permittee.

PART II

A. MANAGEMENT REQUIREMENTS

1. Change in Effluents or Discharge

All effluents or discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any constituent identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, or treatment modifications which will result in new, different, or increased effluents or discharges must be reported by submission of a new application or, if such changes will not violate the limitations specified in this permit, by notice to the permit issuing authority of such changes. Following such notice, the permit may be modified to specify and limit any constituents not previously limited.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with or will be unable to comply with the conditions, requirements and limitations specified in this permit, the permittee shall provide the Director with the following information, in writing, within five (5) days of becoming aware of such conditions:

- a. A description of the noncompliance; and,
- b. 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 noncompliance.

3. Facilities Operation

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

4. Adverse Impact

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

5. Bypassing

Any diversion from or bypass of facilities necessary to maintain compliance with the terms and conditions of this permit is prohibited except where unavoidable to prevent loss of life or severe property damage. The Division will have the final authority in the determination of whether a discharge is deemed unavoidable. The permittee shall promptly notify the Director in writing, of each such diversion or bypass, in accordance with the procedure specified in Part II.A.2 above.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Director and/or his authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where a source is located or in which any records are required to be kept under the terms and conditions of this permit; and
- b. To have access to, and to 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 perform any necessary sampling to determine compliance with this permit or to sample any effluent or discharge.

2. Transfer of Ownership or Control

In the event of any change in control or ownership, 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 Director within 10 days of such change. All transfer of permits shall be approved by the Administrator of the Division of Environmental Protection.

3. Availability of Reports

Except for data determined to be confidential under NRS 445.311, all reports prepared in accordance with the terms of this permit shall be available for public inspection. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NRS 445.337.

4. Permit Modification, Suspension or Revocation

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;

- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
 - c. A change in any condition that requires either a temporary or permanent reduction or elimination of the effluent or discharge.
5. Civil and Criminal Liability
- a. Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.
 - b. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation.
 - c. 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.

PART III

A. Schedule of Compliance

- 1. The permittee shall achieve compliance with the conditions, limitations and requirements of the permit at the commencement of relevant activity.
- 2. The Director may, upon the request of the permittee, and after public notice, revise or modify a schedule of compliance in an issued permit if he determines good and valid cause (such as an act of God, a strike, materials shortage or other event over which the permittee has little or no control) exists for such revision.

PETER G. MORROS
Director

STATE OF NEVADA
BOB MILLER
Governor

L. H. DODGION
Administrator

Administration (702) 687-4870
Air Quality 687-5088
Mining Regulation and Reclamation 687-4870
Waste Management 687-6872



Wastewater Treatment Services 687-5870
Water Permits and Compliance 687-4870
Water Quality Planning 687-4870
FAX 685-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane
Carson City, Nevada 89710
June 12, 1991

Department of Energy
Attn: Carl P. Gertz, Project Manager
Yucca Mountain Site Characterization
Project Office
P.O. Box 98608
Las Vegas, Nevada 89193-8608

Dear Mr. Gertz:

The application and supporting documentation submitted for an air quality permit to construct for the surface area disturbance associated with the Nevada Nuclear Waste Storage Investigation Project has been reviewed by Bureau of Air Quality staff under legal authority from Nevada Revised Statutes 445.401 through 445.601 and pursuant to regulations in Nevada Administrative Code 445.430 through 445.846. Based on staff review and recommendation, I am hereby issuing Air Quality Permit to Construct 2693, with appropriate restrictions. Please note this permit must be posted conspicuously at or near the source.

Enclosed are two copies of Permit to Construct 2693. Please read carefully and be sure both copies are signed by an authorized representative of the U.S. Department of Energy. The blue copy must be signed and returned to the Bureau of Air Quality within 10 days of receipt.

If you have any questions, please call me or Gay McCleary of my staff.

Sincerely,

Handwritten signature of L. H. Dodgion in black ink.
L. H. Dodgion, P.E.
Administrator

LHD/GM/gm

Enclosures

Certified Mail No. P 668 463 471

cc: Pete Morros
John Sarb
Brian Chally
Bob Loux
Lowell Shifley ✓
Mike Turnipseed

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY
123 WEST NYE LANE
CARSON CITY, NEVADA 89710

NO. 2693

AIR QUALITY PERMIT TO CONSTRUCT

Issued to: U.S. DEPARTMENT OF ENERGY, NEVADA OPERATIONS OFFICE
P.O. Box 98518, LAS VEGAS, NEVADA 89193-8518
Location: T13S, R49E; T13S, R50E; MDB&M (HA 227A)

is granted a permit to construct, modify or establish the following source of air contaminant:

Surface area disturbance, Nevada Nuclear Waste Storage Investigation Project, consisting of: roads, surface facilities, storage areas, parking areas, powder magazine, electrical substation, waste rock storage pit, mine waste-water pond, batch plant area, sewage treatment plant, borrow areas, and topsoil storage area - 18.2 hectares (45.0 acres); drill pads - 58.7 hectares (145.0 acres); roads - 60.6 hectares (125.0 acres); seismic surveys - 28.3 hectares (70.0 acres); trenches, pits and pavements - 6.0 hectares (15.0 acres); drill holes without pads - 2.0 hectares (5.0 acres); miscellaneous disturbances - 24.3 hectares (60.0 acres); for a total of 188.1 hectares (465 acres);

in accordance with Nevada Administrative Code (NAC) 445.430 through 445.846 and the plans, specifications or other materials submitted.

