



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, ILLINOIS 60532-4352

December 14, 2004

Rakesh Sarman, Ph.D.
President
Imaging Subsurface, Inc.
P.O. Box 1019
Novi, MI 48376-1019

SUBJECT: NRC INSPECTION REPORT 03034616/2004-002(DNMS)

Dear Dr. Sarman:

This refers to the inspection conducted at the Imaging Subsurface, Inc. facility in Detroit, Michigan, and at your residence on November 4-6 and 9, 2004, with continued NRC in-office review through November 16, 2004. The in-office review included assessment of information pertaining to unresolved items that were identified during the inspection. The purpose of the inspection was to review your corrective actions in response to violations identified during our April 20-21, 2004, inspection.

The inspector identified three unresolved items that require additional NRC review. The unresolved items pertain to potential violations of License Conditions 10, 13, and 19. Specifically, the unresolved items involve an unauthorized storage location, failure to leak test sealed sources at 6-month intervals and failure to lock 2 gauges in storage. At the conclusion of our review of these unresolved items, we will document our findings under separate correspondence.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). The NRC's document system is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

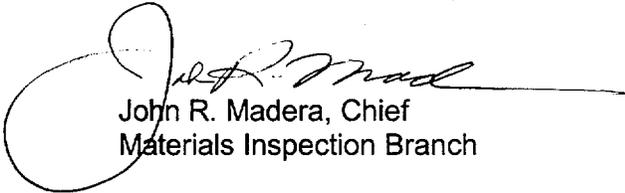
Please note that on October 25, 2004, the NRC terminated public access to ADAMS and initiated an additional security review of publicly available documents to ensure that potentially sensitive information is removed from the ADAMS database accessible through the NRC's web site. Interested members of the public may obtain copies of the referenced documents for review and/or copying by contacting the Public Document Room pending resumption of public access to ADAMS. The NRC Public Documents Room is located at NRC Headquarters in Rockville, MD, and can be contacted at (800) 397-4209 or (301) 415-4737 or pdr@nrc.gov.

R. Sarman

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We will gladly discuss any questions you have concerning this inspection.

Sincerely,



John R. Madera, Chief
Materials Inspection Branch

Docket No. 030-34616
License No. 21-32050-01

INSPECTION RECORD

Region III

Inspection Report No. 2004-002

License No. 21-32050-01

Licensee (Name and Address):

Docket No. 030-34616

Imaging Subsurface, Inc

P.O. Box 1019

Novi, MI 48376-1019

Location (Authorized Site) Being Inspected: 15733 James Couzens Avenue, Detroit, Michigan, two residential locations in Plymouth and Novi, Michigan, and the Christian Academy construction project, Saline, Michigan (field inspection)

Licensee Contact: Rakesh Sarman, Ph.D., RSO Telephone No.: 248.344.7194

Priority: E1 5 Program Code: 03121

Date of Last Inspection: 4/20-21/2004

Date of This Inspection: 11/2-5/2004 and 11/9/2004 with continued in-office review through 11/16/2004 to discuss the characterization of three unresolved issues/potential violations with HQ

Type of Inspection: () Announced (X) Unannounced
() Routine (X) Special
() Initial

Next Inspection Date 4/2005 () Normal (X) Reduced

Justification for reducing the routine inspection interval: **The inspection frequency was reduced due to the RSO/owner's medical condition. At the time of this inspection, the RSO could not be contacted to discuss the corrective actions regarding the previous inspection. In addition, the RSO could address the current inspection findings. Therefore, MIB will contact the licensee by telephone in 3 months and conduct a follow-up inspection in 3-6 months.**

Summary of Findings and Actions:

- (X) No violations cited, clear U.S. Nuclear Regulatory Commission (NRC) Form 591 or **regional letter issued**
- () Non-cited violations (NCVs)
- () Violation(s), Form 591 issued
- () Violation(s), regional letter issued
- (X) Follow up on previous violations **(Remain open at this time)**

Inspector(s) *D. Piskura*
Deborah A. Piskura

Date 12/1/04

Approved *John R. Madera*
John R. Madera, Chief, MIB

Date 12/14/04

PART I-LICENSE, INSPECTION, INCIDENT/EVENT, AND ENFORCEMENT HISTORY

1. AMENDMENTS AND PROGRAM CHANGES:
(License amendments issued since last inspection, or program changes noted in the license)

<u>AMENDMENT #</u>	<u>DATE</u>	<u>SUBJECT</u>
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No licensing actions have been issued since the previous inspection conducted on April 20-21, 2004.

