



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005**

January 25, 2005

EAs-03-126
03-190
04-177

NMED No. 011072

Mr. Michael Barton, Commissioner
State of Alaska Department of
Transportation & Public Facilities
3132 Channel Drive
Juneau, Alaska 99801

SUBJECT: NRC INSPECTION REPORT 030-07710/04-002 AND NOTICE OF VIOLATION

Dear Mr. Barton:

This refers to the inspection conducted on September 7-17, 2004, at the State of Alaska Department of Transportation & Public Facilities in Anchorage, Juneau, and Fairbanks, Alaska. The purposes of this inspection were to (1) determine if licensed activities were being conducted in a manner that will protect the health and safety of workers and the general public in accordance with NRC requirements, (2) review your compliance with the terms and conditions of the Confirmatory Order Modifying License (Order), and (3) assess your organization's safety conscious work environment. The inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of the license. Within these areas, the inspection consisted of selective examination of procedures and representative records, interviews with personnel, independent radiation measurements, observations of licensed activities, and observation of a training course. The preliminary inspection findings were discussed with Messrs. Michael San Angelo, Thomas Moses, Greg Christensen, Gary Gantz, and other members of your staff on September 17, 2004. A final telephonic briefing was conducted with Messrs. Gary Hogins, Michael San Angelo, Greg Christensen, Gary Gantz, and Rick Habegger on January 10, 2005.

Based on the results of this inspection, the NRC has determined that one violation of NRC requirements occurred. This violation involved the licensee's failure to comply with the terms and conditions of the Order (EA-04-177). This violation was evaluated in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600 and was categorized as Severity Level IV. The violation is cited in the enclosed Notice of Violation (Notice) (Enclosure 1) and the circumstances surrounding it is described in detail in the subject inspection report (Enclosure 2). This violation is being cited in the Notice because it was identified by the NRC during the inspection. You are required to respond to the enclosed Notice and should follow the instructions specified in the enclosed Notice when preparing your response. For your consideration and convenience, an excerpt

from NRC Information Notice 96-28, "SUGGESTED GUIDANCE RELATING TO DEVELOPMENT AND IMPLEMENTATION OF CORRECTIVE ACTION," is enclosed (Enclosure 3). The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

On balance, with the exception of the identified violation, your organization appears to be responsive to the Order, and the inspection report provides observations regarding your training. Our inspectors also interviewed many of your employees, supervisors and managers, and, we noted that the majority of the workers interviewed felt they could raise safety concerns without fear of retaliation. Nevertheless, the inspectors' observations and the violation of the Order that was identified indicate that continued management attention is needed to ensure you implement the Order in an effective manner. We will continue our enhanced inspections of your program to ensure compliance with the Order.

Also, based on the results of this inspection, the NRC has determined that the licensee's corrective actions for one previously issued violation was adequate to consider the violation closed. Three other previously issued Severity Level IV violations remain open and the licensee's continuing corrective actions will be reviewed by the NRC during future inspections. Additionally, at the time of the inspection, the licensee had not yet responded to the previously issued escalated enforcement action involving one Severity Level II problem and one Severity Level III violation of NRC requirements (EA-03-190). During future inspections, the NRC will review and evaluate the implementation of your corrective actions regarding these violations and will further review your compliance with the Order.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, Enclosures 1 & 2, and your response will be available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Please note that on October 25, 2004, the NRC suspended 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 Document 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.

Should you have any questions concerning this inspection or the enclosed report, please contact Janine F. Katanic, Ph.D. at (817) 860-8151 or the undersigned at (817) 860-8186.

Sincerely,

/RA/

Charles L. Cain, Acting Director
Division of Nuclear Materials Safety

Enclosures:

1. Notice of Violation
2. NRC Inspection Report
030-07710/04-002
3. NRC Information Notice 96-28

cc w/Enclosures 1 & 2:

Mr. Clyde E. Pearce
Alaska Radiation Control Program Director
Radiological Health Program
State Public Health Laboratories
Department of Health & Social Services
4500 Boniface Parkway
Anchorage, AK 99507

Ms. Kim Stricklan
Alaska Department of Environmental Conservation
Environmental Health Division,
Solid Waste/Pesticide Program
555 Cordova Street
Anchorage, AK 99501

Mr. Gary Hogins
Chief Engineer
State of Alaska Department of Transportation
& Public Facilities
3132 Channel Drive
Juneau, Alaska 99801

Mr. Michael San Angelo
Statewide Materials Engineer
State of Alaska Department of Transportation
& Public Facilities
5800 East Tudor Road
Anchorage, Alaska 99507

Mr. Greg Christensen
Statewide Radiation Safety Officer
State of Alaska Department of Transportation
& Public Facilities
5800 East Tudor Road
Anchorage, Alaska 99507

Mr. Gary W. Gantz
Assistant Attorney General
State of Alaska Department of Law
1031 West 4th Avenue, Suite 200
Anchorage, Alaska 99501-5903

bcc w/enclosure (via ADAMS distrib):

BSMallett
CLCain
KSFuller
WAMaier
GFSanborn
GMVasquez
HAFreeman
JCruz
JEWhitten
JFKatanic
KEGardin
GMLongo, OGC
FJCongel, OE
DRStarkey, OE
OEMail
NMIB File
RIV File (5th Floor)

