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December 22, 1988

Joyce Hester Laeser, Esq.
Counsel
Department of Energy
Albuquerque Operations
Los Alamos Area Office
Los Alamos, NM 87544

Dear Ms. Laeser:

You requested by telephone yesterday afternoon that EID reiterate in writing why it proposes a monetary assessment for a violation cited in the November 23, 1988 NOV. The violation will not be corrected within thirty days but, instead, under the proposed settlement agreement/compliance schedule. I understood your position to be that a monetary assessment is not consistent with EID's past position, and further, that EID has no authority to require a monetary assessment if a binding compliance schedule is developed within thirty days of the NOV.

As you know, EID has the authority to issue a compliance order for violations which continue beyond thirty days of an NOV. With regard to Violation #9, LANL's failure to have groundwater monitoring systems in place at two surface impoundments at TA 35, a compliance order, if issued, would probably contain a civil penalty assessed against DOE and the University of California pursuant to Section 74-4-10 NMSA 1978. EID could, alternatively, file suit in district court seeking penalties from August 1988, the date when the violation was discovered. In lieu of issuing a compliance order or filing a complaint in district court, EID has the discretion, and is willing, to settle the NOV with a legally binding compliance schedule, i.e., a settlement agreement, as indicated in the NOV. For EID, a necessary part of such a settlement is LANL's payment of money for Violation #9.

There are several reasons for this. LANL will not correct Violation #9 within the thirty days. Failure to have groundwater monitoring is a major violation, as that term is defined by EPA's enforcement guidance, of the Hazardous Waste Act. LANL has also previously violated and is in violation of other provisions of the Hazardous Waste Act and regulations. For the purposes of deterrence, and in furtherance of the enforcement policies outlined in EPA's guidance and its enforcement agreements with EID, EID has reasonably concluded that settlement with a monetary assessment is necessary.

Whether or not this departs from EID's actions in the past, I do

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not know. I do not believe so, because I understand EID's general practice to date is to issue compliance orders. EID's departure, if any, is in considering a settlement agreement in lieu of an order, or a complaint. Nor is it relevant, even if EID's action differs from its actions in the past. EID's enforcement discretion is broad; it can and must tailor enforcement and settlement as required by the facts. Until recently, EID did not have the authority under Section 74-4-10 to administratively assess penalties.

If you have any more questions on this point, please call me, at 827-2854, and I will try to answer them.

Sincerely,



Gini Nelson
Assistant General Counsel

cc: Sheila Brown, General Attorney, LANL
John Gould, Hazardous Waste Bureau, EID

12-20-88

CONSENT AGREEMENT/COMPLIANCE SCHEDULE

PURPOSE

This agreement is intended by the parties to establish a binding compliance schedule and to resolve fully the alleged violation set forth in paragraph nine of the Notice of Violation (NOV) NM0890010515 issued by the New Mexico Environmental Improvement Division on November 23, 1988. This agreement shall be effective when signed by all parties.

PARTIES

The Environmental Improvement Division (EID) is an agency of the State of New Mexico charged with the duty to enforce the New Mexico Hazardous Waste Act and regulations thereunder.

The United States Department of Energy (DOE) is an agency of the Federal Government. DOE is the owner of the facility known as the Los Alamos National Laboratory (LANL) located in Los Alamos, New Mexico.

The Regents of the University of California (the University) is a branch of the State of California. The University operates LANL for DOE pursuant to contract.

STATEMENT FACTS

EID's Notice of Violation NM 0890010515 at paragraph nine states that no groundwater monitoring system was in place at either of the Lagoons, located at TA-35 in violation of New Mexico Hazardous Waste Management Regulations-4, Section 206.C.1. The NOV further states that if DOE and the University fail to correct the violations cited in the NOV, or do not arrange for a legally binding compliance schedule within the 30 day time period permitted for response, the DOE and the University may be subject to a compliance order, and/or civil penalties or civil action in district court for appropriate relief and penalties. Pursuant to the offer set forth in the NOV, DOE and the University requested a meeting to arrange for a binding compliance schedule regarding the alleged violation. On December 12, 1988, DOE and University staff met with EID staff to discuss this alleged violation.

