



CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES QUALITY ASSURANCE SURVEILLANCE REPORT

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SURVEILLANCE SCOPE: Checking of equipment prior to geophysical surveys using differential Global Positioning System (GPS), magnetometers, electromagnetics, and gravimeter in the field. This is a hold point prior to field work as established in the monthly CNWRA QA Status Reviews. Equipment pre-travel surveillance.

REFERENCE DOCUMENTS: 1. CNWRA Quality Assurance Manual, Section 12, Control of Measuring and Test Equipment; 2. QAP-004 Surveillance Control Procedure; 3. CNWRA Program Manager's Periodic Report.

STARTING DATE: 04/27/98 **ENDING DATE:** 04/28/98

QA REPRESENTATIVE: B. Mabrito

PERSONS CONDUCTING ACTIVITY: P. C. LaFemina

SATISFACTORY FINDINGS: 1. The complete Equipment List (attached) was available for this surveillance as prepared by P. LaFemina. 2. Equipment, with individual identifying numbers on either the equipment or its case, was viewed (except for those pieces of equipment that are being leased, although numbers were present on the Equipment List for the leased equipment). 3. Names of individual staff traveling to the site were provided and Professional Personnel Qualification folders were checked and found acceptable for the following individuals: P. LaFemina, C. Connor, J. Winterle, R. Fedors, D. Ferrill, D. Sims, J. Stamatakos, and Ken Kodama; others who may assist in the field work were: R. Klar, C. White, Keith Wooster, S. Malone, and L. Connor (it was explained to the QA Rep that those on the field trip who do not have CNWRA PPQ documentation completed will be working directly for a qualified individual and under his direct instruction). 4. According to P. LaFemina, all the equipment being taken is "non-calibrateable." It was explained in this manner: a relative calibration is conducted for magnetometers in the field using the earth's magnetic field prior to start of work; absolute calibration isn't needed because the readings are in relative units; the differential GPS provides location information (x, y, and z axes) to within a relatively close tolerance (approximately 20 cm); this field work measures the magnetic variation as the unit is moved from location to location. This explanation has been provided to CNWRA QA previously and has been accepted. 5. Packaging of the instruments appeared to be robust and suited to safe arrival of the equipment. 6. P. LaFemina had a copy of Administrative Procedure-013, Working in Remote Areas or at Nonstandard Work Sites, and was following it as he prepared for this field trip.

UNSATISFACTORY FINDINGS: None.
NONCONFORMANCE REPORT NO.: None.

ATTACHMENTS: Equipment List as generated by P. LaFemina.

RECOMMENDATIONS/ACTIONS: None.

APPROVED: 
CENTER DIRECTOR OF QUALITY ASSURANCE

DATE: 4/29/98

DISTRIBUTION:
ORIGINAL - CENTER QA DIRECTOR QA Records
ORIGINATOR B. Mabrito
PRINCIPAL ENGINEER C. Connor
ELEMENT MANAGERS
B. Sagar; H. Garcia; P. Mackin; P. LaFemina

Center for Nuclear Waste Regulatory Analyses

Equipment List

Geometrics Mag-Mapper Cesium Portable Magnetometer, mdl 858, #29077
Geometrics Proton Precession Magnetometer, mdl 856, #2777186
Novatel GISMO 12-channel GPS receiver, mdl GISMO RT-20, #CGF96380001
Novatel GISMO 12-channel GPS receiver, mdl GISMO BASE, #CGF96370003
Novatel Millenium 12-channel GPS receiver, mdl PROPAK 2-STD, #CGT97340019
Novatel Millenium 12-channel GPS receiver, mdl PROPAK 2-RT-2, #CGT97340023
DAP portable GPS data logger, mdl PC9500, #CQ2827, #CQ4362, #CQ4342
Pacific Crest UHF base station radio/modem 35 watt, mdl RFM96W, #96306355
Pacific Crest UHF 2 watt radio/modem, mdl RFM96W, #96356664, #97362226, #97352079
Novatel Active GPS antennas, mdl 501, #CGA96210029, #CGA96230035
Novatel Active GPS antenna, mdl 502, #6255.502
Novatel Active GPS choke ring antenna, mdl 503, 6345.503
Geonics Electromagnetic conductivity meter, mdl EM31-2, #9315007
Geonics Electromagnetic conductivity meter, mdl EM34, #9617012
Motorola 5-watt VHF portable radios, mdl P-100, #1042, #1044, #1173
Panasonic laptop computer, mdl CF-25, #CF-25EGC2AAM 6IKSA01051
Radio Shack digital multimeter, mdl 22-178, #8A7 012367
Aluminum tripods, Capital Industries
Hand-held radios w/ charger unit