Restrictions:

1. Fugitive dust from all disturbed areas must be controlled at all times. As a minimum water and/or chemical stabilization or other controls approved in advance by the Bureau of Air Quality must be utilized 24 hours per day, 365 days per year.
2. Fugitive dust from roads and parking areas shall be controlled by paving and/or graveling as indicated on Map 4 entitled "Expanded View of ESF Show on Map 3", hereby incorporated as part of this permit to construct.
3. The contractor/owner may not clear more land than can be controlled by the methods specified in Permit Restrictions #1 and #2.
4. The Bureau of Air Quality must be notified in writing of commencement of construction, completion of construction, and commencement of operation in accordance with Nevada Administrative Code 445.681.
5. Local grading, building, health or any other permits must be obtained from the appropriate agency as the issuance of this permit to construct does not preclude the necessity for their procurement.
6. This permit to construct expires if construction of the source is not commenced within one year from the date of issuance or construction of the source is delayed for one year after initiated.
7. The U.S. Department of Energy must sample the ambient air for PM₁₀ and monitor and record wind speed, direction, and ambient temperature in accordance with the requirements in Attachment A (Rev. April 23, 1991) and documents listed therein. Sampling and monitoring must be conducted during construction and for at least one year after operation commences. Findings must be submitted to the Bureau of Air Quality within 60 days after the end of each quarter. After the first year of operation, further monitoring may be required upon review of the data.
8. Any person who:
 - A. makes any false material statement, representation, or certification in, or omits material information from, or alters, conceals, or fails to file or maintain any notice, application, record, report, plan, or other document required by the permit or director;
 - B. fails to notify or report as required by the permit or director;
 - C. falsifies, tampers with, renders inaccurate, or fails to install any monitoring device or method required by the permit or director;

shall constitute a violation of this permit and will result in a revocation of this permit.

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY
123 WEST NYE LANE
CARSON CITY, NEVADA 89710

NO. 2693

AIR QUALITY PERMIT TO CONSTRUCT

Issued to: U.S. DEPARTMENT OF ENERGY, NEVADA OPERATIONS OFFICE
P.O. Box 98518, LAS VEGAS, NEVADA 89193-8518
Location: T13S, R49E; T13S, R50E; MDB&M (HA 227A)

Restrictions Continued:

9. The proposed facility is subject to and must comply with the Clean Air Act, including the provisions of the 1990 amendment and any regulations adopted by the Federal Government and/or the State of Nevada pursuant thereto.
10. The blue copy of this permit must be signed and returned to the Bureau of Air Quality postmarked within ten days of receipt. Failure to do so will result in this permit being invalidated.

This permit:

1. Is non-transferable in accordance with NAC 445.704.
2. Is issued on condition that the holder allows inspection of the premises by authorized representatives of the department at any time during hours of construction or operation, without prior notice.
3. Is issued on condition of acceptance of all restrictions and conditions contained on this permit as evidenced by the signing hereof by an authorized representative.

Signature *Lowell H. Shifley, Jr.*
Issued by Lowell H. Shifley, Jr., P.E.
Chief, Bureau of Air Quality

Signature _____
Print Name _____
Authorized Representative of
U.S. Department of Energy

Phone 687-5065 Date June 12, 1991 Phone _____ Date _____

ATTACHMENT A

Nevada Bureau of Air Quality Ambient Air Quality Monitoring Guidelines

This document will be revised from time to time based on the needs of the Bureau of Air Quality and the sources required by the Bureau to perform ambient air monitoring. Please note the revision date located at the lower left corner of each page.

References

The Bureau of Air Quality requires monitoring of pollutants that may be emitted by a source to determine background concentrations before construction of the source and to determine the impact after the source begins operation. To assure data of sufficiently high quality, all sampling and continuous monitoring shall be conducted in accordance with the guidance and quality assurance procedures required for Prevention of Significant Deterioration (PSD) use. Several U.S. EPA documents contain information that is required for the operation of such monitoring networks:

"Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)," EPA-450/4-87-007, Office of Air Quality Planning and Standards (OAQPS), Research Triangle Park (RTP), North Carolina 27711. A copy of the document is available from Dave Lutz (EPA, RTP) at (919) 541-5476.