2. INSPECTION AND ENFORCEMENT HISTORY:
(Unresolved issues; previous and repeat violations; Confirmatory Action Letters; and orders)

The last inspection conducted on 4/20-21/2004 , reviewed the licensee's corrective actions for violations identified during the 2003 inspection. A Severity Level III NOV, with proposed imposition of a \$3,000 civil penalty, was issued August 17, 2004, for failing to adequately secure from unauthorized removal or limit access to a nuclear gauge stored in a vehicle (EA-04-092). Two Severity Level IV violations were also identified for failure to (1) lock a nuclear gauge or its container during storage; and (2) stow shipping papers as required during nuclear gauge transport.

A Severity Level III NOV was issued February 6, 2004, for leaving two moisture density gauges unsecured and unattended in an unlocked storeroom at the licensee's Detroit, Michigan, facility on October 17, 2003, and for leaving the gauges and their cases unlocked (EA-03-223). During the inspection period (October 17, October 31, and November 12, 2003) five Severity Level IV violations were also identified involving: (1) storing gauges at an unauthorized location, (2) transporting a gauge without a shipping paper or with the shipping paper stowed in the gauge case, (3) failing to leak-test gauges, (4) failure to conduct inventories, and (5) failure to conduct a periodic review of the radiation safety program.

3. INCIDENT/EVENT HISTORY:
(List any incidents, or events reported to NRC since the last inspection. Citing "None" indicates that regional event logs, event files, and the licensing file have no evidence of any incidents or events since the last inspection.)

NONE

According to the authorized gauge user, there have been no events, incidents, or equipment failures since the last NRC inspection. The inspector confirmed this through a review of ADAMS and the events listed in the NMED database.

PART II - INSPECTION DOCUMENTATION

1. ORGANIZATION AND SCOPE OF PROGRAM:
(Management organizational structure; authorized locations of use, including field offices and temporary job sites; type, quantity, and frequency of material use; staff size; delegation of authority)

On November 2, 2004, the inspector conducted a special inspection at the licensee's facility located in Detroit, Michigan to follow-up on a Severity Level III security violation (no civil penalty) and several Severity Level IV violations. The

inspector was dispatched to the facility to verify the security of the licensee's four portable gauges because the Region was unable to contact the licensee due to injury. Upon arriving at the licensee's facility in Detroit, Michigan, the inspector observed that the licensee's facility appeared vacant and had been burglarized and vandalized. Accompanied by 2 police officers of the Detroit 12th Precinct, the inspector entered the licensee's facility and determined that four portable gauging devices, each containing a nominal 8 millicuries of cesium-137 and 40 millicuries of americium-241, were not located in the storage location. Interviews with neighboring individuals, revealed that ISI staff had been observed, within the past 2-3 weeks, removing equipment from the facility. On November 4, 2004, with assistance from the Office of Investigations, the inspector and 2 investigators located an ISI employee at his residence and found one of the gauges in his possession. The gauge user temporarily stored his assigned gauge at his residence during off-hours while performing his duties for a construction project in progress. This employee also informed NRC staff of the whereabouts of the three remaining gauges, stored at the RSO's residence.

On November 4, 2004, the inspector and 2 investigators arrived at the RSO's residence and interviewed the RSO's son. The RSO's son confirmed that the three remaining gauges had been stored in the garage since about mid-October. The inspector examined the gauges and surveyed the gauges and garage area. The inspector noted that two of the gauge cases/units were not locked.

According to the RSO's family members, on September 12, 2004, the RSO was seriously injured in an automobile accident, hospitalized, and unable to oversee his business. Since the Detroit office had been burglarized and vandalized several times during the months of September and October, the family believed the gauges and other valuable equipment were vulnerable to theft and decided to relocate the equipment to the RSO's residence for safe keeping.

