FAX

WATER QUALITY & HYDROLOGY GROUP (ESH-18)

FAX TRANSMITTAL SHEET

FAX #: (505) 665-9344 **VERIFICATION #: (505) 665-0453**

Date: 4-29-98 LOG NO: ESH-18:98-FAX-

TO: B. Hoditschek FAX #: (505) 827-0160 PHONE # (505) 827-0596 GRP/ORG: NMED/SWQB

TO: Steve Yanicek (D. Romero) FAX #: (505) 672-0466 PHONE # (505) 672-0448 GRP/ORG: NMED/AIP

TO: Bonnie Koch FAX #: (505) 665-4504 PHONE # (505) 665-7202 GRP/ORG: DOE/LAAO

TO: Everett Spencer FAX #: (214) 665-6490 PHONE # (214) 665-6080 (214) 665-6475 GRP/ORG: EPA Region VI

TO: D. Weise FAX #: (505) 665-4424 PHONE # (505) 667-3766 GRP/ORG: LC/GEN

TO: Al Elliott (P. Vadaro-Charles) FAX #: (505) 665-6977 PHONE # (505) 665-0033 GRP/ORG: ESH-7

TO: Bart Jarvis FAX #: (505) 984-9254 PHONE # (505) 841-9460 GRP/ORG: NMED/GWQB

TO: J. Young FAX #: ( ) 8271544 PHONE # ( ) 8271557 GRP/ORG: NMED HRMB

TO: _____ FAX #: ( ) _____ PHONE # ( ) _____ GRP/ORG: _____

FROM: Harvey Decker, ESH-18, MS K497 PHONE #: (505) 665-2014

MESSAGE: Release Notification: [redacted]. 15 day corrective action. Cuase Canyon Release.

NUMBER OF PAGES TO FOLLOW: 10

Cy: ESH-18 Fax File
CRM-4, MS A150

GROUP LEADER/TEAM LEADER

H.D. Jon M.S.

February 5, 1997

7001

RELEASE / DISCHARGE NOTIFICATION

LOS ALAMOS NATIONAL LABORATORY
Permit Number: NM0028355

Year: 1998

NPDES or Operational Spill/Release [x] (Indicate by X in appropriate box)
ER Spill/Release [ ]

Release ID Number: 34

Responsible Facility/User Group: FSS-6

Contact Person: Charles Richardson
Pager #: N/A
Phone #: 667-5598
Cell Phone #: N/A

Release/Discharge Location:
TA: 0
Building:
Guaje Canyon Replacement Wells Project. Behind treatment plant at current discharge point.

If the release/discharge is associated with a NPDES Outfall, Potential Release Site (PRS) or Solid Waste Management Unit (SWMU), indicate the site/unit number and its relationship to the release/discharge:

NPDES:[x] PRS:[ ] SWMU:[ ] PRS/SWMU Number: N/A

(Indicate by X in appropriate box)

Relationship of the Discharge to a SWMU or PRS:

No SWMU's or PRS's have been identified in the area. RFI 1071was used as the SWMU and PRS reference document.

Release / Discharge Occurred: 4/5/98 Date and Time
Release / Discharge Discovered: 4/9/98 Date and Time
Release / Discharge Stopped: 4/13/98 3:00:00 PM Date and Time

Cleanup Started: 4/13/98 5:00:00 PM Date and Time
Cleanup Finished: 4/18/98 12:00:00 PM Date and Time

Material(s) Released / Discharged:

Guaje Replacement well untreated water. This water potentially had binding polymer or drilling mud in suspension. Samples were collected in order to correctly identify any drilling products in the water. Data is pending.

Release/Discharge Mitigation Method:

On 4/13/98 at approximately 3:00 p.m. as per a recommendation by D. Romero of the NMED DOE/OB all discharges were halted until the streamcourse was cleared of all discharged material. Additionally increased BMP's and monitoring of the streamcourse will be performed as per agreements discussed on 4/15/98

Weather Conditions:

Clear, cool

Duration of Release/ Discharge, in HOURS: 207
Est. Volume Released/ Discharged, in GAL.: 440300
Est. Volume Recovered, in GAL.: 0

Corrective Actions Taken (ie, type of BMPs, etc):

BMP's were and are currently in place. These BMP's halted the majority of the suspended particulates in the first 50 yards of the discharge to the stream. The deposited sediments in the stream has been removed by hand and the cleanup deemed acceptable by both the Forest Service and NMED.

