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73
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ENVIRONMENT DEPARTMENT

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RYAN FLYNN
Cabinet Secretary
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Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

July 25, 2014

Peter Maggiore
Assistant Manager, Env. Projects Office
Los Alamos Field Office, DOE
3747 West Jemez Rd, MS A316
Los Alamos, NM 87544

Jeffrey D. Mousseau, Associate Director
Environmental Programs
Los Alamos National Security, L.L.C.
P.O. Box 1663, MS M991
Los Alamos, NM 87545

RE: REQUEST FOR A WAIVER FOR THE IMPLEMENTATION OF ACTIVE GAS COLLECTION USING BLOWERS AT THE AIRPORT LANDFILL TA 73, SWMU-73-001(A) LOS ALAMOS NATIONAL LABORATORY EPA ID#NM0890010515 HWB-LANL-13-070

Dear Messrs. Maggiore and Mousseau:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security, L.L.C.'s (LANS) (collectively, the Permittees) *Formal Notification of Methane Levels at 100 Percent of the Lower Explosive Limit at Vent Risers Along the North Edge of the Los Alamos Airport Landfill Cap and Request for a Waiver of the Implementation of an Active Gas Collection Using Blowers* (Notification) dated December 12, 2013, and received December 16, 2013.

In the Notification the Permittees state that “methane levels are expected to decline within acceptable levels in the next few months’ without the need to implement any additional measures. Therefore, the requirement of active gas collection system in the April 2006 Post-Closure Care and Monitoring Plan for the Los Alamos Field Office Technical area 73 (TA-73) Los Alamos Airport Landfill may not be necessary and we request a waiver from NMED.”

NMED was notified via email on October 23, 2013, that methane levels at spinners (PS) PS02 and PS05 were at 100% of the Lower Explosive Limit (LEL). The Permittees instituted more frequent (weekly) monitoring with the expectation that the methane levels



Messrs. Maggiore and Mousseau

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would likely decrease over time. NMED was notified that the Permittees had implemented administrative controls, to ensure the protection of human health and the environment, by restricting access through use of barriers and signage. In reviewing the data from September 2013, to July 2014, NMED noted that methane levels have not decreased, but rather continue to be at 100% of the LEL in two or more spinners. NMED is concerned that these methane levels may pose a threat to the human health or environment.

The *Post-Closure Care and Monitoring Plan for the Los Alamos Site Office TA-73 Airport Landfill* dated April 2006, Section 3.5.1 Landfill Gas Monitoring, states that "if the combustible gas levels exceed the 25% of the LEL in any enclosed structure, or 100% of the LEL at the north edge of the cap, the owner or operator shall:

- Immediately take all necessary steps to ensure protection of public health, welfare and the environment and notify the NMED;
- Within seven days of detection, record the methane gas levels detected and a description of the steps taken to protect public health, welfare and the environment and report them to NMED; and
- Within 60 days of detection, implement active gas collection using one or more blowers, and notify the Secretary that active gas collection has been implemented. The notification shall describe the nature and extent of the problem and the remedy.

Gas measurements shall be collected and recorded quarterly during operation of the active gas collection system. If all quarterly measurements for a consecutive period of at least one year remain below 25% of the LEL, the active gas collection system shall be shut off and quarterly monitoring continued. If measured gas concentrations do not exceed 25% of the LEL at any monitoring location for two years, the locations will be monitored twice the third year. If measured concentrations do not exceed 25% of the LEL the third year, monitoring will be discontinued."

The Permittees must implement an active gas collection system or propose an alternate remedial measure to reduce the infiltration of water into the landfill and to reduce methane levels to below 100% LEL. The previous Matcon annual inspection reports from the landfill describe unstable subsurface conditions, as indicated by the continued cracking and differential settlement of the cap. The rain event in September 2013, and the continued detection of methane above 100% LEL at several spinners highlight the need for corrective measures. The Permittees must submit a work plan for the implementation of an active gas collection system or an alternate remedial measure to NMED no later than September 30, 2014. Until the work plan is submitted to NMED, the Permittees must continue weekly monitoring at SWMU 73-001(a) and continue to submit data to NMED on a monthly basis.

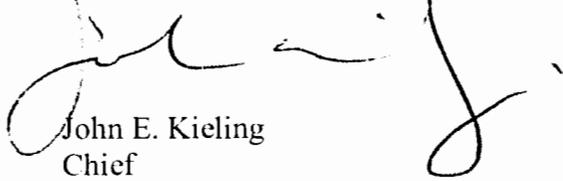
Messrs. Maggiore and Mousseau

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If you have any questions regarding this letter, please contact Siona Briley at (505) 476-6049.

