

May 3, 2006

Docket No. 03031956
EA No. 06-026

License No. 37-28586-01

Mr. Gus Hutras
Plant Manager
Epsilon Products Company
P.O. Box 432
Marcus Hook, PA 19061

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -
\$16,250 (NRC Inspection Report No. 030-31956/2005-002)

Dear Mr. Hutras:

This letter refers to the NRC inspection conducted at your facility in Marcus Hook, Pennsylvania from August 30, 2005, through December 16, 2005, in response to an event you reported to the NRC Operations Center on August 27, 2005. The inspection included visits to your facility, telephone discussions with members of your staff, and review of documents, including those describing your corrective actions. During the inspection, six apparent violations of NRC requirements were identified resulting in radiation exposures in excess of NRC regulatory limits to five employees and contractors (members of the public), and a substantial potential for others to receive exposures to radiation in excess of the regulatory limit. The results of the inspection, including the apparent violations, were discussed with Christopher Bland of your staff during an exit meeting on December 16, 2005, and were described in an NRC letter and inspection report sent to you on March 1, 2006.

In the March 1, 2006, letter, the NRC informed you that these apparent violations were being considered for escalated enforcement action and provided you an opportunity to attend a Predecisional Enforcement Conference (PEC) to discuss the violations. Subsequently, on March 15, 2006, the NRC conducted a PEC in the NRC Region I office with David C. Kurland, Senior Counsel for Epsilon and other representatives of your company to discuss the apparent violations, their significance, their root causes and your corrective actions.

Based on the information developed during the inspection, and the information your representatives provided during the PEC, the NRC has determined that six violations of NRC requirements occurred. The violations are cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) and the circumstances surrounding them are described in detail in the subject inspection report. The most significant violation involved the radiation exposure of five employees and contractors, who were not radiation workers (and therefore considered members of the public). These individuals received radiation doses in excess of the regulatory limit of 100 millirem in a year. The doses ranged from 103 millirem to 197 millirem.

The receipt of radiation doses in excess of regulatory limits occurred when personnel entered a chemical reactor vessel at a time when a sealed source containing cesium-137, used in an Ohmart fixed gauge (Model SHLM-CR-3) attached to the vessel, was not in the shielded position as expected. Your investigation determined that the cesium-137 sealed source separated from the cable used to retract the source because the set pin that holds the shutter in the open position to prevent the shutter from damaging the source extension cable during source exposure and retraction had been missing for some time. The unshielded source was not initially detected because of an inadequate radiation survey performed by one of your Instrument and Electrical Technicians. As a result of the failure to conduct an adequate survey, and the fact that the source was unshielded and went undetected for a period of five days, five members of the public received doses in excess of the regulatory limit.

The following additional violations were identified during the inspection: (1) failure to conduct operations such that the dose in an unrestricted area from external sources, did not exceed 0.002 rem in any one hour; (2) failure to make appropriate surveys in unrestricted and controlled areas; (3) failure to provide appropriate training to an authorized user; (4) failure to conduct adequate physical inspections of the fixed gauge at the required 6-month interval; and (5) failure to develop, and implement operating and emergency procedures that included instructions for testing each gauge for proper operation of the on-off shutter mechanism at intervals not to exceed six months.

While none of the employees received a radiation exposure that is considered harmful (i.e., the highest estimated dose was 197 millirem, which is approximately 4 percent of the annual allowable dose for radiation workers), the NRC considers the failure to control radiation doses within regulatory limits to any individuals who are considered members of the public a serious matter. This violation is categorized as a Severity Level III violation in accordance with Supplement IV.C.4. of the Enforcement Policy. In addition, there are five additional related violations that contributed to the five individuals receiving dose in excess of the limit, as well as creating the potential for others to receive doses in excess of the regulatory limit. Therefore, the five additional violations are categorized as a severity Level III problem in accordance with the NRC Enforcement Policy.

