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JUL 06 1993

Department of Water Resources

MEMORANDUM

DATE: 02-Jul-1993

FROM: Loren Holmes *LH*

TO: Curran Tunnel file

SUBJECT: Measurement activities to date

On 6/30/93, Doug Jones and I made the following measurements at the Curran Tunnel:

| MEASUREMENT   | TIME | METHOD                      | Q (cfs) |
|---|------|-----------------------------|---------|
| Open discharge<br>inside tunnel   | 1100 | current meter               | 4.81    |
| Rangen lab pipeline<br>from tunnel  | 1700 | Polysonic                   | .71     |
| Total tunnel discharge  |      |                             | 5.52    |
| Rangen diversion<br>from lower<br>collector<br>(water not from Curran tunnel) | 1600 | special<br>vessel<br>method | 1.78    |

Due to inexperience with the use of the Polysonic instrument, we were unsuccessful in measuring all the pipelines diverting from the tunnel. The sum of the current meter measurement and the Rangen lab pipeline accounts for all the discharge of the tunnel.

Doug Jones returned on 7/1/93 and measured all the pipeline diversions, which also accounts for all the discharge of the tunnel.

7/1/93 measurements:

| MEASUREMENT                   | TIME | METHOD    | Q (cfs)              |
|-------------------------------|------|-----------|----------------------|
| Candy pipeline                | 1137 | Polysonic | .63                  |
| Musser pipeline               | 1157 | "         | 1.27                 |
| Crandelmire<br>pipeline       | 1221 | "         | <del>2.85</del> 1.99 |
| Rangen lab<br>pipeline        | 1300 | "         | .73                  |
| Total Curran tunnel discharge |      |           | <del>2.85</del> 4.62 |

Due to the large discrepancy between the 6/30 and 7/1 measurements, I plan to make an additional measurement run on 7/7.

Prior to going to the Curran tunnel on 6/30, I was advised by Norm Young that Walter Candy, a tunnel wateruser had requested through his counsel that he be notified when a measurement was planned so that he could be present. This office left a message on his answering machine to the effect that we would be measuring on 6/30. Mr. Candy appeared briefly while we were working at the tunnel mouth.

The best measuring site for the Candy, Musser, and Crandelemire pipelines is located on Candy's property. The measuring site is accessible via the Candy's driveway without opening any gates or causing any disturbance. This is where we unsuccessfully attempted measurements on 6/30, after stopping at the Candy house to notify them we were there. no one came out to the measuring site on that day.

While Doug Jones was repeating the measurements on 7/1, I received a call from Phil Rassier saying that he had been contacted by Candy's lawyer with a message that the department was trespassing without permission. When Doug returned, he said he had gone to the measuring site and gone to work without first stopping at the house, on the assumption that they would know what he was doing when they saw the vehicle and would come out if interested. He said Mr. Candy came out and "read him the riot act".

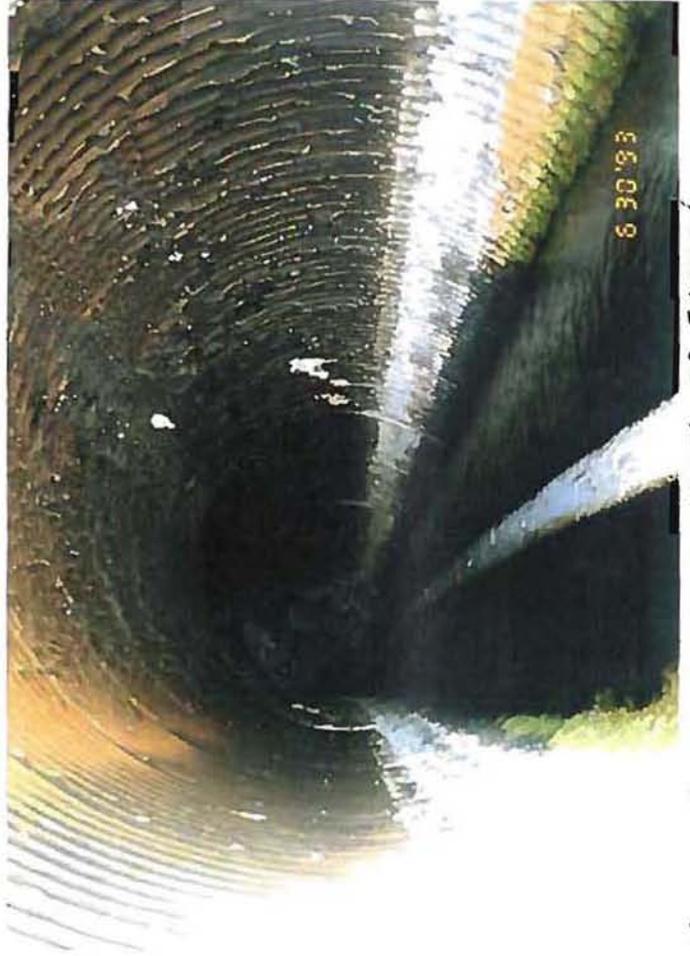
After Phil's call and prior to Doug's return, I called the Candy residence and talked to Mrs. Candy. She told me their only concern was that they want to know when anyone enters the property. Prior notice must be given by phone and anyone entering the place must stop at the house. This instruction has been given to Southern Region staff by me.



View upstream 50' inside Tunnel



Mouth of Cotton Tunnel  
CMP extends 50' upstream  
White PVC pipe diverts to  
Rungen Lab.



View upstream from mouth of Tunnel

West



North

↑  
Tunnel  
outlet

View from Rim Looking North & West

South

southeast



↑ Forward outlet

View from Rose Looking South



From Cotton  
Tunnel TO  
Ranger Lab.

From lower Collector  
TO Ranger faceways

Pipelines from Cotton Tunnel  
& lower Collector



→ crandlemeter

From Tunnel  
CATCH Basin  
TO Raugen  
lower collector

From  
Tunnel TO  
Raugen  
Lwb

Lower collector  
captures springs →  
below Tunnel  
Outlet



← Lower collector