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ENTERED

NEW MEXICO ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau

BILL RICHARDSON
Governor
DIANE DENISH
Lieutenant Governor

Harold Runnels Building
1190 St. Francis Drive
PO Box 5469, Santa Fe, NM 87502-5469
Phone (505) 827-2900 Fax (505) 827-2965
www.nmenv.state.nm.us

RON CURRY
Secretary
JON GOLDSTEIN
Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

September 4, 2009

Anthony R. Grieggs, Group Leader
Environmental Protection Division
Water Quality & RCRA (ENV-RCRA)
P.O. Box 1663, Mail Stop K490
Los Alamos, NM 87545

RE: Response to Notice of Intent to Discharge; Discharge Permit Not Required for Subgrade Carbon Filters, AI:856 (PRD20090004)

Dear Mr. Grieggs:

The New Mexico Environment Department (NMED) received a Notice of Intent on June 30, 2009 (copy enclosed) for the discharge of ground water from three springs (Burning Ground Springs, Martin Spring and Sanitary Wastewater Systems Consolidation outfall) following treatment with carbon filtration for the remediation of high explosives from the alluvial system in the Water Canyon watershed pursuant to the NMED approved Corrective Measures Implementation Plan for Consolidated Unit 16-021(c)-99, Revision 1 (July 2007). The notice satisfies the requirements of Subsection A of 20.6.2.1201 NMAC of the New Mexico Water Quality Control Commission (WQCC) Regulations (20.6.2 NMAC). The proposed discharge is located in Technical Areas (TA) 9 and 16, Los Alamos National Laboratory, Los Alamos County.

Based on the information provided in your Notice of Intent, NMED has determined that a Discharge Permit is not required as long as the discharge is as described. A Discharge Permit is not required at this time because the information provided indicates it is unlikely that the discharge will adversely affect ground water quality.

Although a Discharge Permit is not being required for this discharge at this time, you are not relieved of liability should your operation result in actual pollution of surface or ground waters. Further, this decision by NMED does not relieve you of your responsibility to comply with any other applicable federal, state, and/or local laws and regulations, such as zoning requirements, plumbing codes and nuisance ordinances. Please be advised that you must obtain a response to the Notice of Intent from the NMED Surface Water Quality Bureau to ensure conformance with regulations for the protection of surface water.

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If at some time in the future you intend to change the amount, character or location of your discharge, or if observation or monitoring shows that the discharge is not as described in your Notice of Intent, you must file a revised Notice of Intent with the Ground Water Quality Bureau. If you have any questions, please contact either Jennifer Fullam at (505) 827-2909 or George Schuman, Program Manager of the Ground Water Pollution Prevention Section, at (505) 827-2945.

Sincerely,

William C. Olson, Chief
Ground Water Quality Bureau

WO:JF

Enc: Notice of Intent, dated June 25, 2009

cc: Robert Italiano, District Manager, NMED District II (w/ enc)
NMED Santa Fe Field Office(w/ enc)
NOI File(w/ enc)
County File (w/ enc)
Glenn Saums, NMED SWQB(w/ enc)
James Bearzi, NMED HWB(w/ enc)
Steven Yanicak, NMED-DOE-Oversight Bureau (w/ enc)
Gene Turner, LASO-EO, Los Alamos National Laboratory, A316, Los Alamos, NM 87545 (w/o enc)
Hai Shen, LASO-EO, Los Alamos National Laboratory, MS A316, Los Alamos, NM 87545 (w/o enc)
Michael B. Mallory, PADOPS, Los Alamos National Laboratory, A102, Los Alamos, NM 87545 (w/o enc)
Chris Cantwell, ADESHQ, Los Alamos National Laboratory, K491, Los Alamos, NM 87545 (w/o enc)
Michael Saladen ENV-RCRA, Los Alamos National Laboratory, K490, Los Alamos, NM 87545 (w/o enc)
Don Hickmott, EES-14, Los Alamos National Laboratory,MS D462 , Los Alamos, NM 87545 (w/o enc)
John McCann, ADEP-PM, Los Alamos National Laboratory,MS M992 , Los Alamos, NM 87545 (w/o enc)
Randy Johnson, ENV-EAQ, Los Alamos National Laboratory,MS M992 , Los Alamos, NM 87545 (w/o enc)
Bob Beers, ENV-RCRA, Los Alamos National Laboratory, MS K497, Los Alamos, NM 87545 (w/o enc)

Los Alamos
NATIONAL LABORATORY
EST. 1943

Environmental Protection Division
Water Quality & RCRA Group (ENV-RCRA)
P.O. Box 1663, Mail Stop K490
Los Alamos, New Mexico 87545
(505) 667-0666/FAX: (505) 667-5224

Date: June 25, 2009
Refer To: ENV-RCRA-09-112
LA-UR: 09-03826

Mr. William C. Olson, Chief
Ground Water Quality Bureau
New Mexico Environment Department
Harold Runnels Building, Room N2250
1190 St. Francis Dr.
P.O. Box 2611
Santa Fe, New Mexico 87502

GROUND WATER
JUN 30 2009
BUREAU

Dear Mr. Olson:

SUBJECT: NOTICE OF INTENT TO DISCHARGE, SUBGRADE CARBON FILTERS

Enclosed is a Notice of Intent to Discharge (NOI) that has been prepared for submittal to the New Mexico Environment Department (NMED) pursuant to 20 NMAC 6.2.1201of the New Mexico Water Quality Control Commission (NMWQCC) Regulations. This NOI is being submitted to provide coverage for the discharge of groundwater from three springs following treatment with carbon filtration. The capture and treatment of spring flow is for the remediation of high explosives from the alluvial system in the Water Canyon watershed. This work is being performed as specified in the New Mexico Environment Department-approved Corrective Measures Implementation Plan for Consolidated Unit 16-021(c)-99, Revision 1 (July 2007). An electronic copy of the Corrective Measures Implementation Plan has been provided on the enclosed CD.

