



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
2100 RENAISSANCE BLVD.  
KING OF PRUSSIA, PA 19406-2713

July 16, 2018

EA-18-043  
NMED NO. 180161

Ish Sparkman  
Director of Plastics Operations – Keyser  
Automated Packing Systems, Inc.  
58 Industrial Lane  
Keyser, WV 26726

SUBJECT: AUTOMATED PACKING SYSTEMS, INC. - NRC REACTIVE INSPECTION  
REPORT 99990001/2018001

Dear Mr. Sparkman:

This letter refers to the inspection conducted on April 5, 2018, at your Keyser, West Virginia facility and in office review through June 6, 2018. The purpose of the inspection was to review the circumstances associated with a lost gauge containing a sealed source reported to the NRC on March 28, 2018. The enclosed report presents the results of this inspection. The inspector discussed the preliminary inspection findings with you and Chris Knox, Corporate EH&S Manager of your company at the conclusion of the on-site portion of the inspection. A final exit briefing was conducted (telephonically) with you and Chris Knox on June 6, 2018.

Based on the results of this inspection, five apparent violations were identified, two of which are being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The two items being considered for escalated enforcement action are: (1) the improper transfer or disposal of the missing gauge; and (2) providing incomplete and inaccurate information to the NRC due to a failure to perform a required annual inventory that could have identified the missing gauge in a more timely manner. These apparent violations are discussed in Section 2 of the enclosed report. The remaining three violations being considered for non-escalated enforcement are: (3) failure to perform leak tests and testing of the on-off mechanism as required; (4) failure to maintain records for leak and the on-off mechanism tests; and (5) failure to lock the shutter and perform quarterly inventories of a standby gauge. The two apparent violations are discussed in Section 3 of the report. The circumstances surrounding all of the apparent violations, the significance of the issues, and the need for lasting and effective corrective action were discussed with members of your staff at the inspection exit meeting on June 6, 2018. As a result, it may not be necessary to conduct a pre-decisional enforcement conference in order to enable the NRC to make an enforcement decision.

Since one of the apparent violations involves the loss of a 150 millicurie americium 241 source, the NRC is considering proposing imposition of a civil monetary penalty. Section 2.3.4, Civil Penalty, of the NRC Enforcement Policy states that for violations where a licensee has lost

required control of its regulated licensed material for any period of time, the NRC normally will impose at least a base civil penalty. The base civil penalty amount is based on approximately three times the expected average cost of authorized disposal. In this case, in accordance with Tables A and B in Section 8 of the Enforcement Policy, for a source of the type and amount of radioactive material involved, the NRC would propose a civil penalty of \$8500. However, the NRC may exercise discretion to mitigate or escalate a civil penalty amount based on the merits of a specific case. Therefore, you may provide information regarding the actual expected cost of authorized disposal that you believe the NRC should consider in making a final enforcement decision. However, the NRC will not normally decrease the civil penalty to an amount below the lowest base civil penalty for such cases (i.e., \$3500).

Before the NRC makes its enforcement decision, we are providing you an opportunity to offer your perspective on this matter and provide any information you believe the NRC should take into consideration. You can elect to provide such information by either: (1) responding to the apparent violations in writing within 30 days of the date of this letter, (2) requesting a Pre-decisional Enforcement Conference (PEC) to meet with the NRC and present your views in person, or (3) requesting Alternative Dispute Resolution (ADR). Alternately, you may choose to accept the apparent violations as characterized in this letter and its enclosure, in which case the NRC will proceed with an enforcement decision.

If you choose to provide a written response, it should be clearly marked as a "Response to Apparent Violations in NRC Inspection Report 99990001/2018001; EA-18-043," and should be sent to the NRC's Document Control Center, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, with a copy mailed to James M. Trapp, Director, DNMS, Region I, 2100 Renaissance Boulevard, Suite 100, King of Prussia, PA 19406-2713, within 30 days of the date of this letter.

If you choose to request a PEC, the meeting should be held in our office in King of Prussia, PA, within 30 days of the date of this letter. The conference will afford you an opportunity to provide your perspective on these matters and any other information that you believe the NRC should take into consideration before making an enforcement decision. The topics discussed during the PEC may include information to determine whether a violation occurred, information to determine the significance of a violation, information related to the identification of a violation, and information related to any corrective actions taken or planned. The PEC would be open for public observation, and the NRC would issue a press release to announce the conference time and date, in accordance with Section 2.4, "Participation in the Enforcement Process," of the NRC Enforcement Policy.