Nearest Watercourse (Canyon Name): Guaje Canyon

Report Printed 4/29/98 2:10:46 PM

If the release/discharge reached a watercourse, describe the estimated surface area affected, presence of release/discharge now in the watercourse, and the media the release/discharge was detected in:

The release was to the Guaje Canyon stream course. The BMP's in place halted the majority of the suspended sediments. Flow appears to have moved approximately 150 yards down canyon with >90% of the deposited sediments occurring within the first 50 yards between BMP's. Approximately 5000 sq./ ft. of area was impacted. Guaje Canyon Stream course is currently dry.

Depth to Groundwater, in FT, if known: 600

Distance to Nearest Drinking Water Well, in FT, if known: 1000 **Well ID#** G-5

24 HOUR RELEASE / DISCHARGE NOTIFICATIONS

Agency	Name	Phone	Fax	Date and Time
EPA:	E. Spencer	214-665-6475	214-665-6490	4/14/98
NMED/SWQB:	B. Hoditschek	827-0596	827-0160	4/13/98 1:30:00 PM
NMED/GWQB:	Bart Farris	841-9466	884-9254	4/14/98 10:00:00 AM
NMED/HRMB:	John Young	827-1557	827-1544	4/14/98 10:45:00 AM
NMED/DOE-OB:	Dennis Romero	672-0459	672-0466	4/13/98 2:00:00 PM
ESH-18:	H. Decker	665-2014	665-9344	4/13/98
DOE:	B. Koch	665-7202	665-4504	4/13/98 1:55:00 PM
OTHER:	D. Woitte	667-3766	665-4424	4/14/98
OTHER:	Patricia Vadaro-Charles	665-6976	665-6977	4/14/98 8:45:00 AM

Comments: The new Guaje Replacement well 4 is approximately 300 feet upgradient from this release. The amount of this discharge is unknown but is believed to be less than 3000 gallons. On 4/13/98 at approximately 3:00 p.m. a site visit was conducted with representatives of the NMED DOE OB,FSS-6, Beylik drilling and ESH-18. At that time a treated water discharge was taking place on to the slurry. At the recommendation of the DOE OB representative and concurrance of all parties the discharge was halted and no further discharges will occur until the slurry materials are removed from the stream course.

Form Completed By: H. Decker

7 DAY RELEASE / DISCHARGE ACTIONS

7 Day Notice ☑ **7 Day Notice Date:** 4/12/98 **7 Day Notice By:** H. Decker

(X When Complete)

Comments: The cleanup of the material and improved and additional BMP's have been deemed acceptable by the NMED and Forest service. Sample data is pending. As agreed a corrective action plan and contingency plan is being prepared. Increased monitoring of all discharges and equipment on site will take place and be documented.

15 DAY RELEASE / DISCHARGE ACTIONS

15 day Follow-up Due: 4/20/98 **15-day Follow-Up By:** H. Decker

Comments: I apologize for the dates due portion of this database is wrong. The database enters the due dates based on the date of ocurrance entered. As we discussed in the follow up meeting on 4/15/97 we pushed the due dates forward. On 4/15/98 soil/sediment samples were collected from the stream channel and analyzed by XRD for percentages of drilling mud. That data is included. A total of 7 samples were collected starting approximately 15 feet above the discharge point. (Background, sample #1), one at the discharge point, sample #2, From discharged material on hay bale, sample #3, Approximately 50 yards downstream of discharge point, sample #4, Approximately 100 yards from discharge point, sample #5, approximately 30 feet below "seep" area which is ~ 250 yards from discharge point, sample #6, and from the collection bin at the centrifugal seperator, #7, this sample was collected as a reference sample as it is believed this was the spilled material. A plastic liner has been placed at the discharge area along with hay bales and a silt fence. Other BMP's have been placed as specified on the 4/15/98 site visit. All material was removed from the stream channel causing a very minimal amount of disturbance, rocks over 6" in diameter were scrubbed by hand to remove all deposited material. On 4/24/98 additional water samples were collected for metals and other constituents and is included with this report along with corrective action and mitigation measures from FSS/Beylik staff.