Sincerely,



John E. Kieling

Chief

Hazardous Waste Bureau

Enclosure: Table 1: Methane Detections at % Lower Explosive Limit at SWMU 73-001(a)

Cc with Enclosure:

S. Briley, NMED HWB

J. Kulis, NMED HWB

D. Cobrain, NMED HWB

M. Dale, NMED HWB

N. Dhawan, NMED HWB

J. Kieling, NMED HWB

D. Rhodes, DOE LAFO, MS-A316

R. Massey, DOE LAFO, MS-A316

T. Haagenstad, LANS, MS-M992

File: Reading and LANL, TA-73, Airport Landfill, Denial of Waiver

Enclosure 1:

Table 1: Methane Detections a % Lower Explosive Limit at SWMU-73-001(a)

Table 1: Methane Detections a % Lower Explosive Limit at SWMU-73-001(a)

Methane Values % Lower Explosive Limit as Reported by the Permittees

Name	Description	9/30/13	11/25/13	12/2/13	12/12/13	12/17/13	1/2/14	1/6/14	1/15/14	1/24/14	1/28/14	2/6/14	2/12/14	2/18/14	2/26/14
HP-01	2 inches above expansion joint*	0	—	0	3	0	0	0	0	0	0	—	0	0	0
HP-02	2 inches above expansion joint*	0	—	0	0	0	0	0	0	0	0	—	0	0	0
HP-03	2 inches above expansion joint*	0	—	0	0	0	0	0	0	0	0	—	0	0	0
HP-04	2 inches above expansion joint*	0	—	0	0	0	0	0	0	0	0	—	0	0	0
HP-05	2 inches above expansion joint*	0	—	0	0	0	0	0	0	0	0	—	0	0	0
HP-06	2 inches above expansion joint*	0	—	0	0	0	0	0	0	0	0	—	0	0	0
HP-07	2 inches above expansion joint*	0	—	0	0	0	0	0	0	0	0	—	0	0	0
HP-08	2 inches above expansion joint*	14	—	0	0	0	0	0	0	0	0	—	0	0	0
HP-09	2 inches above expansion joint*	0	—	0	0	0	0	0	0	0	0	—	0	0	0
HP-10	2 inches above expansion joint*	0	—	0	0	0	0	0	0	0	0	—	0	0	0
HP-11	2 inches above expansion joint*	0	—	0	6	0	0	0	0	0	0	—	0	0	0
HP-12	2 inches above expansion joint*	0	—	0	0	0	0	0	0	0	0	—	0	0	0
HP-13	2 inches above expansion joint*	0	—	0	13	0	0	0	0	0	0	—	0	0	0
HP-14	2 inches above expansion joint*	0	—	0	0	0	0	0	0	0	0	—	0	0	0
HP-15	2 inches above expansion joint*	0	—	0	0	0	0	0	0	0	0	—	0	0	0
Trench drains															
TD-01	4 inches below trench grate	0	—	—	—	—	0	0	—	0	0	—	0	0	0
TD-02	4 inches below trench grate	0	—	—	—	—	0	0	0	0	0	—	0	0	0
TD-03	4 inches below trench grate	0	—	—	—	—	0	0	—	0	0	—	0	0	0
TD-04	4 inches below trench grate	0	—	—	—	—	0	0	0	0	0	—	0	0	0
TD-05	4 inches below trench grate	0	—	—	—	—	—	—	—	0	0	—	0	0	0
TD-06	4 inches below trench grate	0	—	—	—	—	0	0	0	0	0	—	0	0	0
TD-07	4 inches below trench grate	0	—	—	—	—	—	—	—	0	0	—	0	0	0
TD-08	4 inches below trench grate	0	—	—	—	—	0	0	0	0	0	—	0	0	0
TD-09	4 inches below trench grate	0	—	—	—	—	0	0	—	0	0	—	0	0	0
TD-10	4 inches below trench grate	0	—	—	—	—	0	0	0	0	0	—	0	0	0
Drainage culverts															
DC-01	4 inches below grate	0	—	0	11	—	0	0	0	0	0	—	0	0	0
DC-02	4 inches below grate	0	—	0	23	—	0	4	0	0	0	—	0	0	7
DC-03	4 inches below grate	0	—	0	16	—	0	0	0	0	0	—	0	0	4

Table 1: Methane Detections a % Lower Explosive Limit at SWMU-73-001(a)