In lieu of a PEC or written response, you may request ADR with the NRC in an attempt to resolve this issue. ADR is a general term encompassing various techniques for resolving conflicts using a neutral third party. The technique that the NRC has decided to employ is mediation; a voluntary, informal process in which a trained neutral mediator works with parties to help them reach resolution. If the parties agree to use ADR, they select a mutually agreeable neutral mediator who has no stake in the outcome and no power to make decisions. Mediation gives parties an opportunity to discuss issues, clear up misunderstandings, be creative, find areas of agreement, and reach a final resolution of the issues. Additional information concerning the NRC ADR program can be obtained at <http://www.nrc.gov/about-nrc/regulatory/enforcement/adr.html>. The Institute on Conflict Resolution (ICR) at Cornell University has agreed to facilitate the NRC program as a neutral third party. Please contact ICR at 877-733-9415 within 10 days of the date of this letter if you are interested in pursuing

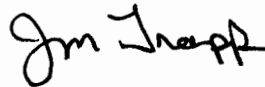
resolution of this issue through ADR. The ADR mediation session should be held in our Region I office in King of Prussia within 45 days of the date of this letter. The mediation session would be closed to public observation, but the time and date would be publicly-announced.

Please contact Arthur Burritt at 610-337-5069 within 10 days of the date of this letter to notify the NRC which of the above options you choose. If you do not contact the NRC within the time specified, and an extension of time has not been granted by the NRC, the NRC will proceed with its enforcement decision.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

If you have any questions concerning this matter, please contact Dennis Lawyer of my staff at 610-337-5366.

Sincerely,



James M. Trapp, Director  
Division of Nuclear Materials Safety

Docket No. 99990001  
License No. GL-657303-19

Enclosure:  
Inspection Report 99990001/2018001

cc w/Encl: Chris Knox, Corporate EH&S  
State of West Virginia

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Inspection Report 99990001/2018001

cc w/Encl: Chris Knox, Corporate EH&S  
State of West Virginia

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Sincerely,

James M. Trapp, Director  
Division of Nuclear Materials Safety

Docket No. 99990001  
License No. GL-657303-19

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Inspection Report 99990001/2018001

cc w/Encl: Chris Knox, Corporate EH&S  
State of West Virginia

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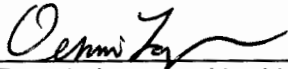
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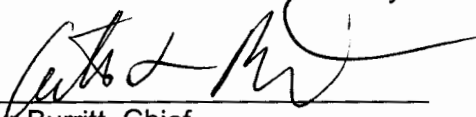
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DATE								

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

INSPECTION REPORT

Inspection No. 99990001/2018001  
EA No. EA-18-043  
Event No. 53296  
NMED No. 180161  
Docket No. 99990001  
License No. GL-657303-19  
Licensee: Automated Packaging Systems, Inc.  
Address: 58 Industrial Lane  
Keyser, West Virginia 26726  
Inspection Dates: April 5, 2018 through June 6, 2018

Inspector:  6/27/18  
Dennis Lawyer, Health Physicist  
Commercial, Industrial, R&D and  
Academic Branch  
Division of Nuclear Materials Safety  
date

Approved By:  6/27/18  
Arthur Burritt, Chief  
Commercial, Industrial, R&D and  
Academic Branch  
Division of Nuclear Materials Safety  
date

Enclosure

## EXECUTIVE SUMMARY

Automated Packaging Systems, Inc.  
NRC Inspection Report No. 99990001/2018001

This was a reactive, announced inspection to review the loss of a gauge containing a sealed source (Event number 53296) (NMED 180161). Automated Packaging Systems, Inc. (APS) possessed the gauge under the general license of Title 10 Code of Federal Regulations (10 CFR) 31.5. While reviewing information from the gauge manufacturer, NDC Technologies, APS determined that a thickness gauge containing a 150 millicurie americium-241 (Am-241) source was missing. After a prompt and extensive search by APS, the general licensee notified the NRC of the loss on March 28, 2018.

