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# CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES QUALITY ASSURANCE SURVEILLANCE REPORT

PROJECT NO: 20- 1402-661

REPORT NO: 99-07

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**SURVEILLANCE SCOPE:** Surveillance activities on Thermal Effects on Flow Technical Assistance KTI

**REFERENCE DOCUMENTS:** FY99 Quality Assurance Application Matrix; CNWRA HLW Operations Plans, Rev 12 Chg 1; QAP-004 Surveillance Control Procedure

**STARTING DATE:** February 24, 1999

**ENDING DATE:** February 26, 1999

**QA REPRESENTATIVE:** Mark R. Ehnstrom *(Signature)*

**PERSONS CONDUCTING TEST/EXAM/ACTIVITY:** R.Green, J.Prikryl, and M.Hill

**SATISFACTORY FINDING:**

Surveillance activities were performed on the Thermal Effects on Flow Technical Assistance. Discussions originally concentrated on current project activities, personnel utilized, and software used. In addition to the personnel contacted, Professional Personnel Qualification files for T. Maxwell and D. Halbadier were reviewed with no comment. The main software code used is MULTIFLO Version 1.2β . This code is currently under appropriate TOP-018 software control. The one major experiment currently being conducted, the Heater Experiment, was reviewed. Critical measuring equipment monitoring and accumulating test measurements was reviewed. (See Attachment A) Test equipment was within current calibration cycles and was also identified with calibration tags showing required information. Scientific Notebook #222 was reviewed and contained appropriate information concerning the experiment. No new samples have been obtained in the last 12 months.

**UNSATISFACTORY FINDINGS:** None

**NONCONFORMANCE REPORT NO:** N/A

**ATTACHMENTS:** See attachment A

**RECOMMENDATIONS/ACTIONS:** None

**APPROVED:** *(Signature)*  
CENTER DIRECTOR OF QUALITY ASSURANCE

**DATE:** 3/5/99

**DISTRIBUTION:**  
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ORIGINATOR - M.R. Ehnstrom  
PRINCIPAL ENGINEER -R. Green  
ELEMENT MANAGERS - ALL  
B. Sagar  
H. Garcia

### Table A

#### Critical Equipment Reviewed During Surveillance Activities

Equipment	Identification	Calibration Date	Calibration Due Date
Amp B	L.C. 418057	7-31-98	7-31-99
Amp C	L.C.418054	7-30-98	7-30-99
Amp D	L.C. 418056	7-29-98	7-29-99
Amp E	L.C. 418058	7-27-98	7-27-99
Amp F	L.C. 418055	7-28-98	7-28-99
Hewlett Packard	2823A02203	6-12-98	6-12-99
Pressure Transducer	971112	12-14-98	12-14-99
Humidity/Temp. Transmitter	51240028	5-27-98	5-27-99