Report Printed 4/29/98 2:10:49 PM

NMED 30 Day Response Date: 6/20/98

Comments:

G. Thomas Todd, Area Manager
Los Alamos Area Office
Department of Energy
Los Alamos, New Mexico 87544
(505) 667-5105

Dennis J. Erickson, ESH Division Director
University of California
Los Alamos National Laboratory
P.O. Box 1663, MS K491
Los Alamos, New Mexico 87544
(505) 667-4218

Los Alamos
NATIONAL LABORATORY

memorandum

Geology and Geochemistry (EES-1)

To/MS: Bill Turney
From/MS: Steve J. Chipera, EES-1, D469
Phone/Fax: 7-1110/5-3285
E-mail: chipera@lanl.gov
Symbol: EES-1-SJC-TFS-CFW
Date: April 23, 1998

Subject: XRD Analyses

The following are the results of XRD analyses for the seven samples that you submitted.

ESH-18 #7 Drilling Mud Sample

Smectite	~70 wt%
Kaolinite	~1 wt%
Zeolite	~2 wt%
Mica	trace amount
Calcite	~1 wt %
Quartz	~7 wt%
Cristobalite	~2 wt%
Feldspar	~16 wt %

The following are approximate smectite abundances in the remaining six samples as compared with a know rock mixture.

ESH-18 #1	~4 wt%
ESH-18 #2	~3 wt%
ESH-18 #3	~16 wt%
ESH-18 #4	~3 wt%
ESH-18 #5	~4 wt%
ESH-18 #6	~4 wt%

If you have any questions, or desire any additional analyses, please do not hesitate to give me a call.

SJC:sjc

Los Alamos
NATIONAL LABORATORY
memorandum

Facilities Engineering Division
Facility Project Delivery Group/FE-6
Project Management Team

To/Mail Stop: Michael Saladen, ESH-18, K497

From/Mail Stop: Charles R Richardson, FE-6, M984 CRR

Telephone/FAX: 7-5598/7-5955

Symbol No: FE-6/CR/98-008

Date: April 17, 1998

SUBJECT: ISF WATER WELLS, PI 10544

On April 9, 1998, a suspicious accumulation of silty material was discovered in the Guaje Creek at and downstream of the discharge point for the Beylik Drilling water treatment facility. This facility utilizes a centrifugal separator and a diatomaceous earth filter to treat the drilling fluids and early production water prior to discharge to the environment. This accumulation of material was classified as a spill on Monday April 13, 1998, by ESH-18 and Mr. Dennis Romero of the State of New Mexico Environmental Department. A review of the facts surrounding this event indicates that the most probable cause of the accumulation is an incorrect operation of Beylik's treatment plant sometime between April 5 (the date of the last inspection by ESH-18) and April 9, the date of the discovery of the accumulation. The exact nature of this incorrect operation is unknown and could be the result of a number of different types of mistakes by the operators of the plant.

Corrective Actions

The basic approach to mitigation of the spill has been to physically clean the creek bed to a point where the silty material is no longer visible on the sides of the larger rocks, a distance of approximately 1,000 feet. This activity was followed by the construction of silt fences at three locations within the stream bed. These silt fences were installed to prevent the transport of any residual material left in the stream bed after the physical cleaning and to facilitate its removal. The first silt fence was installed directly adjacent to the discharge point and was constructed of straw bales. This structure was designed to reduce the dispersal of any future contamination from the filter plant. The second silt fence was constructed at the point where the stream bed crosses the roadway. This structure was constructed of a row of straw bales followed by a fabric fence. This structure was designed to retain any residual silty material in the stream course from the initial spill. It was located where it will be relatively easy to clean any accumulation and will be cleaned periodically until all traces of the contaminate have been removed. The third structure was constructed at a point beyond the maximum extent of the water flow from current and previous drilling operations. This structure was constructed as a safety valve in case the earlier structures failed to perform for any reason.