The NRC conducted an on-site inspection on April 5, 2018, with continued office review through June 6, 2018. The inspector reviewed the events surrounding the loss of the source and the general license requirements for all other APS gauges. The inspector also reviewed actions taken by APS in response to the loss, including the manner in which APS investigated its cause and developed the corrective actions documented in their report dated April 25, 2018 (ML18158A136). APS determined the root cause to be the lack of knowledge transfer of general license requirements. The inspector concluded that the thickness gauge, which has not been recovered, was most likely transferred to a scrap metal yard.

Five apparent violations of NRC regulations were identified, two of which are being considered for escalated enforcement action: (1) the improper transfer or disposal of the missing gauge; and (2) providing incomplete and inaccurate information to the NRC by failure to perform the required physical inventory. The remaining three violations being considered for non-escalated enforcement are: (3) failure to perform leak tests and testing of the on-off mechanism as required; (4) failure to maintain records of leak tests and testing of the on-off mechanism; and (5) failure to lock the shutter and inventory a standby gauge.

APS implemented the following corrective actions: They developed a new procedure, APS-SPP-S17, "Ionizing Radiation" which places some of the general license required activities into a procedure for the staff to follow. The procedure includes requirements for training, additional posting, quarterly inventory, and personnel responsibility. APS locked the shutter of the standby gauge, placed this device in an appropriate container, and locked it in its own specified area which is accessible to only a few individuals. APS contracted with Perma-Fix Environmental Services (Perma-Fix) as a consultant to provide radiological support services to APS Facilities. Perma-Fix will service, test, and maintain all radiological equipment at the Keyser facility.

## REPORT DETAILS

### **1. Program Overview**

The inspector used the Inspection Procedure 87103, the event report, records of the registration reports from the licensee in the Agency-wide Documents Access and Management System (ADAMS), records from the NRC general license tracking system, and licensee documents and records, to perform the inspection.

#### 1.1 Inspection Scope

The inspector interviewed Automated Packaging Systems, Inc. (APS) staff and observed facilities to determine the management and use of the gauges by the licensee.

#### 1.2 Observations and Findings

Automated Packaging Systems, Inc. (APS) is authorized by 10 CFR 31.5, a general license, to possess and use byproduct material contained in devices designed and manufactured for the purpose of detecting, measuring, gauging, or controlling thickness. APS manufactures bags and bagging systems for world-wide sale and distribution and has two manufacturing plants in Keyser, West Virginia. At one such plant, the company possessed four generally-licensed devices, all of which are fixed gauges manufactured by NDC Technologies (NDC). Three of the devices are Model-103 gauges, which contain a 150 millicurie (mCi) americium-241 (Am-241) sealed source and are used on process lines to measure product thickness. These gauges require annual registration with the NRC in accordance with 10 CFR 31.5(c)(13), because they contain more than 1 mCi of Am-241. The other device is a Model-302 gauge, which contains a sealed source of up to 200 mCi of krypton-85 gas, and is used on process lines for measuring product weight. This gauge does not require registration. The individual accountable for the general license program is the Extrusion Manager. The Extrusion Manager reports to the plant manager.

### **2. Inspection Findings for the Loss of a Gauge**

#### 2.1 Inspection Scope

The inspector interviewed APS personnel and reviewed documents and records to determine the sequence of events that led to the loss of a gauge. The inspector reviewed corrective actions initiated by the licensee. Documents reviewed included the initial event report, the registration reports from the licensee in Agencywide Documents Access and Management System (ADAMS); Automated Packaging Systems Safety Policies & Procedures, APS-SPP-S17; the licensee report dated April 25, 2018; and the NDC Technologies letter dated December 13, 2017.

#### 2.2. Observations and Findings

A reactive inspection was performed on April 5, 2018, for the APS facility located in Keyser, West Virginia. The following is a sequence of events associated with the lost source.



The Extrusion Manager is the responsible individual for the gauges possessed under a general license. The Extrusion Manager who worked in the position up to 2012 had been knowledgeable about the general license requirements. However, in 2012, he was demoted from the position, and then his replacement was abruptly terminated before February 2013 and was replaced by a different individual. No knowledge transfer was performed to get the new manager knowledgeable about the general license program requirements.

In November 2016, a production line was upgraded. As a result, the NDC Technologies, Model 103 fixed gauge, serial number 12131 containing a 150 millicurie Am-241 source SN 7199Q, was removed from service. This device was placed in a container along with other parts and scrap metal from the project.