In accordance with the NRC Enforcement Policy, a base civil penalty in the amount of \$3,250 is considered for a Severity Level III violation or problem. With respect to the violation involving the failure to control exposures to members of the general public to below regulatory limits, because your facility has not been the subject of escalated enforcement action within the last two years or two inspections, the NRC considered whether credit was warranted for Corrective Action in accordance with the civil penalty assessment process in Section VI.C.2 of the Enforcement Policy. Credit for corrective actions is warranted because your corrective actions were considered comprehensive at the time of the PEC. These corrective actions included: (1) removing the gauge from service; (2) conducting a review of the entire radiation safety program and recommending the revision and/or development of radiation safety procedures; (3) implementing these revised procedures (which were submitted to the NRC on November 30, 2005) incorporating the process for performing adequate radiation surveys for various types of activities, on January 15, 2006; and (4) taking steps to assure that only appropriately trained staff function as authorized users.

Therefore, since Epsilon has not been the subject of escalated action in the two years preceding this incident, and because credit is warranted for corrective actions, a civil penalty would not normally be proposed. However, given the importance that NRC attaches to protecting members of the public from radiation exposures, the NRC has decided to exercise discretion, as provided for in Section VII.A.1(b) of the Enforcement Policy, to assess a separate \$3,250 base civil penalty for each of the five radiation overexposures. This results in a civil penalty of \$16,250, as set forth in Section I of the enclosed Notice.

With respect to the Severity Level III problem involving the other five violations, the NRC considered whether credit was warranted for Corrective Action in accordance with the civil penalty assessment process in Section VI.C.2 of the Enforcement Policy. For the reasons already described herein, credit for corrective actions is warranted. Therefore, no civil penalty has been assessed for this Severity Level III problem.

Therefore, to emphasize the importance of preventing unnecessary radiation exposures to members of the public, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Materials, Research, State and Compliance Programs, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of \$16,250 for the Severity Level III violation described in Section I of the enclosed Notice. In addition, issuance of this Notice constitutes escalated enforcement action, which may subject Epsilon to increased inspection effort.

The NRC has concluded that the provisions of 10 CFR 2.201, (i.e., the information regarding the reasons for the violations, the corrective actions taken and planned to correct the violations and prevent recurrence, and the date when full compliance was achieved), is already adequately addressed (1) in this letter; (2) in additional information you provided on September 6, 2005, October 3, 2005, October 24, 2005, and November 30, 2005; (3) in the inspection report issued on March 1, 2006; and (4) during the March 15, 2006 PEC. Therefore, although you are required to provide a response to the enclosed Notice of Violation and Proposed Imposition of Civil Penalty, you are not required to address the provisions of 10 CFR 2.201 unless the descriptions therein do not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, 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 Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public

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Electronic Reading Room). 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. The NRC also includes significant enforcement actions on its web site at <http://www.nrc.gov>; select What We Do, Enforcement, then Significant Enforcement Actions.

Sincerely,

/RA/

Samuel J. Collins
Regional Administrator

Enclosures:

1. Notice of Violation and Proposed Imposition of Civil Penalty
2. NUREG/BR-0254 Payment Methods (Licensee only)

cc:

Christopher Bland, Health, Environmental & Safety Manager
Wayne Applegate, Radiation Safety Officer
Commonwealth of Pennsylvania

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ENCLOSURE

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY

Epsilon Products Company
Marcus Hook, Pennsylvania

Docket No. 030-31956
License No. 37-28586-01
EA-06-026

During an NRC inspection conducted at the Epsilon Products Company in Marcus Hook, Pennsylvania from August 30, 2005, through January 17, 2006, six violations of NRC requirements were identified. The violations were discussed at an exit meeting on December 16, 2005. In accordance with the NRC Enforcement Policy, the NRC proposes to impose a civil penalty pursuant to Section 234 of the Atomic Energy Act of 1954, as amended (Act), 42 U.S.C. 2282, and 10 CFR 2.205. In accordance with the NRC Enforcement Policy, the violations and associated civil penalty are listed below:

I. VIOLATION INVOLVING RADIATION DOSES IN EXCESS OF REGULATORY LIMITS

10 CFR 20.1301(a)(1) requires, in part, that each licensee conduct operations so that the total effective dose equivalent to individual members of the public from licensed operations does not exceed 0.1 rem in a year.

