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CORRES. CONTROL
INCOMING LTR NO.

0285 RF 01

DUE DATE
ACTION



2001 APR 25 P 1:39

Department of Energy

CORRESPONDENCE
CONTROL

ROCKY FLATS FIELD OFFICE
10808 HIGHWAY 93, UNIT A
GOLDEN, COLORADO 80403-8200

APR 25 2001

01-DOE-00757

DIST.	LTR	ENC
BOGENBERGER, V.		
BOGNAR, E.	✓	
BRAILSFORD, M.D.		
BURNS, T.F.		
CIAGLO, T.	✓	
DECK, C.A.		
DIETERLE, S.E.		
FERRERA, D.W.		
FERRI, M.S.		
FRASER, R.G.		
FULTON, J.C.		
GERMAIN, A.L.		
GIACOMINI, J.		
ISOM, J.H.		
LEONARD, R.C.		
MARTINEZ, L.A.	✓	
NORTH, K.		
PARKER, A.M.		
POWERS, K.P.		
RODGERS, A.D.		
SANDLIN, N.B.	✓	
SCOTT, G.K.		
SHELTON, D.C.	✓	
SPEARS, M.		
TRICE, K.D.		
TUOR, N.R.		
VOORHEIS, G.M.		
<i>Preminger</i>	✓	
<i>Brooks</i>	✓	
<i>Butter</i>	✓	

Ronald A. Hellbusch
City of Westminster
Director Public Works and Utilities
4800 West 92nd Avenue
Westminster, Colorado 80031

Mary Harlow
City of Westminster
Rocky Flats Coordinator
4800 West 92nd Avenue
Westminster, Colorado 80031

Dear Mr. Hellbusch and Ms. Harlow:

We are in receipt of your letter of April 16, 2001, and are providing the following responses. While the City of Westminster is correct that no written response has been provided to the Colorado Department of Health and Environment (CDPHE) and Environment Protection Agency (EPA), there were less formal communications about this issue.

City of Westminster Issue:

1. Currently the effluent from the solar pond plume treatment system does not exceed the temporary modification of 100 mg/l for nitrates, however the ability of the Solar Ponds Plume Treatment System to provide treatment for uranium and nitrate as designed has not been proven. This system reaches the required 11 feet of head only when there is a precipitation event. Therefore, only groundwater diluted with infiltration is being treated by the system. There is currently no way of knowing where the water is going. It may be underflowing the collection system itself. What is the Department of Energy response to this concern?

Department of Energy (DOE) Response to Issue 1:

The temporary modification of 100 mg/l for nitrate is not exceeded in North Walnut Creek. As noted, the Solar Ponds Plume (SPP) Treatment system only treats groundwater when precipitation events cause the collection trench water levels to rise sufficiently to flow into the treatment cell. However, the DOE disagrees with the statement that only groundwater diluted with infiltration is being treated by the system. The influent concentrations are measured monthly and generally range between 110 and 170 mg/l nitrate whether or not there is flow into the treatment system.

COR CONTROL	X	X
ADMN RECORD		
PATS/130		

Reviewed for Addressee
Corres. Control RFP

4/25/01
Date By

Ref Ltr. #

DOE ORDER # *None*

1/5

DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE



ADMIN RECORD

BZ-B-000066

APR 25 2001

The flow rate and nitrate concentrations present at the discharge gallery strongly indicate that the pre-existing Interceptor Trench System (ITS) downgradient of the collection trench is collecting the water bypassing the system. This water is then discharged at the discharge gallery. Observation of the area since installation has shown no evidence to suggest that the water could be going anywhere else but to the discharge gallery.

City of Westminster Issue:

2. Both State Health and EPA indicate in their joint letter that allowing the system to operate in this manner defeats the purpose of installing the collection trench into bedrock to collect the contaminants found to be migrating below the Interceptor Trench System. What is the Department of Energy response to this concern?

DOE Response to Issue 2

As stated in the Solar Ponds Plume Decision Document, the purpose for installing the Solar Ponds Plume groundwater collection and treatment system was to accomplish a long-term and more cost-effective remedy for the SPP groundwater interception, management, and treatment.

The objectives of the SPP remediation included the following:

- Protect North Walnut Creek by reducing the mass loading of nitrate to surface water and ensure that surface water standards are met in the Creek.
- Design and install a passive system to intercept and treat the contaminated groundwater of the SPP to remove nitrate.
- Design and construct the reactive barrier system in a manner which minimizes the generation of low-level mixed waste and/or hazardous waste and protects the habitat of Preble's Meadow Jumping Mouse, which was added to the Threatened Species List on May 18, 1998.
- Design the reactive barrier system to allow easy access for operations and maintenance and reactive media replacement or removal.
- Evaluate effectiveness of reactive barrier system in removing nitrate.
- Evaluate long-term effectiveness of the treatment system once it has been in operation for several years.