SISP Review Completed: **jc**

ADAMS: Yes No Initials: JFK

X Publicly Available Non-Publicly Available Sensitive X Non-Sensitive

DOCUMENT NAME: s:\dnms\!Nmib\Katanic\40771002.wpd

final r:_dnms

RIV:DNMS :NMIB	C:NMIB	D:ACES	OE	AD:DNMS
JFKatanic*	JCruz*	GFSanborn*	FJCongel (per MVasquez)	CLCain
/RA/	/RA/	/RA GMVasquez for/	/RA DStarberg for via E-mail	/RA/
01/05/05	01/20/05	01/24/05	01/28/05	01/25/05

*Previously concurred OFFICIAL RECORD COPY T=Telephone E=E-mail F=Fax

ENCLOSURE 1

NOTICE OF VIOLATION

State of Alaska Department of
Transportation & Public Facilities
Anchorage, Alaska

Docket No. 030-07710
License No. 50-14102-01
EA-04-177

During an NRC inspection conducted on September 7-17, 2004, one violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violation is listed below:

Section IV, Condition 2.B. of the Confirmatory Order Modifying License (Order) issued March 15, 2004, requires, in part, that training conducted by the licensee shall include discussions of (1) 10 CFR 30.7, including a discussion of protected activities and adverse actions, (2) applicable federal and state laws pertaining to whistleblower protection, (3) enforcement actions that may be taken against licensees and individuals who violate these requirements, (4) the content of the Order, (5) establishing a safety conscious work environment (SCWE), (6) the roles and responsibilities of the statewide and regional radiation safety officers in assuring compliance with NRC radiation safety requirements, and (7) what constitutes a hostile work environment and a "chilling effect."

Contrary to the above, during training conducted on September 7, 2004, the licensee failed to discuss 10 CFR 30.7, "Employee Protection," and enforcement actions that may be taken against licensees and individuals who violate these requirements. Specifically, the two required items were not discussed during the SCWE training and were not described in the written material provided to the SCWE training attendees.

This is a Severity Level IV violation (Supplement VII).

Pursuant to the provisions of 10 CFR 2.201, State of Alaska Department of Transportation & Public Facilities is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with a copy to the Regional Administrator, Region IV, within 30 days of the date of this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation; EA-04-177" and should include: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information).

Please note that on October 25, 2004, the NRC suspended 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 Document 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.

In accordance with 10 CFR 19.11, you are required to post this Notice within two working days.

Dated this 25th day of January 2005

ENCLOSURE 2

U.S. Nuclear Regulatory Commission
Region IV

Docket No.: 030-07710

License No.: 50-14102-01

Report No.: 030-07710/04-002

EA Nos.: 03-126
03-190
04-177

NMED No.: 011072

Licensee: State of Alaska Department of Transportation
& Public Facilities

Facility: State of Alaska Department of Transportation
& Public Facilities

Locations: Anchorage, Alaska (Central Region)
Juneau, Alaska (Southeast Region)
Fairbanks, Alaska (Northern Region)
Temporary portable nuclear gauge storage locations and
temporary job sites throughout the Central, Southeast, and
Northern Regions

Dates: September 7, 2004 - January 10, 2005

Inspectors: Russell Wise, Senior Allegations Coordinator
Janine F. Katanic, Ph.D., Health Physicist

Approved By: Jeffrey Cruz, Chief
Nuclear Materials Inspection Branch

Attachment: Supplemental Inspection Information

EXECUTIVE SUMMARY

State of Alaska Department of Transportation & Public Facilities (ADOT&PF)
NRC Inspection Report 030-07710/04-002

This refers to the inspection conducted on September 7-17, 2004, at ADOT&PF facilities throughout Alaska. The scope of the inspection included selective examination of procedures and representative records, interviews with personnel, independent radiation measurements, observations of licensed activities, and observation of a training course.

Program Overview

State of Alaska Department of Transportation & Public Facilities is authorized to use portable nuclear gauging devices at their facilities located in Anchorage, Fairbanks, and Juneau, Alaska, and at temporary jobsites in areas of NRC jurisdiction. (Section 1)

Enforcement History

On March 15, 2004, the NRC issued to ADOT&PF a Notice of Violation and Proposed Imposition of Civil Penalties (EA-03-190). A Severity Level II problem and a Severity Level III violation were identified for violations involving technical issues related to radiation exposures to individual members of the public. Additionally, on March 15, 2004, the NRC issued a Notice of Violation and Confirmatory Order Modifying License (Order) (EA-03-126). The violation documented the NRC's conclusion that the licensee discriminated against one of its employees for raising safety concerns. The licensee agreed to take the actions described in the Order, which the NRC believed were necessary to provide reasonable assurance that an environment would be established and maintained whereby employees can raise safety concerns without fear of retaliation. (Section 2)

Review of ADOT&PF's Compliance with the Order

On June 22, 2004, the NRC formally approved ADOT&PF's plans to review internal policies and procedures and to conduct initial safety conscious work environment (SCWE) training. An independent contractor provided SCWE training to ADOT&PF managers and employees during several days in June 2004. The training attendees were given the opportunity to participate in an anonymous employee cultural survey to assess and evaluate the participants' attitudes toward ADOT&PF's safety culture. The inspectors conducted interviews with approximately 45 members of ADOT&PF's personnel who had attended the SCWE training.