In addition to the physical controls described above, the University has implemented a number of operational controls to ensure that a similar incident does not occur. These operational controls include actions by Beylik and the University's field inspectors. Beylik has prepared a corrective action plan to document the changes to their operations. This plan is dated April 15, 1998, and is attached to this memorandum as Attachment 1. The University has modified its inspection

processes to provide an intensive review of the contractor's operations. These modifications include the provision that all future discharges will be confirmed as being within specifications by the University's field inspector prior to release to the environment. This provision applies to the restart of the filter plant after each cleaning and repacking of the filter material. The contractor will be directed to continue to accumulate discharge water in a tank until the University's inspector confirms that all discharge parameters have been satisfied. The University's field inspectors will also be conducting unannounced operational sampling of the discharge once it has been approved for discharge to the environment. These unannounced samples will be in addition to the sampling conducted by the operators and will be performed throughout the period of each discharge. During each of these unannounced inspections, the University's field inspector will also visually evaluate the condition of the stream at the point of discharge. If during one of these inspections the Construction Inspector observes any indications of an unauthorized discharge, he will take appropriate action including suspension of operations.

Conclusion

The implementation of these corrective actions should ensure that a reoccurrence of the spill does not occur. It is our intention to resume operation of the treatment plant once these corrective actions have been implemented. Please advise me at your earliest convenience if the above approach is acceptable and if there is any reason not to resume operation of the treatment plant.

CR:sd

Attachment: a/s

Cy:
Gary Seals, BUS-5, M986
Rubel Martinez, ESH-7, K999
Neil Williams, ESH-18, K497
Bill Turney, ESH-18, K497
Harvey Decker, ESH-18, K497
John Bretzke, FE-6, M984
J. Carlos Ortiz, FE-6, M984
PI 10544, M703
PI 10544, M984

BEYLIK DRILLING, INC.

3702 B State Highway 528 • Rio Rancho • New Mexico 87124 • (505) 867-4723 • FAX (505) 867-6411
WATER WELL DRILLING • MONITORING WELLS • WELL AND PUMP REPAIR • TEST HOLES

April 15, 1998

Mr. Gary Seals
Senior Contracts Administrator
Los Alamos National Laboratory
BUS-5, Construction Contracts, MS/P274
P.O. Box 1663
Los Alamos, New Mexico 87545

Re.: Beylik input to correction action plan.

Dear Mr. Seals:

In response to our meeting of April 14, 1998. Beylik Drilling will be implementing the following additional measures in order to ensure a greater certainty of meeting discharge standards required by our contract.

1. For the first 10 minutes of discharge following each dosing episode of the filter, fluid properties will be monitored every other minute for turbidity, TDS, pH, and in the event of a recent chlorination, for free chlorine. The attached form will be used to greater emphasize procedures.

2. Discharges from the treatment system will be field checked for turbidity, TDS, and pH every 30 minutes during discharge operations.

3. Beylik supervisors will spot check discharges at least 2 times per day in unannounced inspections.

4. Beylik Health and Safety Vice President Bill Godwin will visit the site and perform a quality assurance inspection, including making an internal inspection of the filter, view the operation of the unit, the record keeping and have another instructional meeting regarding operation and maintenance of the unit.

5. Beylik supervisors will inspect the creek below the filter system twice daily to look for any additional accumulations and document their findings on the attached form.

6. Beylik will collect samples of discharge fluids in sample containers at least every other hour of operation, and keep these samples on hand until the end of the treatment of fluids from each well.

As has been the case from the very start, Beylik Drilling invites any person related to the project to collect their own samples for analysis from the system at any time of the day or night to check for compliance. Beylik will continue to advise Los Alamos of future discharges as requested.

Yours very truly,
BEYLIK DRILLING, INC.

Kent M. Wartick, P.E.
Division Manager

Operator report of Discharged Fluids
(Supervisor to Utilize Same Report for Random Checks)

Date	Time	pH	Cl	TDS	Turbidity	Signature	Comments

With my signature below, I acknowledge that properties were monitored and record every 2 minutes following a dosing episode, every 30 minutes thereafter, and that at no time were any fluids exceeding discharge requirements released to the environment.

_____ (Printed Name) _____ (Signature)

_____ (Printed Name) _____ (Signature)

Supervisor Inspection of Discharge Areas

Name _____ **Date** _____ **Time** _____

Comments:

Signature _____