While the collection system is not fully functioning as it was originally intended, the treatment cell is functioning better than anticipated, probably due to the increased residence time. However, the intended outcome of meeting surface water standards in North Walnut Creek is being achieved now, and is projected to continue to be achieved at Site Closure even after the temporary modification to the nitrate standard has expired.

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City of Westminster Issue:

3. In previous meetings with City Staff, DOE indicated that it is the Site's intention to monitor the Solar Ponds Treatment System through 2001 for seasonal impacts and determine if further action is required. Westminster requests information on the process designed for collecting this additional monitoring information and of when the results of the monitoring be available to the public?

DOE Response to Issue 3

The ongoing monitoring of the SPP System consists of increased monitoring of surface water, groundwater and treatment system locations. Surface water is monitored monthly for nitrates at GS-13 and Pond A-3. Uranium activities are monitored monthly at GS-13, and during discharge at Pond A-4. Nitrate and uranium samples are collected monthly at the influent, effluent, and discharge gallery. Water levels are measured monthly in the collection trench. Groundwater data are collected quarterly at four downgradient wells. These data are made available on a quarterly basis as part of the Quarterly Report for the Rocky Flats Groundwater Plume Treatment Systems. Five of these reports are posted on EDDIE, from the second quarter 2000 through the second quarter 2001.

City of Westminster Issue:

4. Groundwater flow in the vicinity of the collection trench has not been investigated. Both the State and EPA indicate that piezometers above and below the trench would be needed to develop a picture of the actual ground water flow into and out of the trench and to investigate re-saturation of the weathered claystone. Will the Site utilize piezometers to address these concerns?

DOE Response to Issue 4

The DOE has no plans to install additional piezometers. As discussed in the response to Issue 1, the monitoring data indicate that water bypassing the treatment system is being collected by the downgradient part of the pre-existing ITS and then discharged at the system discharge gallery. Surface water quality is expected to provide the most appropriate information for making decisions. In addition, groundwater flow in the area is complex and greatly impacted by the presence of the pre-existing ITS laterals. As determined during system construction, the ITS laterals preferentially transport groundwater and the claystone between the laterals was unsaturated. Flow into the collection trench is controlled primarily by the ITS laterals. As stated above, groundwater flow bypassing the collection trench is also collected by the downgradient laterals and directed into the discharge gallery. While it is possible that installation of downgradient piezometers may provide additional information on where water is being lost, this information will not assist with the decision making process.

Mr. Ronald Hellbusch
Ms. Mary Harlow
01-DOE-00757

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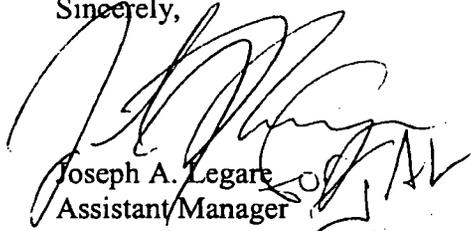
The DOE is committed to meet stream standards at closure when the temporary modification no longer applies. For that reason, a decision tree was developed to evaluate present conditions and decision points to determine if and when an action may be required to meet current standards. In addition, the future conditions are being evaluated to determine if an action is required to meet the applicable standards at Site Closure.

Currently, the Site is meeting the future nitrate standard of 10 mg/l at the Site boundary. For example, for calendar year 2000, the 85th percentile of nitrate levels in Walnut Creek at Indiana Street was 3.3 mg/L. This compares favorably to the lower reaches of Big Dry Creek where the 85th percentile level is 4 times higher. The current uranium standard is based on ambient conditions. Because the uranium in the stream sediments has been determined to be naturally occurring, the standard may change now that EPA has promulgated the MCL of 30 mg/l.

However, as the final end state of the Site will be determined over the next few years with input from stakeholders, the final Site Conditions cannot currently be evaluated. Therefore, the decision tree shows the process that will be used over the next few years to continually evaluate the impact at Site Closure from the Solar Ponds Plume to determine if additional actions will be required. The decision tree has been briefed to both EPA and CDPHE and is provided on Enclosure 1.

If you have any comments or issues concerning these responses, please contact Norma Castaneda at (303) 966-4226 or contact me at (303) 966-5918.

Sincerely,



Joseph A. Legare
Assistant Manager
for Environment and Infrastructure

Enclosure

cc w/Enc.:

R. DiSalvo, OCC, RFFO
N. Castaneda, ERWM, RFFO
G. Hill, AI, RFFO
D. Shelton, K-H
L. Butler, K-H
A. Primrose, K-H
L. Brooks, K-H
Administrative Record

Enclosure 1 – Solar Ponds Plume System Decision Tree

