

WMPO QUALITY ASSURANCE SURVEILLANCE REPORT  
NNWSI SURVEILLANCE OF U. S. GEOLOGICAL SURVEY

SURVEILLANCE NUMBER WMPO-SR-88-007

CONDUCTED MARCH 17-18, 1988

USGS Activities Surveilled:

1. Readiness Reviews
2. Technical Procedure Generation

Prepared By: *G. Heaney, H. H. Caldwell, J. Kepper* Date: 4-21-88  
G. Heaney, H. H. Caldwell, J. Kepper

Approved By: *R.H. Kepper for W. Kazar* Date: 4-21-88  
Manager - Audits & Surveillances

Approved By: *Ray S. Moore* Date: 5/4/88  
WMPO PQM

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ENCLOSURE

## 1.0 Introduction

This report contains the results of a QA surveillance conducted March 17-18, 1988, at the offices of the U. S. Geological Survey (USGS) in Denver, Colorado, in accordance with the requirements of the WMPO QA Program Plan WMPO/88-1, Rev. 0 and WMPO Quality Management Procedure (QMP) 18-02 "Surveillance," Rev. 0. The purpose of this surveillance was to assess the USGS readiness review process for both new and ongoing activities. As part of the "ongoing" activities the team focused on the newly redefined "monitoring activities"; those tasks exempt from stop work by virtue of "irrevocable loss of data." A list of these activities is contained in Appendix A of this report.

The basis for this surveillance was a sampling trip to Busted Butte and Trench 14 which was attended by Science Applications International Corporation/Quality Assurance Overview Geologist, J. Kepper. His observation of the sampling activities identified three areas of concern which brought into question the readiness review process committed to by the USGS in their response to WMPO Audit 87-6/87-7, Observation No. 5. These concerns included:

- o The field participants' lack of familiarity with the sample and subsample forms (key to establishing traceability of the samples taken).
- o The overall, initial lack of familiarity with sampling procedures.
- o The use of a tentative technical procedure which did not meet the requirements of USGS QMP 5.01, "Preparation of Technical Procedures."

## 2.0 Surveillance Personnel

This surveillance was conducted by:

Jack Kepper - Technical Specialist - Geologist - SAIC, Las Vegas, NV  
Henry Caldwell - Quality Assurance Engineer - SAIC, Las Vegas, NV  
Gerard Heaney - Quality Assurance Engineer - SAIC, Las Vegas, NV

## 3.0 Summary of Surveillance Results

This surveillance confirmed the existence of a readiness review process; in place and operational. As this process pertains to the Busted Butte and Trench 14 sampling trip, however, the following was brought to light:

- o The coordinating PI for this sampling activity did not receive the QA readiness review checklist until after the activity had been concluded.
- o The tentative technical procedure is in fact a plan (outline) not a fully detailed/step-by-step process document. The objective in this sampling activity was to have the coordinating PI use his field notes covering this work to prepare a more comprehensive procedure at a later time.

The surveillance team reviewed the ongoing monitoring activities listed in Appendix A of this surveillance report for the existence of approved technical procedures. The USGS is presently concentrating efforts in preparing technical procedures where they are not in place. USGS is requested to generate nonconformance reports (NCRs) for those ongoing monitoring activities that have been conducted without approved procedures. An NCR will document this QA program deficiency and facilitate a technical evaluation of data collected without these approved technical procedures being in place. (See Observation No. 1)

The surveillance team also requests that evidence of USGS QA involvement with these ongoing monitoring activities via audit/surveillance be identified. If these activities have not been audited/surveilled, provide a proposed schedule for this action to be initiated. (See Observation No. 2)

#### 4.0 Persons Contacted

The following persons were contacted during the surveillance:

J. Willmon - USGS QA Manager  
T. Chaney - USGS QA  
D. Porter - SAIC QA Manager  
A. Whiteside - SAIC QA, Golden, CO  
B. Langerstein - SAIC QA, Golden, CO  
B. Bennington - SAIC QA, Golden, CO

#### 5.0 Synopsis of Standard Deficiency Reports/Observations

##### 5.1 Standard Deficiency Reports

There were no SDRs generated during this surveillance

##### 5.2 Observations

###### Observation No. 1

During review of the USGS scientific activities that were exempt from the stop work order (due to the importance of continuous data collection to the scientific task) it was observed by the surveillance team that each of these ongoing monitoring activities (see Appendix A of this surveillance report) does not have all required technical procedures approved and in place. Discussions with USGS personnel indicated that there have been NCRs generated to document this programmatic deficiency for these activities. It is requested that USGS perform a review of all ongoing monitoring activities to ensure NCRs have been generated for each activity which has been ongoing without approved technical procedures.

In dispositioning the NCRs, an evaluation should be made to determine if the lack of approved technical procedures has compromised any past data collected. USGS is requested to identify and send copies of all NCRs generated on these ongoing monitoring activities to the WMPO as part of the response to this observation.

Observation No. 2

The surveillance team requested evidence of USGS QA audit/surveillance involvement in each of the ongoing monitoring activities. USGS indicated that most of the activities have been audited or surveilled. It is requested that USGS identify the audit/surveillance that was performed for each of the ongoing monitoring activities listed in Appendix A of this surveillance report. If any of the activities have not been audited/surveilled, provide a proposed schedule for this action to be initiated.

6.0 Required Action

A written response for each observation delineated in Part 5 of this report is required within 20 working days from the date of the surveillance transmittal letter.

APPENDIX A

The following USGS ongoing monitoring activities were reviewed during this surveillance:

1. "Characterization of Unsaturated Zone Infiltration," SIP-3342G-01, WBS 1.2.3.3.4.2
2. "Characterization of Regional Surface Water," SIP-3310G-01, WBS 1.2.3.3.1.0
3. "Regional Studies of Seismicity," SIP-3233G-03, WBS 1.2.3.2.3.3
4. "Hydraulic and Conservative-Tracer Tests in Fractured Rock," SIP-3332G-01, WBS 1.2.3.3.3.2
5. "Characterization of the Regional Ground Water Flow System," SIP-3334G-01, WBS 1.2.3.3.4.3
6. "Characterization of the Unsaturated Zone Hydrochemistry," SIP-3344G-01, WBS 1.2.3.3.4.4
7. "Boundary Condition and Hydraulic Gradients Within the Saturated Zone," SIP-3331G-01, WBS 1.2.3.3.3.1
8. "Characterization of Percolation in the Unsaturated Zone," SIP-3343-01, WBS 1.2.3.3.4.3
9. "Characterization of the Quaternary Regional Ground Water Flow System," SIP-3360G-01, WBS 1.2.3.3.6.0
10. "Climate Monitoring of Precipitation for Isotopic Analysis," No SIP, WBS 1.2.3.3.5.6