"On-Site Meteorological Program Guidance for Regulatory Modeling Applications," EPA-450/4-87-013, OAQPS, RTP, NC 27711. The meteorological guidance document is available from the OAQPS (EPA Library, 919-541-2777).

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume I, Principles," EPA-600/9-76-005, OAQPS, RTP, NC 27711.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II, Ambient Air Specific Methods," EPA-600/4-77-027a, OAQPS, RTP, NC 27711.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV, Meteorological Measurements," EPA-600/4-82-060, OAQPS, RTP, NC 27711. Volume IV (September 1989 revision) of the QA documents is being published by OAQPS.

Volumes I, II and IV of the QA documents should be available from the Office of Research and Development (ORD) Publications in Cincinnati at (513) 569-7562 or possibly from EPA regional offices if not available from ORD Publications. Some sections of these documents, such as the particulate section on PM₁₀ sampling, are revised at times, and care should be exercised to obtain the most recent edition (currently the November 1989 edition for PM₁₀ sampling).

Discussion

There are several topics of special interest contained within these documents:

- 1) All meteorological data collected shall be recovered at a minimum rate of 90% of the total data possible, as required in the meteorological guidance document.
- 2) All ambient monitoring data obtained (including the data from continuous analyzers and particulate samplers) shall be recovered at a minimum rate of 80% of the total data possible, as required in the PSD monitoring guidelines document.
- 3) For meteorological data, at least two valid 15-minute periods are required to represent an hourly average.
- 4) For continuous ambient monitoring data, at least 45 minutes of valid observations are required to represent an hourly average.
- 5) The EPA specification for the high-volume particulate sampling run time is 24 hours \pm 1 hour (1440 minutes \pm 60 minutes).
- 6) The EPA specification for the TSP high-volume particulate sampling flow rate is 39 to 60 actual cubic feet per minute (not corrected to standard conditions).
- 7) The EPA specification for the PM₁₀ high-volume particulate sampling flow rate is 36 to 44 actual cubic feet per minute (not corrected to standard conditions).

All ambient monitoring data being reported shall be submitted to the Bureau of Air Quality on a calendar quarter basis no later than sixty (60) days after the end of the applicable quarter.

Should any of the requirements for a PSD monitoring program not be maintained at the requisite levels, part or all of the data recovered may be deemed incomplete and may not be usable to support the environmental evaluation, ambient concentration assessment or meteorological assumptions necessary for new or modified air quality permits or for enforcement issues.

Meteorological Data

All meteorological data shall be collected by electronically sampling the appropriate equipment output at least once every 10 seconds. These values shall then be averaged every 15 minutes and the 15-minute values averaged to obtain the hourly average values. The hourly data shall be reported for the period ending at the hour (i.e., the data between midnight and one o'clock will be reported for hour one). Both the 15-minute and hourly average values shall be stored and reported for each parameter as follows:

15-Minute Averages

Year, Julian Day, Hour, 15-minute interval #, Wind Speed (m/s), Wind Direction (degrees from true north), Temperature (K), Sigma Theta

or,

YY, JJJ, HH, I, SS.SS, DDD.D, TTT.T, VV.VV

Hourly Averages

Year, Julian Day, Hour, Wind Speed (m/s), Wind Direction (degrees from true north), Temperature (K), Sigma Theta

or,

YY, JJJ, HH, SS.SS, DDD.D, TTT.T, VV.VV

The preferred method for calculating sigma theta, the standard deviation of the horizontal wind direction fluctuations, is the Yamartino method described in Section 6.0, Meteorological Data Processing, of the "On-Site Meteorological Program Guidance for Regulatory Modeling Applications." The use of other methods to calculate sigma theta requires prior Bureau approval.

A missing or invalid meteorological data value shall be identified as a field of nines (9's).

In addition to being summarized in hard copy, meteorological data shall be recorded to floppy disk in the format indicated above (comma-delineated string, ASCII file). The diskettes submitted shall be either 3.5" or 5.25" IBM-compatible format and contain both the 15-minute and hourly average data. It is not necessary to report the 15-minute data in the hardcopy summary. Please note that the 15-minute interval number identified above is an integer value between 1 and 4 (with 1 corresponding to the first 15-minute average value at the beginning of the hour).

Quality Assurance

The results of performance audits called for in the References section above shall be reported to the Bureau. For co-located particulate samplers, the particulate data for both samplers shall be reported in order to provide a precision check of the samplers. Data for all particulate samplers shall include the sampling time and actual flow rate for each sample.

Certification

A statement shall accompany the ambient air monitoring results submitted to the Bureau that the information contained in the report is true and correct to the best of the knowledge of the authorized representative signing and dating the statement.