The parties agree that given the geology of the area where the lagoons are located, groundwater monitoring consisting of one upgradient and three downgradient wells to the first aquifer at about 1000 feet in the area of the lagoons may be unsuitable and may serve little useful purpose. It is DOE and the University's intention to close these lagoons and closure plans were submitted to EID on October, 17, 1988 for its approval. *Closure plan review and approval by EID is independent of and not bound by this agreement.* At the meeting held on December 12, 1988 EID suggested that monitoring of the alluvial ground water in the canyon floor

adjacent to the impoundments, even though not strictly required by regulation, would be an appropriate alternative to satisfy groundwater monitoring requirements. DOE and the University do not believe that such alluvial ground water exists in quantities sufficient to sample, nor that, if it exists, it would necessarily represent ground water affected by the impoundments. EID agreed that subsurface hydrogeological characterization below the impoundments and in the Ten Site Canyon floor, and sampling and analyses for hazardous constituents could be conducted to demonstrate that canyon monitoring is possibly unnecessary. *to monitor for releases from these impoundments*

All parties desire that resources for compliance be allocated in a way which will most efficiently protect public health and the environment. To expedite closure of these lagoons, and as an alternative to be performed in lieu of groundwater monitoring, DOE and the University have agreed to be bound by the compliance schedule set forth below.

COMPLIANCE SCHEDULE

Based upon the circumstances set forth above, the EID hereby enters into this consent agreement/ compliance schedule with DOE and the University. DOE and the University hereby agree to do the following:

1) In order to support their premise that no subsurface hydrologic connection exists between the impoundments (125 & 85 at TA-35) and the canyon floor that could produce or significantly contribute to alluvial groundwater:

Using a truck mounted mechanically driven auger, bottom area
Three borings will be drilled in the ~~location of the base of~~ *bottom area* each impoundment to a depth to be determined during drilling, *but at least 20 feet.* These borings will extend through the upper moderately welded tuff to the densely welded tuff (approximately 100 feet), ~~as conditions permit.~~ Hollow flight augers will be used to proceed through the tuff following 5' core section removal. Augur refusal will terminate drilling efforts and an attempt will be made to retrieve a core sample at that depth.

It is anticipated that a total of 5 core samples will be collected from the moderately welded tuff and one from the densely welded tuff in each boring. These cores will be evaluated for porosity, permeability, specific yield, specific retention, and volumetric moisture content.

Work will begin to collect these samples on or before April 1, 1989 at impoundment 125. Results of these analyses will be ~~available for submittal to EID by July 31, 1989.~~ *Submitted*

Work will begin to collect these samples on or before May 1, 1989 at impoundment 85. Results of these analyses will be available for submittal to EID by September 15, 1989.

2) In order to demonstrate the unlikelihood of alluvial

groundwater in the Ten Site Canyon floor adjacent to the impoundment at TA-35-125:

Two borings will be drilled in the canyon floor adjacent to the TA-35-125 impoundment. These borings will extend, if possible, approximately ten feet through the densely welded tuff. A sampler will be used to retrieve 2 five foot core samples per hole. Coring will terminate upon sampler refusal or reaching a depth of 10 feet, whichever occurs first.

spec. samples

Cores will be evaluated for porosity, permeability, specific yield, specific retention, and volumetric moisture content.

Work will begin by April 1, 89. Results by July 31, 89 to EID.