On September 7, 2004, the inspectors observed a make-up SCWE training session. The Order specified the topics to be covered in the SCWE training; however, the material presented orally and in writing during the training did not address 10 CFR 30.7, "Employee Protection," nor did it discuss enforcement actions that may be taken against licensees and individuals who violate these requirements. This was identified as a violation of the terms and conditions of the Order. (Section 3)

Radiation Exposures of Monitored Individuals

On October 23, 2003, the NRC issued to ADOT&PF a Notice of Violation which identified, among other things, five Severity Level IV violations. A violation regarding the licensee's failure to advise each worker annually of the worker's dose during calendar years 1997 through 2002 (Violation 030-07710/2001-007) was not corrected at the time of the inspection and is considered open. A violation regarding the licensee's failure to post notices to workers as required (Violation 030-07710/2001-008) was reviewed during the inspection, was found to be corrected, and is considered closed. (Section 4)

Radiation Exposures to Members of the Public

The regulatory requirements of 10 CFR 20.1302(a) have been an ongoing challenge for the licensee, as evidenced by Notices of Violation issued to the licensee in 1997, 2004, and additional NRC inspection findings. At the time of the inspection, the licensee had not yet responded to the NRC regarding the previously cited violation of this requirement (Violation 030-07710/2001-005), and this violation is therefore considered open. However, for the majority of nuclear gauge storage locations reviewed by the inspectors, the licensee had the results of radiation measurements or had performed calculations such that the facilities had been adequately evaluated to demonstrate compliance with the requirement. In a few instances, the licensee's analyses were lacking in sufficient detail to demonstrate compliance with the regulatory requirement. However, the licensee was in the process of implementing corrective action to more consistently perform the required evaluations.

At the time of the inspection, the licensee had not yet responded to the NRC regarding the previously issued violations involving the licensee's failure to conduct operations so that the total effective dose equivalent to individual members of the public from licensed operations did not exceed 0.1 rem in a year (Violation 030-07710/2001-002) and for the licensee's failure to provide copies of reports submitted to the Commission, pursuant to the provisions of 10 CFR 20.2203, to identified members of the public at a time no later than their transmittal to the Commission (Violation 030-07710/2001-003). Accordingly, these violations were not reviewed and are considered open. (Section 5)

Maintenance of Portable Nuclear Gauges

A previously issued violation for the licensee's failure to perform surveys with a radiation detection instrument weekly during maintenance periods, as committed to by the licensee in its license (Violation 030-07710/2001-010), was not reviewed during the inspection and is considered open. (Section 6)

Corrective Actions

After the NRC inspectors identified ADOT&PF's failure to discuss, during SCWE training, 10 CFR 30.7, "Employee Protection," and enforcement actions that may be taken against licensees and individuals who violate these requirements (Section IV, Condition 2.B. Items (1) and (3) of the Order), the licensee agreed to take corrective action. On September 28 and 29, 2004, the licensee transmitted two memos to all attendees of the 2004 SCWE training. The memos discussed the previously omitted items and provided copies of 10 CFR 30.7. (Section 7)

Report Details

On September 7-17, 2004, an announced inspection of licensed activities was conducted by the NRC of the licensee's facilities in Anchorage, Juneau, and Fairbanks, Alaska. This inspection included a review of the main nuclear gauge storage locations in each location as well as a review of several temporary jobsite locations or areas of temporary nuclear gauge storage.

1 Program Overview (87124)

1.1 Inspection Scope

The license application, supporting documents, and other records provided by the licensee were reviewed. Collectively, these documents describe the licensee's nuclear gauge radiation safety program. The inspectors also interviewed licensee personnel and toured various State of Alaska Department of Transportation & Public Facilities (ADOT&PF) facilities.

1.2 Observations and Findings

State of Alaska Department of Transportation & Public Facilities is authorized under NRC Byproduct Materials License 50-14102-01 to possess and use portable nuclear gauging devices for measuring physical properties of materials. Licensed material is authorized to be used at the licensee's facilities located in Anchorage, Fairbanks, and Juneau, Alaska, and at temporary jobsites in areas of NRC jurisdiction.

1.3 Conclusions

State of Alaska Department of Transportation & Public Facilities is authorized to use portable nuclear gauging devices at their facilities located in Anchorage, Fairbanks, and Juneau, Alaska, and at temporary jobsites in areas of NRC jurisdiction.

2 Enforcement History (87124)

On July 17, 2003, the NRC issued to ADOT&PF an apparent violation of 10 CFR 30.7, NRC's employee protection requirements prohibiting discrimination against employees who engage in protected activities. On October 23, 2003, the NRC issued Inspection Report 030-07710/2001-001 and Notice of Violation (October 2003 Notice). This report identified one non-cited violation, five Severity Level IV violations, and five apparent violations of NRC requirements. On November 18-19, 2003, a Predecisional Enforcement Conference (PEC) was held with the licensee. The first day of the PEC addressed the five apparent violations of NRC requirements related to technical issues whereas the second day addressed the apparent violation of NRC's employee protection requirements.

On March 15, 2004, the NRC issued to ADOT&PF a Notice of Violation and Proposed Imposition of Civil Penalties (EA-03-190). A Severity Level II problem was identified for two violations involving: (1) the licensee's willful failure to conduct operations so that the total effective dose to individual members of the public did not exceed 0.1 rem in a year, and (2) the licensee's willful failure to make or cause to be made, as appropriate, surveys of radiation levels to demonstrate compliance with the dose limits for individual members of the public. A Severity Level III violation was also identified for the

licensee's willful failure to provide a copy of the reports submitted to the NRC to the individual members of the public at a time no later than the transmittal to the NRC.