In early 2017, the site performed cleanup operations, called "Kaizen" or "6 Sigma" which is designed to remove unneeded materials.

Based on the above two activities, the company practice was to take the material from the containers and either recycle the metal, dispose of trash, or place re-usable items in the inventory for spare parts. Since this NDC gauge was metallic, APS personnel believe it most likely went into scrap metal or inventory. Based on interviews, radiation readings, and licensee actions, the inspector concluded that the device most likely left the facility in late 2016 to January 2017 in the form of scrap metal.

On May 1, 2017, the current Extrusion Manager signed the forms for the three gauges possessed under a general license which are required to be registered annually with the NRC. The registration form requires confirmation that a physical inventory of the gauge was performed. However, APS staff stated that the form was signed without having performed the physical inventory; the manager stated that he did not observe the gauge or the labels, so it is unknown if the missing gauge was actually present at the APS facility in May 2017.

NDC Technologies, the manufacturer of the devices used by APS, mailed to APS a letter noting the age of the sources, a check-off sheet similar to a self-assessment, and a summary of general licensee requirements. Because the letter was addressed to the previous Extrusion Manager who was demoted in 2012, and subsequently left the company, it was not delivered to the appropriate manager. Instead, it eventually was forwarded to the Safety Department, who directed it to the plant manager at the Keyser Facility.

While reviewing the information provided by NDC Technologies, APS identified that the gauge was missing during March 2018. They obtained a 2x2 sodium iodide radiation detector suitable for searching for Am-241 and used it to search their facility and inventory. APS checked with their scrap transporter to determine where scrap was taken. They learned that the scrap yard used a detector system but had not detected any radioactive material from the scrap transporter. APS also went to another location where scrap metal may have been transported, and searched it with the sodium iodide radiation detector, but could not find the missing gauge.

APS notified the NRC of the missing gauge on March 28, 2018.

APS determined the root cause of the event to be a lack of knowledge transfer associated with the general license program. From 1998 through early 2012, the APS employee responsible for the gauges was the Extrusion Manager. That individual had been knowledgeable about the general license requirements. However, in 2012, he was demoted from the position, and his replacement was abruptly terminated before February 2013. The current Extrusion Manager received no knowledge transfer from his predecessors and was not aware of the general license requirements.

As a result of the loss of the gauge, APS developed a "Safety Policies and Procedures" document, APS-SPP-S17, "Ionizing Radiation." This document places some of the general license required activities into a procedure for the staff to follow. The procedure requires APS staff to implement training, additional posting, quarterly inventory requirements, and personnel responsibility. APS has contracted with Perma-Fix Environmental Services (Perma-Fix) to come in annually to perform an inventory, verify serial numbers, and verify labels prior to sending in the annual registration.

### 2.3. Conclusions

The following two apparent violations of NRC regulations were identified, and are being considered for escalated enforcement action:

- A. 10 CFR 31.5(a) states, in part, that a general license is issued to commercial and industrial firms to acquire, receive, possess, use or transfer, byproduct material contained in devices designed and manufactured for the purpose of detecting, measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage, or qualitative or quantitative chemical composition, or for producing light or an ionized atmosphere.

10 CFR 31.5(c)(8)(i) requires, in part, that any person who acquires, receives, possesses, uses or transfers byproduct material in a device pursuant to the general license in paragraph (a) of this section shall transfer or dispose of the device containing byproduct material only by export as provided by paragraph (c)(7) of this section, by transfer to another general licensee as authorized in paragraph (c)(9) of this section, or to a person authorized to receive the device by a specific license issued under parts 30 and 32 of this chapter, or part 30 of this chapter that authorizes waste collection, or equivalent regulations of an Agreement State, or as otherwise approved under paragraph (c)(8)(iii) of this section.

Contrary to the above, as of November 2016, APS (a general licensee) did not transfer or dispose of a device containing byproduct material only by export as provided by paragraph (c)(7) of this section, by transfer to another general licensee as authorized in paragraph (c)(9) of this section, or to a person authorized to receive the device by a specific license issued under parts 30 and 32 of this chapter, or part 30 of this chapter that authorizes waste collection, or equivalent regulations of an Agreement State, or as otherwise approved under paragraph (c)(8)(iii) of this section. Specifically, APS possessed a 150 mCi Am-241 source contained in a device (a fixed gauge distributed under a general license), did not transfer the gauge in accordance with the requirements, and can no longer account for the gauge.