3) In order to determine if hazardous constituents associated with the impoundment wastes at TA-35-125/85 have migrated beneath the units, and, if so, to what extent:

volatile and semi-volatile organics and metals in ^{40 CFR} ~~HW~~ Part ²⁶⁴ ~~19~~, App IX

a) A ten foot boring will be drilled in each surface impoundment for the purpose of organic sampling. Core samples from these as well as the three borings beneath each impoundment will be submitted for volatile organic analysis, ^{using EPA approved procedures} from the following depths: 2-3 ft., 7-8 ft. If ^{analysis results} visual observation indicates contamination, additional samples may be submitted for analysis to determine the extent of the ^{problem}. Augur refusal may restrict the proposed depth of sample collection. If this should occur, a sample will be collected from the bottom of the last core retrieved.

b) Core samples from the two borings in the canyon floor will also be submitted for volatile organic analysis. Presumably, 2 cores from each boring will be retrieved. A sample from each core will be analyzed.

All core samples collected for organic analysis shall be placed in glass sampling jars with Teflon-lined lids. The jars will be labeled with the sample number, sealed with evidence tape, and placed in a cooler. A chain of custody form will accompany all samples. A field log book containing such information as sample number, sample location, type of analysis requested, depth, weather conditions etc., will be maintained.

Analyses will be performed on the headspace in the sample jars using methodology for the determination of volatile organic compounds. All appropriate quality control measures will be performed, including spiked sample analysis and duplicate and field blank analysis (1 duplicate, 1 field blank per 10 samples in each sampling area).

Work will begin to collect these samples on or before April 1, 1989 at impoundment 125. Results of these analyses will be available for ~~submitting~~ ^{ed} to EID by July 31, 1989.

Work will begin to collect these samples on or before May 1, 1989 at impoundment 85. Results of these analyses will be available for submittal to EID by August 31, 1989.

4) DOE and the University maintain that ground water monitoring regulations specifically require monitoring at the limit of the waste management area (HWMR-4, Sec. 206.C.1.b.), and that by definition (HWMR-4, Sec 206.D.1.f.(2)), this area would encompass the surface impoundments only. However, for purposes of this agreement only, DOE and the University agree to evaluate the following areas of concern with regard to potential alluvial ground water.

a.) Samples of soil will be collected in the canyon floor, if available, from the location of the surface impoundment to the first NPDES outfall encountered. Sample collection will be achieved with a hand augur and shall extend to the ^{top} ~~base~~ of the ^{bed rock} soil zone. Samples will be taken approximately every 100 feet in areas containing obvious accumulations of soil in the path of previous drainage flow. *a min of 4 soil samples*

Soil will be evaluated to determine the likelihood of ground water existing in quantities sufficient to obtain samples for analysis. If such quantities exist contiguously, shallow monitoring wells will be installed to collect ground water. ~~Organic~~ Analysis of existent ground water will be performed to identify the hazardous constituents ~~previously~~ detected in the surface impoundment. ^{to the water table} If none of these constituents are found, it will be presumed that the impoundment has not impacted the alluvial ground water. If these constituents are detected, efforts to confirm their source will be undertaken. *If monitoring wells are installed monitoring will continue IAW HWMR-5 2LS Subpart F*

Delete all or LANL assets
The proximity of a major landfill, Material Disposal Area C, adjacent to the surface impoundment may present significant interference with the analytical results. It would not be unlikely that compounds identical to those found in the surface impoundment were placed in this unit. It will, therefore, be difficult to distinguish which unit may have contributed to the above-mentioned constituents. The problem is compounded by the anticipated lack of alluvial ground water at the limits of both waste management areas. ~~As this landfill will be addressed in the DOE's Environmental Restoration Program additional evaluation of a potential release from the landfill will continue under that program.~~ Information collected beneath the impoundment and in the canyon floor will be used to further define any potential impact from the impoundment on alluvial ground water, if present.

Work will begin to collect these samples on or before April 1, 1989. Results of the analyses will be available to EID by July 31, 1989.

b) Evaluation of any potential impact from TA-35-85 on alluvial ground water will be restricted to the limits of the waste management area. If no evidence exists that indicates

referred to

contamination could have reached the alluvium in Mortandad Canyon following the activities proposed in this document, it will be presumed that this surface impoundment has not impacted alluvial ground water. If such evidence does exist, 3 borings shall be drilled on the existing shelf between the surface impoundment and the canyon floor to a depth to be determined during drilling. These borings shall extend through the densely welded tuff as conditions permit. Hollow flight augurs will be used to proceed through the tuff following 5 feet core section removal. Augur refusal will terminate drilling efforts and an attempt will be made to retrieve a core sample at that depth.