In addition, on March 15, 2004, the NRC also issued a Notice of Violation and Confirmatory Order Modifying License (Order) (EA-03-126). This Notice of Violation documented the NRC's conclusion that, between 1999 and 2002, the licensee discriminated against one of its employees for raising safety concerns. The licensee agreed to take the actions described in the Order, which the NRC believed were necessary to provide reasonable assurance that an environment would be established and maintained where employees can raise safety concerns without fear of retaliation.

Because the licensee had requested, and was granted, an extension of time to respond to the enforcement actions noted above, at the time of the inspection, the licensee had not yet submitted a response to either enforcement action. During future inspections, the NRC will review and evaluate the implementation of the licensee's corrective actions regarding these violations.

3 Review of ADOT&PF's Compliance with the Order

3.1 Inspection Scope

This portion of the inspection consisted of interviews with licensee managers and employees, reviews of licensee documentation and records pertaining to the licensee's actions in response to the Order, observation of a training course, reviews of training materials and employee culture survey, and interviews with members of the licensee's designated contractor for these activities.

3.2 Observations and Findings

On March 15, 2004, the NRC issued to ADOT&PF an Order which outlined the actions agreed to by the licensee to ensure that a safety conscious work environment (SCWE) would be established and maintained. The Order focused on (1) ensuring that the licensee's internal policies and procedures establish and support a SCWE, (2) developing a plan to conduct training of ADOT&PF staff and (3) developing a long-term plan for maintaining a SCWE.

3.2.1 Training Required by the Order

On May 20 and 28, 2004, as required by the Order, ADOT&PF submitted to the NRC its plans to review their internal policies and procedures and to conduct initial training on the NRC's employee protection regulations and the attributes of a SCWE. By letter dated June 22, 2004, the NRC approved ADOT&PF's plans. In response to the specific conditions of the Order, the licensee retained and contracted the services of Employee Concerns Program Forum, Inc. (ECPF) to review ADOT&PF's internal policies and procedures and to conduct the initial SCWE training.

On May 24, 2004, a "Safety Culture Workshop" was provided to ADOT&PF by members of the ECPF team. The workshop served as a venue for ADOT&PF senior managers to discuss the common behaviors of a SCWE, ADOT&PF's safety culture vision, and the practical implementation of the SCWE training.

The training plan submitted by ADOT&PF provided for separate training sessions for ADOT&PF managers and employees. A pilot SCWE training class was provided to ADOT&PF managers by ECPF team members and was held on June 10, 2004. This class allowed for ADOT&PF senior management to review and comment on the training materials, training format, and modify the training materials if necessary. Following the pilot class, between June 14-21, 2004, 17 training sessions were conducted in 5 different locations for ADOT&PF managers/supervisors and employees (mainly portable nuclear gauge users).

The first hour of each training session was allotted for the attendees to voluntarily participate in an employee cultural survey, consistent with Section IV, Condition 3.A of the Order. The anonymous "Organizational and Safety Culture Survey" contained 201 questions which were designed by the consulting group to assess and evaluate the participants' attitudes toward and understanding of ADOT&PF's safety culture. By August 2004, the contractor had provided ADOT&PF with a preliminary analysis of the survey results. Pursuant to Section IV, Condition 3.A. of the Order, the licensee shall provide the NRC with an annual report for 2004 which summarizes the findings of the survey, including the questions used, the methodology applied, and any follow-up actions. The licensee anticipated submitting the annual report for 2004 to the NRC in early 2005. When submitted, the findings described in the licensee's annual report will be reviewed by the NRC.

A make-up SCWE training session was held on September 7, 2004. This training session was provided to ADOT&PF both managers and employees that were unable to attend any of the previously offered training sessions. Pursuant to Section IV, Condition 2. of the Order, the SCWE training shall commence within 90 days from the date of the NRC's approval and the training shall be completed within 90 days of commencing. After a review of ADOT&PF's submittals, on June 3, 2004, the NRC gave ADOT&PF management verbal approval to implement their training plan. By letter dated June 22, 2004, the NRC formally approved ADOT&PF's SCWE training plan. Training commenced on June 14, 2004, and was completed on September 7, 2004, within 90 days of commencing, in compliance with the Order.

The NRC inspectors observed the September 7, 2004, make-up training session. The inspectors found that two elements of required training were not met. Specifically, Section IV, Condition 2.B. of the Order specified the topics to be covered in the SCWE training. The Order states that the training shall include discussions of: (1) 10 CFR 30.7, including a discussion of protected activities and adverse actions, (2) applicable federal and state laws pertaining to whistleblower protection, (3) enforcement actions that may be taken against licensees and individuals who violate these requirements, (4) the content of the Order, (5) establishing a SCWE, (6) the roles and responsibilities of the statewide and regional radiation safety officers in assuring compliance with the NRC radiation safety requirements, and (7) what constitutes a hostile work environment and a "chilling effect." The licensee's May 28, 2004, training plan submitted to the NRC included all of the required elements. However, during the September 7, 2004, SCWE training session observed by the NRC inspectors, it was noted that the material presented during the training did not address 10 CFR 30.7, "Employee Protection," nor did it discuss enforcement actions that may be taken against licensees and individuals who violate these requirements. Also, these two elements were not discussed in the written training materials provided to the attendees nor in the speaker's presentation notes. The licensee's failure to discuss, during SCWE training,