Contrary to the above, during the period of August 23 through 27, 2005, the licensee failed to conduct operations such that the total effective dose equivalent to individual members of the public from licensed operations did not exceed 0.1 rem in a year. Specifically, five members of a cleaning and maintenance crew (who are considered members of the public) employed by the licensee, received estimated doses ranging from 0.103 to 0.197 rem. These doses were in excess of the regulatory limit of 0.1 rem in a year.

This is a Severity Level III violation (Supplement IV).
Civil Penalty - \$16,250 (A base civil penalty is proposed for each over exposure (5 X \$3,250))

II. VIOLATIONS THAT CONTRIBUTED TO FIVE INDIVIDUALS RECEIVING DOSES IN EXCESS OF REGULATORY LIMITS AND CREATED A SUBSTANTIAL POTENTIAL FOR THREE OTHER INDIVIDUALS TO RECEIVE DOSES IN EXCESS OF REGULATORY LIMITS

A. 10 CFR 20.1301(a)(2) requires, in part, that each licensee conduct operations so that the dose in any unrestricted area from external sources, does not exceed 0.002 rem in any one hour.

Contrary to the above, during the period of August 23 through 27, 2005, the licensee failed to conduct operations such that the dose in an unrestricted area from external sources, did not exceed 0.002 rem in any one hour. Specifically, five individuals employed by the licensee who are considered members of the

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public had access to an unrestricted area where an unshielded radiation source was located, and received radiation doses from that source in excess of 0.002 rem in any one hour.

- B. 10 CFR 20.1501 requires, in part, that each licensee make or cause to be made, surveys that may be necessary for the licensee to comply with the regulations in 10 CFR Part 20 and that are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels; concentrations or quantities of radioactive material; and potential radiological hazards.

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.

Contrary to the above, as of August 22, 2005, the licensee did not make or cause to be made, surveys that were reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and potential radiological hazards. Specifically, adequate surveys were not made in (a) the areas surrounding Chemical Reactor Vessel #2, where dose rates as high as 5 rem per hour may have existed, and (b) the actual work area where dose rates as high as 0.060 rem per hour existed. Although measurements were made, they failed to identify the increased radiation levels because the measurements were made on the fourth level of the chemical reactor vessel and not in the vicinity of the source holder.

- C. Condition 11 of License No. 37-28586-01 requires, in part, that licensed material be used by or under the supervision of individuals who have received the training described in the licensee's application dated February 13, 2001, and have been designated in writing by the Radiation Safety Officer.

Item 7.2 of the licensee's application dated February 13, 2001, requires, in part, that authorized users successfully complete the training described in Section 8.7.2, entitled, "Authorized Users," of NUREG-1556, Volume 4, dated October 1998. Section 8.7.2 requires, in part, that an authorized user successfully complete the fixed gauge manufacturer's or distributor's course for users, or an equivalent course that meets the criteria in Appendix G of NUREG-1556, Volume 4, which requires, in part, that an authorized user be provided training in operating, emergency, and lock out procedures.

Contrary to the above, as of August 27, 2005, an authorized user did not successfully complete a fixed gauge manufacturer's or distributor's course for users, or an equivalent course that met the criteria in Appendix G of NUREG-1556, Volume 4. Specifically, an individual acting as an authorized user, did not receive appropriate training in the operating, emergency and lock out procedures. The individual was also not designated as an authorized user in writing by the Radiation Safety Officer.

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- D. Condition 23 of NRC License No. 37-28586-01 requires, in part, that the licensee conduct its licensed activities in accordance with the statements, representations, and procedures contained in the licensee's application dated February 13, 2001.

Items 5 and 6 of the licensee's application dated February 13, 2001, require, in part, that licensed material be used as listed on Sealed Source and Device (SSD) Certificate. SSD Certificate No. OH-0522-D-111-S for the Ohmart Corporation device Model SHLM-CR-3 requires, in part, that physical inspections of the device be conducted at least once every six months for proper operation and to identify safety features that require maintenance.