Methane Values % Lower Explosive Limit as Reported by the Permittees

Name	Description	9/30/13	11/25/13	12/2/13	12/12/13	12/17/13	1/2/14	1/6/14	1/15/14	1/24/14	1/28/14	2/6/14	2/12/14	2/18/14	2/26/14
DC-04	4 inches below grate	0	—	0	36	—	0	0	0	0	0	—	0	0	5
DC-05	4 inches below grate	0	—	15	34	15	0	0	0	0	0	—	0	0	0
DC-06	4 inches below grate	0	—	7	33	7	0	7	0	0	0	—	0	0	0
DC-07	4 inches below grate	0	—	47	8	47	0	0	0	0	0	—	0	0	10
DC-08	4 inches below manhole lid	0	—	32	—	32	0	0	0	0	0	—	0	0	0
Northern perimeter															
PG-01	2 inches above ground surface	0	—	—	—	—	0	—	—	0	0	—	0	0	0
PG-02	2 inches above ground surface	0	—	—	—	—	0	—	—	0	0	—	0	0	0
PG-03	2 inches above ground surface	0	—	—	—	—	0	—	—	0	0	—	0	0	0
PG-04	2 inches above ground surface	0	—	—	—	—	0	—	—	0	0	—	0	0	0
PG-05	2 inches above ground surface	0	—	—	—	—	0	—	—	0	0	—	0	0	0
PG-06	2 inches above ground surface	0	—	—	—	—	0	—	—	0	0	—	0	0	0
PG-07	2 inches above ground surface	0	—	—	—	—	0	—	—	0	0	—	0	0	0
PG-08	2 inches above ground surface	0	—	—	—	—	0	—	—	0	0	—	0	0	0
PG-09	2 inches above ground surface	0	—	—	—	—	0	—	—	0	0	—	0	0	0
PG-10	2 inches above ground surface	0	—	—	—	—	0	—	—	0	0	—	0	0	0
PG-11	2 inches above ground surface	0	—	—	—	—	0	—	—	0	0	—	0	0	0
PG-12	2 inches above ground surface	0	—	—	—	—	0	0	—	0	0	—	0	0	0
PG-13	2 inches above ground surface	0	—	—	—	—	—	—	—	0	0	—	0	0	0
PG-14	2 inches above ground surface	0	—	—	—	—	0	0	—	0	0	—	0	0	0
PS-01	at spinner (4 ft above pavement)	0	—	0	—	—	0	0	0	0	0	0	0	0	0
PS-02	at spinner (4 ft above pavement)	100	—	100	100	100	100	100	0	100	100	32	100	100	100
PS-03	at spinner (4 ft above pavement)	0	—	0	0	0	100	100	24	100	2	34	0	100	100
PS-04	at spinner (4 ft above pavement)	12	—	0	0	0	0	0	0	0	0	0	0	26	—
PS-05	at spinner (4 ft above pavement)	100	—	100	100	100	0	81	0	33	33	100	5	100	91
PS-06	at spinner (4 ft above pavement)	—	—	100	—	100	0	0	0	0	0	0	0	100	100

surface at crack at 100%
 No sample - obstruction

*NA No measurements collected because section of trench drain held standing water from rains on Saturday, 3/1/14

Table 1: Methane Detections a % Lower Explosive Limit at SWMU-73-001(a)

Methane Values % Lower Explosive Limit as Reported by the Permittees

Name	Description	3/4/14	3/12/14	3/19/14	3/26/14	4/3/14	4/10/14	4/16/14	4/21/14	4/28/14	5/8/14	5/14/14	5/21/14	5/28/14	6/5/14	6/13/14
HP-01	2 inches above expansion joint*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HP-02	2 inches above expansion joint*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HP-03	2 inches above expansion joint*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HP-04	2 inches above expansion joint*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HP-05	2 inches above expansion joint*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HP-06	2 inches above expansion joint*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HP-07	2 inches above expansion joint*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HP-08	2 inches above expansion joint*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HP-09	2 inches above expansion joint*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HP-10	2 inches above expansion joint*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HP-11	2 inches above expansion joint*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HP-12	2 inches above expansion joint*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HP-13	2 inches above expansion joint*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HP-14	2 inches above expansion joint*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HP-15	2 inches above expansion joint*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trench drains																
TD-01	4 inches below trench grate	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TD-02	4 inches below trench grate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TD-03	4 inches below trench grate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TD-04	4 inches below trench grate	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TD-05	4 inches below trench grate	NA	0	0	0	0	0	0	0	0	0	0	0	NM	0	0
TD-06	4 inches below trench grate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TD-07	4 inches below trench grate	0	0	0	0	0	0	0	0	0	0	0	0	NM	0	0
TD-08	4 inches below trench grate	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0
TD-09	4 inches below trench grate	0	0	0	0	0	0	0	0	0	0	0	0	NM	0	0
TD-10	4 inches below trench grate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Drainage culverts																
DC-01	4 inches below grate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DC-02	4 inches below grate	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DC-03	4 inches below grate	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 1: Methane Detections a % Lower Explosive Limit at SWMU-73-001(a)