10 CFR 30.7, "Employee Protection," and enforcement actions that may be taken against licensees and individuals who violate these requirements was identified as a violation of Section IV, Condition 2.B. Items (1) and (3) of the Order. (030-07710/2004-001)

Other than these two elements, the training met the remaining elements of the Order and met the licensee's May 28, 2004, training plan. While the training appeared adequate to discuss training on a SCWE program, the inspectors had additional observations:

- The training did not make it clear that the responsibility for establishing and maintaining a SWCE was the responsibility of senior management, not the responsibility of the Statewide Radiation Safety Officer as indicated in the training material. As ADOT&PF starts to implement new programs with regard to SCWE, this lack of clarity could create some confusion among workers and managers in how to implement these programs.
- When one trainee asked why the Order was issued by the NRC, the instructor deferred to ADOT&PF management who did not answer the question. Confusion over why the Order was issued was also reflected during the inspectors' interviews with ADOT&PF employees (discussed below).
- During the training, ADOT&PF indicated to the class that an individual who wants to report a concern should document all the facts of a concern before providing it to a supervisor or manager. This instruction appeared confusing in that it implied a worker might have to gather all the facts before reporting the concern; in other words, the worker might have to investigate the concern before reporting it. This might discourage workers from raising some concerns.
- During the training session, (training to encourage workers to raise safety concerns without fear of retaliation), one trainee was persistent with questions regarding the presentation. The trainer responded in a manner that may have discouraged others from raising additional questions.

These observations were discussed with ADOT&PF senior management.

3.2.2 Interview Results

During the period of September 7-17, 2004, the inspectors interviewed approximately 45 members of ADOT&PF's personnel who had attended the SCWE training given in June or September 2004. Personnel interviewed included senior managers, mid-level managers, first-line supervisors and members of the technical staff (mainly portable nuclear gauge users). Interviews were conducted of both permanent and temporary personnel from each of ADOT&PF's three regional offices and personnel assigned to several ADOT&PF project sites. Prior to the inspection, the NRC inspectors developed a sample set of interview questions for both managers and employees. These interview questions focused on ADOT&PF management support for establishing an environment where workers felt free to identify concerns without fear of retaliation, management communications to employees, senior management involvement in preventing discrimination and/or a chilling effect, alternative means for raising concerns, and appeals processes for raised concerns. In addition, the inspectors asked questions

regarding the contents of the SCWE training and whether there was an understanding of the purpose of and reasons for the SCWE training.

Based on the interviews, the inspectors noted that there were several comments that were consistent across all groups. Namely, the majority of interviewees stated that the SCWE training was very poorly timed and abruptly interrupted Alaska's already short construction season by pulling personnel away from project sites. Likewise, many interviewees expressed that the communications regarding the class were not clear. For example, many believed that they were attending portable nuclear gauge safety training and didn't understand why the SCWE training was being provided. In particular, several interviewees from the regional offices and remote project sites didn't understand why they had to participate in the training since they viewed the matter as an "Anchorage problem" that didn't pertain to their work situation or their working group. A significant number of interviewees believed that the SCWE training was conducted because "people in Anchorage were exposed to radiation," and were not aware that the NRC had determined that ADOT&PF had violated the NRC's employee protection requirements. Several individuals commented on the safety culture survey and expressed that it should have been shorter and more focused on the type of work activities performed by ADOT&PF. Likewise, several interviewees commented that the training appeared to lack focus on the type of work performed by ADOT&PF and couldn't easily relate to case studies involving nuclear power reactors or other agencies. In particular, some interviewees indicated that the scenarios that were meant to describe real-world use of portable nuclear gauges were not realistic and that the course instructors might have benefitted by developing a better understanding of the type of work performed by ADOT&PF and the conditions under which the work is performed.

Within the regional offices and at the project offices, the majority of interviewees expressed that open communication regarding safety concerns occurred and was encouraged. This was particularly observed at the project level where workers may spend many weeks or months on a project in isolated areas, and often times form a kind of "project family" that allows them to interact more openly on a daily basis. It was also noted that the regional managers conducted periodic visits to the project sites and more frequently than not, interviewees expressed that managers took individual interest in the workers while at the same time focusing on the demands of the project. Most, if not all, of the nuclear gauge users that were interviewed expressed that if they had any concerns regarding radiation safety they would not hesitate to contact their assigned regional radiation safety officer (RSO) and believed that their concern would be addressed. The majority of interviewees believed that their opinions were valued, would feel free to report concerns despite any negative previous interactions with their supervisors, and did not believe that retaliation would occur because they reported concerns.

3.3 Conclusions

On March 15, 2004, the NRC issued ADOT&PF an Order which outlined the actions agreed to by the licensee to ensure that a SCWE would be established and maintained. On June 22, 2004, the NRC formally approved ADOT&PF's plans to review internal policies and procedures and to conduct initial SCWE training. A team of individuals from the licensee's independent contractor provided SCWE training to ADOT&PF managers and employees during several days in June 2004. The training attendees were given the opportunity to participate in an anonymous employee cultural survey to assess and evaluate the participants' attitudes toward and understanding of ADOT&PF's safety culture. The inspectors interviewed approximately 45 members of ADOT&PF's personnel who had attended the SCWE training. Interviews indicated that workers, particularly on isolated projects, felt free to raise radiation safety concerns without fear of retaliation.