- B. 10 CFR 31.2 states, in part, that general licenses provided in this part are subject to the general provisions of Part 30 of this chapter (Secs. 30.1 through 30.10).

10 CFR 30.9(a) states, in part, that information provided to the Commission by a licensee shall be complete and accurate in all material respects.

10 CFR 31.5(c)(13) states, in part, that any person who acquires, receives, possesses, uses or transfers byproduct material in a device pursuant to the general license in paragraph (a) of this section shall register devices containing at least 1 millicuries of americium-241 annually with the Commission, and shall furnish information about each device including certification by the responsible representative of the general licensee that the information has been verified through a physical inventory and checking of label information.

Contrary to the above, on May 1, 2017, APS (a general licensee) provided information to the Commission that was not complete and accurate in all material respects. Specifically, APS, a general licensee that possessed or used three devices containing at least 1 millicurie of americium-241, submitted a registration form with information about each device including certification by the responsible representative of the general licensee that the information had been verified through a physical inventory and checking of label information. However, the information had not been verified through a physical inventory and checking of label information because one of the listed devices had been missing since approximately January 2017.

### **3. Inspection Findings for the Other Gauges under the General License**

#### **3.1 Inspection Scope**

Because APS did not have any records associated with the general licensed material program, and they stated that the annual registration was done incorrectly, the inspection was expanded to review requirements under 10 CFR 31.5. The inspector interviewed personnel, reviewed the inventory of all generally licensed material, and performed radiation readings of gauges possessed by APS during the inspection to determine if all other gauges reported to be possessed under the general license were present, and managed as required.

#### **3.2. Observations and Findings**

The inspector compared the inventory of all other general-licensed gauges present at APS and found that all other gauges were listed in the NRC's general license tracking system.

The licensee had one NDC Technologies Model 103 device as a standby unit. The shutter of the device was not locked, and the gauge was not being inventoried quarterly as required under the general license. Prior to the inspection, APS had secured this device in its own locked area, which was accessible to only a few people. They wrote a procedure to perform quarterly inventories on all generally licensed devices. As a result of the inspection, APS locked the shutter.

The inspector performed a survey of the standby Model 103 devices using a Ludlum Model # 2401-EC survey meter, NRC Serial Number 32695G, calibration expiration date June 20, 2018. The readings were 0.3 milliroentgen per hour (mR/hr) on contact with the shutter closed and 0.2 mR/hr at 5 centimeters from the closed shutter. The reading was very directional with only a small area with detectable readings. All readings on the side of the device were less than 0.1 mR/hr. Based on these readings, the inspector believed that a typical radiation detector at a scrap yard would not have detected this device. The device could be in any configuration and easily shielded by other metals.

There were no records of leak tests or shutter tests for any of the gauges. Licensee staff stated that they were unaware of any leak testing done since 2012. They assumed that leak tests had been completed before 2012 as the Extrusion Manager was knowledgeable about the requirements. APS staff also stated that shutter tests were not performed to their knowledge.

APS is now utilizing Perma-Fix as a consultant to provide radiological support services to APS Facilities. APS management stated that they currently plan to have Perma-Fix service, test, and maintain all radiological equipment at the Keyser facility in the future. Perma-Fix completed leak tests of the gauges at the facility and results were acceptable.

### 3.3. Conclusions

The following three apparent violations are not being considered for escalated enforcement.

- C. 10 CFR 31.5(a) states, in part, that a general license is issued to commercial and industrial firms to acquire, receive, possess, use or transfer, byproduct material contained in devices designed and manufactured for the purpose of detecting, measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage, or qualitative or quantitative chemical composition, or for producing light or an ionized atmosphere.

10 CFR 31.5(c)(2) states, in part, that any person who acquires, receives, possesses, uses or transfers byproduct material in a device pursuant to the general license in paragraph (a) of this section shall assure that the device is tested for leakage of radioactive material and proper operation of the on-off mechanism and indicator, if any, at no longer than six-month intervals or at such other intervals as are specified in the label.