The core samples will be evaluated for the presence of saturated zones. If a saturated zone(s) exists from which sufficient quantities of ground water could be collected for analysis, ground water monitoring wells will be installed, if possible, in such a location as to provide one upgradient and 3 downgradient wells for statistical comparison. Samples of ground water will be collected and analyzed for the presence of the hazardous constituents previously detected in the surface impoundment. Statistical analysis will be performed on a sufficient number of samples to identify the source of such constituents if present.

DOE and the University may request a reasonable extension of time to complete the tasks set forth in this schedule if circumstances beyond its control make it impossible to complete the tasks within the allotted timeframes. EID will respond to such request for extension within 10 days of its receipt.

FAILURE TO COMPLY

This compliance schedule has been negotiated in response to the November 23, 1988, NOV and is considered a legally binding agreement. Failure to comply with the time frames and tasks set out in this schedule may result in EID taking one or more of the following actions:

- (1) Issuance of an order requiring compliance within a specified period pursuant to Section 74-4-10 NMSA 1978. All rights and remedies contained in that section are preserved by both parties;
- (2) EID may pursue a civil action in district court for appropriate relief, including a temporary or permanent injunction, pursuant to 74-4-10 NMSA 1978. DOE and the University reserve all rights to challenge State court jurisdiction in this matter and to remove any judicial action filed in State court to an appropriate federal forum, and/or;
- (3) EID may pursue a civil action in district court for civil

penalties pursuant to 74-4-10 NMSA 1978. DOE and the University reserve all rights to challenge state court jurisdiction in this matter and to remove any judicial action filed in State court to an appropriate federal forum.

AVAILABILITY OF APPROPRIATIONS

It is understood and agreed that DOE and the University assert that any obligation of DOE and the University hereunder requiring or involving the expenditure of money shall be subject to the availability of appropriations therefor, which may be lawfully spent for such purposes, or

In any action brought by EID to enforce compliance with the compliance schedule set forth herein, DOE and the University reserve the right to argue as a defense, when appropriate, that their inability to comply was a result of the unavailability of appropriated funds which might lawfully be expended for such purposes.

AMENDMENT OF CLOSURE PLAN

DOE and the University agree to amend the closure plans for the TA-35 lagoons by January 30th, 1989 to incorporate the provisions of the compliance schedule and to set forth in further detail the provisions which will be undertaken in lieu of groundwater monitoring.

in further detail
Closure plan review and approval by EID is independent of and not bound by this agreement.

MISCELLANEOUS

Nothing in this agreement or compliance schedule shall be deemed to constitute an admission by either party of any issue of law or fact.

It is understood that DOE's obligations as specified herein may be carried out in whole or in part by the University. Accordingly, any action taken by the University in fulfillment of DOE's obligations under this agreement and compliance schedule shall be to the same effect as if performed by DOE.

SETTLEMENT OF NOTICE OF VIOLATION

Upon the completion of all of the tasks set forth in the compliance schedule, the alleged violation in paragraph nine of the NOV shall be considered to be fully resolved and the NOV shall be considered closed.

UNITED STATES DEPARTMENT OF
ENERGY

REGENTS OF THE UNIVERSITY
OF CALIFORNIA

By
Area Manager
Los Alamos Operations Office

Date

NEW MEXICO ENVIRONMENTAL
IMPROVEMENT DIVISION

By

Date

By
Associate Director for
Support
Los Alamos National
Laboratory

Date

Tabular summary
Supporting analysis request
" " report

Common nomenclature

Narrative Summary of results

Scale maps reflecting sample locations