Methane Values % Lower Explosive Limit as Reported by the Permittees

Name	Description	3/4/14	3/12/14	3/19/14	3/26/14	4/3/14	4/10/14	4/16/14	4/21/14	4/28/14	5/8/14	5/14/14	5/21/14	5/28/14	6/5/14	6/13/14
DC-04	4 inches below grate	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DC-05	4 inches below grate	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DC-06	4 inches below grate	10	0	0	0	0	0	5	0	0	0	0	0	0	0	0
DC-07	4 inches below grate	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DC-08	4 inches below manhole lid	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0
Northern perimeter																
PG-01	2 inches above ground surface	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PG-02	2 inches above ground surface	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PG-03	2 inches above ground surface	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PG-04	2 inches above ground surface	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PG-05	2 inches above ground surface	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PG-06	2 inches above ground surface	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PG-07	2 inches above ground surface	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PG-08	2 inches above ground surface	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PG-09	2 inches above ground surface	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PG-10	2 inches above ground surface	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PG-11	2 inches above ground surface	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PG-12	2 inches above ground surface	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PG-13	2 inches above ground surface	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PG-14	2 inches above ground surface	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PS-01	at spinner (4 ft above pavement)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PS-02	at spinner (4 ft above pavement)	100	32	100	100	0	0	100	0	100	0	100	50	100	0	100
PS-03	at spinner (4 ft above pavement)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PS-04	at spinner (4 ft above pavement)	1	0	55	18	0	0	0	0	0	0	0	0	35	0	0
PS-05	at spinner (4 ft above pavement)	100	0	12	38	0	0	100	0	100	0	0	11	0	0	0
PS-06	at spinner (4 ft above pavement)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

□ surface at crack at 100%

□ No sample - obstruction

*NA No measurements collected

Table 1: Methane Detections a % Lower Explosive Limit at SWMU-73-001(a)

Name	Description	6/19/14	6/26/14	7/2/14
HP-01	2 inches above expansion joint*	0	0	0
HP-02	2 inches above expansion joint*	0	0	0
HP-03	2 inches above expansion joint*	0	0	0
HP-04	2 inches above expansion joint*	0	0	0
HP-05	2 inches above expansion joint*	0	0	0
HP-06	2 inches above expansion joint*	0	0	0
HP-07	2 inches above expansion joint*	0	0	0
HP-08	2 inches above expansion joint*	0	0	0
HP-09	2 inches above expansion joint*	0	0	0
HP-10	2 inches above expansion joint*	0	0	0
HP-11	2 inches above expansion joint*	0	0	0
HP-12	2 inches above expansion joint*	0	0	0
HP-13	2 inches above expansion joint*	0	0	0
HP-14	2 inches above expansion joint*	0	0	0
HP-15	2 inches above expansion joint*	0	0	0
Trench drains				
TD-01	4 inches below trench grate	0	0	0
TD-02	4 inches below trench grate	0	0	0
TD-03	4 inches below trench grate	0	0	0
TD-04	4 inches below trench grate	0	0	0
TD-05	4 inches below trench grate	0	0	0
TD-06	4 inches below trench grate	0	0	0
TD-07	4 inches below trench grate	0	0	0
TD-08	4 inches below trench grate	0	0	0
TD-09	4 inches below trench grate	0	0	0
TD-10	4 inches below trench grate	0	0	0
Drainage culverts				
DC-01	4 inches below grate	0	0	0
DC-02	4 inches below grate	0	0	0
DC-03	4 inches below grate	0	0	0

Table 1: Methane Detections a % Lower Explosive Limit at SWMU-73-001(a)

Name	Description	6/19/14	6/26/14	7/2/14
DC-04	4 inches below grate	0	0	0
DC-05	4 inches below grate	0	0	0
DC-06	4 inches below grate	0	0	0
DC-07	4 inches below grate	0	0	0
DC-08	4 inches below manhole lid	0	0	0
Northern perimeter				
PG-01	2 inches above ground surface	0	0	0
PG-02	2 inches above ground surface	0	0	0
PG-03	2 inches above ground surface	0	0	0
PG-04	2 inches above ground surface	0	0	0
PG-05	2 inches above ground surface	0	0	0
PG-06	2 inches above ground surface	0	0	0
PG-07	2 inches above ground surface	0	0	0
PG-08	2 inches above ground surface	0	0	0
PG-09	2 inches above ground surface	0	0	0
PG-10	2 inches above ground surface	0	0	0
PG-11	2 inches above ground surface	0	0	0
PG-12	2 inches above ground surface	0	0	0
PG-13	2 inches above ground surface	0	0	0
PG-14	2 inches above ground surface	0	0	0
PS-01	at spinner (4 ft above pavement)	0	0	0
PS-02	at spinner (4 ft above pavement)	0	100	0
PS-03	at spinner (4 ft above pavement)	0	0	0
PS-04	at spinner (4 ft above pavement)	0	0	0
PS-05	at spinner (4 ft above pavement)	0	20	10
PS-06	at spinner (4 ft above pavement)	0	0	0

surface at crack at 100%
 No sample - obstruction
 *NA No measurements collected