Labels for two NDC Technologies Model-103 gauges require that the devices be tested for leakage of radioactive material at least every three years and proper operation of the on-off mechanism and indicator at least every six months. The label for the NDC Technologies Model-302 gauge, containing up to 200 mCi of krypton-85, required testing of the on-off mechanism and indicator at no longer than six-month intervals.

Contrary to the above, as of April 5, 2018, APS (a general licensee) did not assure that its devices were tested for leakage of radioactive material and proper operation of the on-off mechanism and indicator at no longer than six-month intervals or at such other intervals as are specified in the label. Specifically, APS

used two NDC Technologies Model-103 gauges, each containing 150 mCi of americium-241, and did not assure that the devices were tested for leakage of radioactive material and proper operation of the on-off mechanism and indicator at the interval specified in the label (3 years for leakage and 6 months for on-off mechanism); and used one NDC Technologies Mode-302 gauge, containing up to 200 mCi of krypton-85, and did not assure proper operation of the on-off mechanism and indicator at no longer than six-month intervals.

- D. 10 CFR 31.5(c)(4) requires, in part, that any person who acquires, receives, possesses, uses or transfers byproduct material in a device pursuant to the general license in paragraph (a) of this section shall maintain records showing compliance with the requirements of 31.5(c)(2). The licensee shall retain each record of a test for leakage or radioactive material for three years after the next required leak test is performed or until the sealed source is transferred or disposed of and each record of a test of the on-off mechanism and indicator for three years after the next required test of the on-off mechanism and indicator is performed or until the sealed source is transferred or disposed of.

Contrary to the above, as of April 5, 2018, APS (a general licensee) possessed byproduct material in four devices pursuant to the general license in paragraph (a) of this section and did not maintain records showing compliance with the requirements of 31.5(c)(2). Specifically, APS possessed three NDC Technologies Model-103 gauges, each containing 150 mCi of americium-241, and one NDC Technologies Model-302 gauge, containing up to 200 mCi of krypton-85, and did not retain any records of past tests for leakage of radioactive material or of tests of the on-off mechanisms and indicators.

- E. 10 CFR 31.5(c)(15) states, in part, that any person who acquires, receives, possesses, uses or transfers byproduct material in a device pursuant to the general license in paragraph (a) of this section may not hold devices that are not in use for longer than 2 years. If devices with shutters are not being used, the shutter must be locked in the closed position. Devices kept in standby for future use are excluded from the two-year time limit if the general licensee performs quarterly physical inventories of these devices while they are in standby.

Contrary to the above, as of April 5, 2018, APS (a general licensee) possessed byproduct material in a device pursuant to the general license in paragraph (a) of this section that was not in use for longer than 2 years; did not lock the shutter on the device in the closed position; and did not perform quarterly physical inventory of the device. Specifically, APS possessed a generally-licensed NDC Technologies Model-103 thickness gauge containing 150 millicuries of americium-241, into standby for more than two years; stored the gauge without locking the shutter closed; and did not perform quarterly inventories of this gauge.

#### **4.0 Exit Meeting**

The inspector conducted a telephonic exit meeting with the Director of Plastic Operations - Keyser and the Environmental Health & Safety Manager on June 6, 2018. Licensee representatives acknowledged the inspector's findings. No proprietary information was identified.

## **PARTIAL LIST OF PERSONS CONTACTED**

\*#Ish Sparkman, Director of Plastic Operations - Keyser  
\*#Chris Knox, Corporate EH&S Manager  
Justin Secrist, Extrusion Manager  
Zane Emerick, Maintenance Supervisor  
Robert Fleming, Maintenance

\* Present at Entrance Meeting  
# Present at Exit Meeting

## **INSPECTION PROCEDURES USED**

IP 87103 "Inspection of Material Licensees Involved in an Incident or Bankruptcy Filing"

## **LIST OF ACRONYMS AND ABBREVIATIONS USED**

ADAMS	Agency wide Documents Access and Management System
Am-241	Americium 241
APS	Automated Packaging Systems, Inc.
CFR	Code of Federal Regulations
EH&S	Environmental Health and Science
mCi	millicurie
mR/hr	milliroentogen per hour
NDC	NDC Technologies
NMED	Nuclear Material Events Database
NRC	Nuclear Regulatory Agency
Perma-Fix	Perma-Fix Environmental Services