On November 5, 2004, the inspector conducted a field inspection of the authorized gauge user while he conducted soil testing at a temporary job site in Saline, Michigan. The inspection identified no violations of NRC requirements during the field inspection. However, discussions with the gauge user revealed that he did not have a contact or resource in case of an emergency at the job site since the RSO was incapacitated. The Region negotiated with another licensee Wayne County Department of Public Service, Wayne, Michigan (License No. 21-13687-01) to temporarily secure the gauging units at its facility until ISI's RSO/owner returns to work or the RSO's family decides to divest the gauging devices.

On November 9, 2004, the inspector observed the representatives of Wayne County perform sealed source leak tests on the gauges in preparation for transport to their secured storage location. Note, that neither the gauge user nor the family members could recall when the last leak tests were performed and could not locate any records. NRC staff contacted the device manufacturer, who provided their most recent records of sealed source leak tests dated November 10, 2003. Therefore, the inspector advised the representatives of Wayne County to perform leak tests of the sources prior to transport to their facility. The inspector transported the leak test samples to the University of Michigan for analysis (results <0.005 uCi)

The inspector identified a potential repeat violation of License Condition 10 regarding an unauthorized storage location of licensed material. The inspector also identified potential repeat violations of License Condition 13 involving failure to perform sealed source leak tests at 6 month intervals and of Condition 19 involving failure to lock two gauge cases during storage.

2. INSPECTION SCOPE

INSPECTION PROCEDURE(S) USED: 87124
INSPECTION FOCUS AREAS: 03.01 through 03.07

3. INDEPENDENT AND CONFIRMATORY MEASUREMENTS:

(Areas surveyed, both restricted and unrestricted, and measurements made; comparison of data with licensee's results and regulations; and instrument type and calibration date)

The inspector performed independent radiation measurements in and around the unapproved storage area (residential garage), and determined the maximum radiation level to be 0.06 milliroentgen per hour.

4. VIOLATIONS, NCVs, AND OTHER SAFETY ISSUES:

(State requirement and how and when licensee violated the requirement. For NCVs, indicate why the violation was not cited. Attach copies of all licensee documents needed to support violations.)

The inspector identified three unresolved issues/potential violations. These issues will be reviewed during a future re-inspection to be determined upon the RSO's recovery.

- A. Condition No. 10 of NRC License No. 21-32050-01 requires, in part, that licensed material be used or stored at the licensee's facilities located at 15733 James Couzens Avenue, Detroit, Michigan.

The licensee failed to store licensed material at the licensee's facilities located at 15733 James Couzens Avenue, Detroit, Michigan. Specifically, between approximately October 11, 2004 and November 9, 2004, the licensee stored three moisture density gauges at a residential location in Novi, Michigan, an unauthorized storage location.

- B. Condition No. 13 A. of NRC License No. 21-32050-01 requires that sealed sources be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by NRC under 10 CFR 32.210 or by an Agreement State. The certificate of registration number NC-646-D-130-S issued by North Carolina, an Agreement State, specifies that Troxler Model 3440 gauges be tested for leakage and/or contamination at intervals not to exceed six months.

The licensee failed to test four Troxler gauges (Serial Nos. 24577, 30985, 30964, and 30649) containing radioactive material for leakage and/or contamination between November 10, 2003 and November 9, 2004, an interval exceeding six months.

- C. Condition No. 19 of Materials License No. 21-32050-01, requires that each portable gauge have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The gauge or

its container must be locked when in transport, storage, or when not under the direct surveillance of an authorized user.

Between November 4 through 9, 2004, the licensee failed to lock the outer containers of two Troxler gauges, Model No. 3440 (Serial Nos. 30985 and 30964) while the gauges were in storage.

5. PERSONNEL CONTACTED:

[Identify licensee personnel contacted during the inspection (including those individuals contacted by telephone).]

#Matt Hall, Field Technician

***Manuu Sarman**

Mark L. Driscoll, Radiation Safety Officer, University of Michigan

Paul Gluszak, P.E., Radiation Safety Officer, Wayne County Dept. Of Public Services

Bernard Ross, Senior Project Supervisor, Wayne County Dept. Of Public Services

Use the following identification symbols:

Individual(s) present at entrance meeting

* Individual(s) present at exit meeting