Please contact me at (505) 667-7969 if you have questions or require additional information.

Sincerely,

Bob Beers
Water Quality & RCRA Group

BB/lm

Enclosures: a/s

Cy: Glenn Saums, NMED/SWQB, Santa Fe, NM, (NOI)
James Bearzi, NMED/HWB, Santa Fe, NM, (NOI)
Gene Turner, LASO-EO, (NOI), A316
Hai Shen, LASO-EO, (NOI), A316
Steve Yanicak, LASO-GOV, (NOI), J993
Michael B. Mallory, PADOPS, w/o enc., A102
Chris Cantwell, ADESHQ, w/o enc., K491
Mike Saladen, ENV-RCRA, (NOI), K490
Don Hickmott, EES-14, (NOI), D462
John McCann, ADEP-PM, (NOI), M992
Randy Johnson, ENV-EAQ, (NOI), M992
ENV-DO, File, w/o enc., J978
ENV-RCRA, File, w/enc., K490
IRM-RMMSO, w/enc., A150

New Mexico Environment Department
Ground Water Quality Bureau

Ground Water Quality Bureau – Pollution Prevention Section
Notice of Intent

GROUND WATER

JUN 3 0 2009

BUREAU

1. **Name and mailing address of person proposing to discharge:**

Los Alamos National Laboratory
PO Box 1663, Mail Stop K490
Los Alamos, NM 87545

Work Phone: 505-667-7969
Cell/Home Phone: NA
Fax: 505-665-9344

Attention: Robert Beers
Water Quality & RCRA Group

Email: bbeers@lanl.gov

2. **Name of facility:**
Los Alamos National Laboratory (LANL or the Laboratory)

3. **Physical location of discharge (if applicable, give street address, township, range, section, distance from closest town or landmark, directions to facility, location map):**
See Location Map, Figure 1.1-1, on Page 37 of the Corrective Measures Implementation Plan for Consolidated Unit 16-021(c)-99, Revision 1, on the enclosed CD.

4. **Type of operation generating the discharge (e.g., truck wash, food processing plant, restaurant, etc.):**
The discharges result from the treatment of groundwater for the remediation of high explosives. This work is being performed as specified in the New Mexico Environment Department-approved Corrective Measures Implementation Plan for Consolidated Unit 16-021(c)-99, Revision 1.

5. **Source(s) of the discharge. Describe how the wastewater, sludge, or other discharges processed and/or disposed at your facility are generated. Identify all sources. Attach additional pages if needed:**
In 2001, the Laboratory installed pilot carbon filters at Martin Spring (Martin Spring Canyon) to test the feasibility of removing high-explosives from spring water using a commercially available stormwater treatment BMP. The pilot filters have operated so successfully that the Laboratory intends to expand their use at two additional springs, SWSC and Burning Ground Springs in Cañon de Valle. See the detailed description on Page 17 of the Corrective Measures Implementation Plan for Consolidated Unit 16-021(c)-99, Revision 1.

6. **Expected contaminants in the discharge (e.g., nitrate-nitrogen, metals, organic compounds, salts, etc.) Include estimated concentration if known, and copies of results of laboratory analyses, if available:**
Water quality data is presented in Enclosures 1, 2, and 3 for Martin Spring, SWSC Spring, and Burning Ground Spring, respectively. The data show that no contaminants exceed NMWQCC 3103 standards with the exception of the following:
(1) boron concentrations at Martin Spring of about 1.3 mg/L in 3/09 exceeded the standard of 1 mg/L.
(2) iron concentrations at SWSC Spring of about 1.03 mg/L in 4/08 exceeded the standard of 1 mg/L.
Low concentrations of VOCs below NMWQCC standards have been detected in all three springs. RDX is present in all three springs at concentrations greater than the EPA cancer risk level. The remedial objective for the carbon filters is to treat RDX present in the spring waters to levels below the 10^{-5} risk-based standard for RDX of 6.1 µg/L.
In May 2009, the Laboratory submitted a "Contained-In" request to the NMED-HWB for listed contaminants detected in spring and alluvial waters since 1995 (Enclosure 4). The HWB's response to the "Contained-In" request is pending.

7. **Describe all components of wastewater processing, treatment, storage, and disposal system (e.g., grease interceptor, lagoon, septic tank/leachfield, etc.) Include sizes, site layout map, plans and specifications, etc. if available:**
The subgrade carbon filtration system consists of a collection weir box, subgrade piping, and a subgrade carbon filter to collect, treat, and discharge treated water. See design drawings C-1002, C-1004, C3001, C-3002, C-5001, C-5002, and M-5001 of the Corrective Measures Implementation Plan for Consolidated Unit 16-021(c)-99, Revision 1, on the enclosed CD for details. The current design specifies a surface discharge of treated water from the carbon filters directly to the respective watercourse for each spring. This component of the carbon filtration system is being reevaluated and the alternate option of a subsurface discharge, via a leach field, for example, is under consideration. The NMED-GWQB will be informed of all design changes prior to construction.

8. **Estimated maximum daily discharge volume in gallons per day (or other units):**
SWSC Spring: 2-10 gpm; Burning Ground Spring: 4-20 gpm; Martin Spring: 1-3 gpm

9. **Estimated depth to ground water (ft):** <5 ft.

Signature: A R Grieggs **Title:** Group Leader

Printed name: Anthony R. Grieggs **Date:** 6/24/09

Please return this form to:
NMED Ground Water Quality Bureau
P.O. Box 5469
Santa Fe, New Mexico 87502-5469

Telephone: 505-827-2900
Fax: 505-827-2965