A make-up SCWE training session was held on September 7, 2004, and was observed by the NRC inspectors. The Order specified the topics to be covered in the SCWE training, however, the material presented orally and in writing during the training did not address 10 CFR 30.7, "Employee Protection," nor did it discuss enforcement actions that may be taken against licensees and individuals who violate these requirements. This was identified as a violation of the terms and conditions of Order.

4 **Radiation Exposures of Monitored Individuals (87124)**

4.1 Inspection Scope

This portion of the inspection consisted of interviews with licensee personnel and reviews of licensee documentation and records pertaining to the radiation safety program, observations of workers performing licensed activities, and independent radiation measurements at the licensee's facilities.

4.2 Observations and Findings

10 CFR 19.13(b) requires, in part, that each licensee shall advise each worker annually of the worker's dose as shown in records maintained by the licensee pursuant to the provisions of 10 CFR 20.2106. In the October 2003 Notice, a Severity Level IV violation of 10 CFR 19.13(b) was issued for the licensee's failure to advise each worker annually of the worker's dose during the calendar years 1997-2002 (030-07710/2001-007).

In response to the violation, the licensee indicated that they planned on having their contracted radiation safety service provider perform the historical evaluations for each monitored employee for calendar years 1997- 2003, and compile annual reports to personnel regarding their occupational radiation doses. The licensee entered into the contract with the service provider on April 16, 2004, and anticipated that the annual reports would be completed and mailed to the individuals within 120 days from the date of the contract. The service provider's task was to assimilate the necessary data, develop the annual reports, and provide them to the licensee, who would then be responsible for providing the reports to the individuals. At the time of the inspection, the service provider had compiled the reports, but the reports were not properly formatted, resulting in additional delays in distributing the reports. As of the date of the NRC's inspection, the licensee was still working on composing the reports. Accordingly,

Violation 030-07710/2001-007 is considered open and will be reviewed during future NRC inspections.

10 CFR 19.11(a) requires, in part, that the licensee shall post current copies of: (1) the regulations contained in 10 CFR Parts 19 and 20, (2) the license, license conditions, or documents incorporated into a license by reference, and amendments thereto, (3) the operating procedures applicable to licensed activities, and (4) any notice of violation involving radiological working conditions, proposed imposition of civil penalty, or order issued, and any response from the licensee. 10 CFR 19.11(b) further states, in part, that if posting a document specified in 19.11(a) is not practicable, the licensee may post a notice which describes the document and states where it may be examined.

In the October 2003 Notice, a Severity Level IV violation of 10 CFR 19.11(a) was issued for the licensee's failure to post notices to workers, as required (030-07710/2001-008). During the NRC inspections of the licensee's facilities in Anchorage, Juneau, and Fairbanks, as well as inspections of several temporary jobsites and locations of temporary nuclear gauge storage, the inspectors observed current copies of the required documents or notices which described the documents and stated where they may be examined. Accordingly, Violation 030-07710/2001-008 is considered closed.

4.3 Conclusions

In the October 2003 Notice, a Severity Level IV violation of 10 CFR 19.13(b) (030-07710/2001-007) was issued for the licensee's failure to advise each worker annually of the worker's dose during calendar years 1997 through 2002. At the time of the inspection, the licensee had not yet advised each worker of the worker's dose for calendar years 1997-2003. Accordingly, Violation 030-07710/2001-007 is considered open and will be reviewed during future NRC inspections.

Additionally, in the October 2003 Notice, a Severity Level IV violation of 10 CFR 19.11(a) (030-07710/2001-008) was issued for the licensee's failure to post notices to workers, as required. During the NRC inspections of the licensee's facilities, the inspectors observed current copies of the required documents or notices which described the documents and stated where they may be examined. Accordingly, Violation 030-07710/2001-008 is considered closed.

5 Radiation Exposures to Members of the Public (87124)

5.1 Inspection Scope

This portion of the inspection consisted of interviews with licensee personnel, reviews of licensee documentation and records, and independent radiation measurements of the licensee's facilities and temporary nuclear gauge storage locations..

5.2 Observations and Findings

10 CFR 20.1302(a) requires, in part, that the licensee shall make or cause to be made, as appropriate, surveys of radiation levels in unrestricted and controlled areas to demonstrate compliance with the dose limits for individual members of the public in 10 CFR 20.1301. Pursuant to 10 CFR 20.1003, *survey* means an evaluation of the

radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources of radiation. When appropriate, such an evaluation includes a physical survey of the location of radioactive material and measurements or calculations of levels of radiation, or concentrations or quantities of radioactive material present. 10 CFR 20.1003 provides, in part, that *member of the public* means any individual except when that individual is receiving an occupational dose, and that *occupational dose* means the dose received by an individual in the course of employment in which the individual's assigned duties involve exposure to radiation or to radioactive material.

On August 19, 1997, the NRC issued the licensee a Severity Level IV violation for failure to comply with 10 CFR 20.1302(a) (030-07710/1997-001). In the March 2004 Notice, the NRC identified a Severity Level II problem for the licensee's willful failure to comply with 10 CFR 20.1302(a) (030-07710/2001-005). In June 2004, the NRC performed an inspection of the licensee's portable nuclear gauge storage facilities in Anchorage and Fairbanks, Alaska, as well as a review of temporary gauge storage locations throughout the Central and Northern Regions. Of the sites that were reviewed during the inspection, the inspectors found that the licensee was not in compliance with the provisions of 10 CFR 20.1302(a) at one temporary nuclear gauge storage location near Denali in Nenana Canyon. Following the June 2004 inspection, on August 23, 2004, the licensee submitted a letter to the NRC which stated, in part, "we have conducted surveys at all temporary and permanent storage facilities and have determined that they meet the requirements of 10 CFR 20.1302." On October 1, 2004, the NRC issued Inspection Report 030-07710/2004-001, which identified the June 2004 inspection finding as another example of the licensee's previously cited violation of 10 CFR 20.1302(a). At the time of the inspection, the licensee had not yet responded to the NRC regarding the previously cited Violation (030-07710/2001-005). Accordingly, the specific circumstances regarding this violation were not reviewed and the violation is considered open.