Contrary to the above, prior to August 30, 2005, the licensee failed to conduct adequate physical inspections of the device for proper operation and to identify safety features requiring maintenance. Specifically, a retaining pin on the exterior of the gauge had been lost and the licensee had no record of this loss nor could its personnel provide the date when it was lost. This pin held the shutter in the open position during operations and during retraction of the source to its shielded position.

- E. Condition 23 of NRC License No. 37-28586-01 requires, in part, that the licensee conduct its licensed activities in accordance with the statements, representations, and procedures contained in the application dated February 13, 2001.

Item 10 of the licensee's application dated February 13, 2001, requires, in part, that the licensee develop, implement, and maintain operating and emergency procedures that meet the criteria in the section entitled "Radiation Safety Program - Operating and Emergency Procedures," in NUREG-1556, Volume 4, dated October 1998. Section 8.10.6 of NUREG-1556, Volume 4, describes the criteria that the operating and emergency procedures must meet, and these criteria require, in part, that the operating procedures include instructions for testing each gauge for proper operation of the on-off mechanism (shutter) at intervals not to exceed 6-months.

Contrary to the above, as of August 30, 2005, the licensee did not develop, implement, and maintain operating and emergency procedures that met the criteria in the section entitled "Radiation Safety Program - Operating and Emergency Procedures," in NUREG-1556, Volume 4, dated October 1998. Specifically, the licensee's procedures did not include instructions for testing a gauge for proper operation of its shutter mechanism.

These violations represent a Severity Level III problem (Supplements IV and VI)

The NRC has concluded that information regarding the reasons for the violations, the corrective actions taken to correct the violations and prevent recurrence, and the date when full compliance was achieved is already adequately addressed in this letter; in the information you provided on September 6, 2005, October 3, 2005, October 24, 2005, and November 30, 2005;

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in the inspection report issued on March 1, 2006; and during a predecisional enforcement conference in the NRC Region I office with representatives from your company on March 15, 2006. Therefore, although you are required to provide a response to the Notice and Proposed Imposition of Civil Penalty, you are not required to address the provisions of 10 CFR 2.201 unless the descriptions therein do not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, EA-06-026" and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region I, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

The licensee may pay the civil penalty proposed above, in accordance with NUREG/BR-0254 and by submitting to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, a letter clearly marked "Statement as to Payment of Civil Penalty" indicating when, and by what method payment was made.

The licensee may protest imposition of the civil penalty in whole or in part, by a written answer addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission. Should the licensee fail to answer within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty, an order imposing the civil penalty will be issued. Should the licensee elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalty, in whole or in part, such answer should be clearly marked as an "Answer to a Notice of Violation" and shall: (1) deny the violations listed in this Notice, in whole or in part, (2) demonstrate extenuating circumstances, (3) show error in this Notice, or (4) show other reasons why the penalty should not be imposed. In addition to protesting the civil penalty in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.C.2 of the Enforcement Policy should be addressed. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 10 CFR 2.201, but may incorporate parts of the 10 CFR 2.201 reply by specific reference (e.g., citing page and paragraph numbers) to avoid repetition. The attention of the licensee is directed to the other provisions of 10 CFR 2.205, regarding the procedure for imposing a civil penalty.

Upon failure to pay any civil penalty due which subsequently has been determined in accordance with the applicable provisions of 10 CFR 2.205, this matter may be referred to the Attorney General, and the penalty, unless compromised, remitted, or mitigated, may be collected by civil action pursuant to Section 234c of the Act, 42 U.S.C. 2282c.

The responses noted above (Reply to a Notice of Violation; EA-06-026, Statement as to Payment of Civil Penalty, or Answer to a Notice of Violation) should be addressed to: Michael Johnson, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional

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Administrator, U.S. Nuclear Regulatory Commission, Region I, 475 Allendale Road, King of Prussia , PA 19406-1415.

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>. Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 3rd day of May 2006