Though the specific circumstances regarding Violation 030-07710/2001-005 were not reviewed, because of the importance that the licensee conduct operations so that the total effective dose to individual members of the public not exceed the regulatory limit, the inspector reviewed how the licensee demonstrated compliance with the dose limits for individual members of the public. For the majority of locations reviewed, the licensee had the results of radiation measurements or had performed calculations such that the nuclear gauge storage facilities had been appropriately evaluated to demonstrate compliance with 10 CFR 20.1302(a). In a few instances, it appeared that the licensee's records of their analyses were lacking in sufficient detail to demonstrate compliance with the regulatory requirements of 10 CFR 20.1302(a). However, at the time of the inspection, the licensee was in a transition period, having received new survey instrumentation and was in the process of implementing a revised procedure to demonstrate compliance with the dose limits for individual members of the public. The statewide RSO was planning to provide additional training to the regional RSOs to attempt to make their evaluations more consistent and more thoroughly documented.

10 CFR 20.1301(a)(1) requires, in part, that the licensee conduct operations so that the total effective dose to individual members of the public from licensed operations does not exceed 0.1 rem in a year. In the March 2004 Notice, the NRC identified a finding of a Severity Level II problem for the licensee's willful failure to conduct operations so that the total effective dose equivalent to individual members of the public from licensed operations did not exceed 0.1 rem in a year (030-07710/2001-002). At the time of the inspection, the licensee had not yet responded to the NRC regarding the violation. Accordingly, Violation 030-07710/2001-002 was not reviewed and is considered open.

10 CFR 20.2205 requires, in part, that when a licensee is required, pursuant to the provisions of 10 CFR 20.2203, to report to the Commission an exposure, to radiation or radioactive material, of an identified member of the public, the licensee shall also provide a copy of the report submitted to the Commission to the individual. This report must be transmitted at a time no later than the transmittal to the Commission. In the March 2004 Notice, the NRC identified a Severity Level III violation for the licensee's willful failure to provide copies of reports submitted to the Commission pursuant to the provisions of 10 CFR 20.2203, to six identified members of the public at a time no later than transmittal of the reports to the Commission (030-07710/2001-003). At the time of the inspection, the licensee had not yet responded to the NRC regarding the violation. Accordingly, Violation 030-07710/2001-003 was not reviewed and is considered open.

5.3 Conclusions

The regulatory requirements of 10 CFR 20.1302(a) have been a challenge for the licensee, as evidenced by Notices of Violation issued to the licensee in 1997, 2004, and additional inspection findings identified for their failure to comply with this requirement. At the time of the inspection, the licensee had not yet responded to the NRC regarding the previously cited violation and the specific circumstances regarding Violation 030-07710/2001-005 were not reviewed. This violation is therefore considered open and will be reviewed during future NRC inspections. However, during this inspection, the inspector found that for the majority of locations reviewed, the licensee had the results of radiation measurements or had performed calculations such that the nuclear gauge storage facilities had been evaluated to demonstrate compliance with 10 CFR 20.1302(a). In a few instances, it appeared that the licensee's records of their analyses were lacking in sufficient detail to demonstrate compliance with the regulatory requirements of 10 CFR 20.1302(a). However, the licensee was in the process of implementing corrective action to help make their evaluations more consistent and more thoroughly documented.

In the March 2004 Notice, the NRC issued a finding of a Severity Level II problem for the licensee's willful failure to conduct operations so that the total effective dose equivalent to individual members of the public from licensed operations did not exceed 0.1 rem in a year (030-07710/2001-002) and a Severity Level III violation for the licensee's willful failure to provide copies of reports submitted to the Commission pursuant to the provisions of 10 CFR 20.2203, to identified members of the public at a time no later than transmittal of the reports to the Commission (030-07710/2001-003). At the time of the inspection, the licensee had not yet responded to the NRC regarding the violation. Accordingly, these violations were not reviewed and are considered open.

6 Maintenance of Portable Nuclear Gauges (87124)

6.1 Inspection Scope

This portion of the inspection consisted of interviews with licensee personnel and reviews of licensee documentation and records pertaining to the radiation safety program, observations of licensed activities, and independent radiation measurements at the licensee's facilities.

6.2 Observations and Findings

In the October 2003 Notice, a Severity Level IV violation was issued for the licensee's failure to perform surveys with a radiation detection instrument weekly during maintenance periods (030-07710/2001-010), as committed to by the licensee in its license. In its response to the violation, the licensee indicated that it had implemented a new policy regarding non-routine maintenance of nuclear gauges. Specifically, the licensee's contracted service provider would perform all non-routine maintenance of nuclear gauges onsite at the licensee's Anchorage facility once per year. At the time of the inspection, the statewide RSO was uncertain as to whether this policy would be enacted for all of the licensee's nuclear gauges or just the nuclear gauges used in the Anchorage vicinity. Because the inspector was not able to review the implementation of the licensee's corrective actions, Violation 030-07710/2001-010 is considered open and will be reviewed during future NRC inspections.

6.3 Conclusions

A Severity Level IV violation was issued in October 2003 for the licensee's failure to perform surveys with a radiation detection instrument weekly during maintenance periods, as committed to by the licensee in its license. Because the inspector was not able to review the implementation of the licensee's corrective action, Violation 030-07710/2001-010 is considered open and will be reviewed during future NRC inspections.

7 Corrective Actions

After the inspectors notified ADOT&PF management of their failure to discuss, during SCWE training, 10 CFR 30.7, "Employee Protection," and enforcement actions that may be taken against licensees and individuals who violate these requirements (Section IV, Condition 2.B. Items (1) and (3) of the Order), the licensee agreed to take corrective action. On September 28, 2004, the statewide RSO transmitted a memo to all attendees of the 2004 SCWE training. The memo noted that the training inadvertently omitted a discussion of 10 CFR 30.7, "Employee Protection," and a copy of the requirement was provided. Also included was a copy of the NRC's May 1996 Policy Statement, "Freedom of Employees in the Nuclear Industry to Raise Safety Concerns Without Fear of Retaliation." The statewide RSO also took the opportunity to more completely explain that the NRC had concluded that ADOT&PF violated this requirement, the result of which precipitated the Order and the training requirements therein. The memo also expressed that while ADOT&PF did not agree with the NRC on the finding of discrimination, ADOT&PF agreed to the Order because it would improve their safety culture. Enforcement actions taken against licensees who violate the NRC's

requirements were briefly discussed. When the inspectors reviewed the memo, they noted that it did not discuss enforcement actions that may be taken against individuals who violate the NRC's requirements. They notified the licensee and on September 29, 2004, the statewide RSO promptly sent another memo to all attendees of the 2004 SCWE training. The September 29, 2004, memo was transmitted by the statewide RSO but was routed through ADOT&PF's chief engineer, a member of the senior management team. The memo transmitted the same attachments and much of the same information as the earlier memo. However, a more thorough discussion of the types of enforcement actions that may be taken against licensees who violate the NRC's requirements was provided in the memo. The memo also described the types of enforcement actions that may be taken against individuals who violate the NRC's requirements .

8 Exit Meeting Summary

Preliminary inspection findings were discussed briefly with the Statewide Materials Engineer, Central Region Construction Engineer, Statewide RSO, Statewide Safety Officer, State of Alaska Assistant Attorney General, and other members of the licensee's staff at the conclusion of the onsite portion of the inspection on September 17, 2004. A final telephonic briefing was conducted with the Chief Engineer, Statewide Materials Engineer, Statewide RSO, State of Alaska Assistant Attorney General, and a representative of ECPF on January 10, 2005.

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

Licensee

Gary Hogins, Chief Engineer
Thomas Moses, Regional Construction Engineer
Michael San Angelo, Statewide Materials Engineer
Dan Monteleone, Statewide Safety Officer
Robert Lewis, Quality Assurance Engineer
Greg Christensen, Statewide Radiation Safety Officer
Jim Kelbesadel, Regional Radiation Safety Officer
Frank Ganley, Regional Radiation Safety Officer
John Dart, Alternate Regional Radiation Safety Officer

INSPECTION PROCEDURES USED

87124 Fixed and Portable Gauge Programs

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

030-07710/2004-001 VIO Failure to discuss, during SCWE training, 10 CFR 30.7, "Employee Protection," and enforcement actions that may be taken against licensees and individuals who violate these requirements. [Section IV, Condition 2.B.(1) and (3) of the Confirmatory Order].

Discussed

030-07710/2001-002 VIO Failure to conduct operations so that the total effective dose to individual members of the public did not exceed 0.1 rem [10 CFR 20.1301(a)(1)].

030-07710/2001-003 VIO Failure to provide a copy of the reports submitted to the NRC to the individual members of the public at a time no later than the transmittal to the NRC [10 CFR 20.2205].

030-07710/2001-005 VIO Failure to make or cause to be made, as appropriate, surveys of radiation levels in unrestricted and controlled areas to demonstrate compliance with the dose limits for individual members of the public in accordance with 10 CFR 20.1301 [10 CFR 20.1302(a)].

030-07710/2001-007 VIO Failure to advise each worker annually of the worker's dose as shown in records maintained by the licensee pursuant to 10 CFR 20.2106 [10 CFR 19.13(b)].

030-07710/2001-010 VIO Failure to comply with the terms and conditions of the license by failing to perform surveys with a radiation detection instrument weekly during maintenance periods [License Condition 17].

030-07710/1997-001 VIO Failure to comply with 10 CFR 20.1302(a). The licensee had stored nuclear gauges in a controlled area adjacent to an unrestricted area occupied by a member of the public and had not conducted a survey to demonstrate compliance with the annual dose limit in 10 CFR 20.1301 [10 CFR 20.1302(a)].

Closed

030-07710/2001-008 VIO Failure to post notices to workers as required [10 CFR 19.11(a)].

LIST OF ACRONYMS USED

ADOT&PF	Alaska Department of Transportation & Public Facilities
CFR	Code of Federal Regulations
ECPF	Employee Concerns Program Forum, Inc.
NRC	Nuclear Regulatory Commission
RSO	Radiation Safety Officer
SCWE	Safety Conscious Work Environment
VIO	Violation