



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF RADIATION CONTROL
Rusty Lundberg
Director



January 19, 2011

CERTIFIED MAIL
RETURN RECEIPT REQUIRED

Materials and Energy Corporation
Kimberly E. Holt, Logistics Manager
ETTP 2010 Hwy 58, Suite 1020
Oak Ridge, TN 37830

RE: Generator Access Permit Number 0112001205; NOTICE OF VIOLATION AND NOTICE OF PROPOSED IMPOSITION OF CIVIL PENALTY

Dear Ms. Holt:

On December 3, 2010, an inspection was performed at the EnergySolutions, LLC., waste disposal facility. The results of this inspection indicated that certain shipments sent by Materials and Energy Corporation to EnergySolutions were in violation of the Utah Radiation Control Rules.

Accordingly, a Notice of Violation and Notice of Proposed Imposition of Civil Penalties is enclosed. The particular violations are described in the enclosed Notice.

The Division of Radiation Control is significantly concerned that the apparent lack of management control regarding the implementation of your waste classification procedures resulted in significant violations of the Utah Radiation Control Rules. Consequently, your required response to this letter should describe those actions planned or taken to improve the effectiveness of the management control of your permit operations, with particular emphasis on measures currently being taken to prevent future waste classification violations.

Corrective actions taken to avoid future noncompliance are expected to be effective and lasting. Utah Administrative Code Subsection R313-14-15(2)(b)(ii) states, "ineffective licensee programs for problem identification or correction are unacceptable. In cases involving repeated poor performance in an area of concern or serious breakdown in management control, the Executive Secretary may apply the full enforcement authority."

UTAH RADIATION CONTROL BOARD

Rusty Lundberg, Executive Secretary

RL:jf
Enclosure

**UTAH RADIATION CONTROL BOARD
NOTICE OF VIOLATION
AND
NOTICE OF PROPOSED IMPOSITION OF CIVIL PENALTY**

Materials and Energy Corporation
ETTP 2010 Hwy 58, Suite 1020
Oak Ridge, TN 37830

Generator Site Access Permit No. 011 200 1205

An inspection of the Permittee's activities was conducted on December 3, 2010. As a result of the inspection, violations of Utah Radiation Control Rules were identified. The Executive Secretary of the Utah Radiation Control Board proposes a civil penalty. The authority for this proposed action is Utah Code Annotated (1953, as amended) Section 19-3-109. The proposed penalties have been arrived at by using Rule R313-14 of the Utah Administrative Code. The particular violations and the associated proposed civil penalty are set forth below:

1. Utah Radiation Control Rule R313-26-6 states: "Generator Site Access Permittees shall be subject to the provisions of Rule R313-14 for violations of federal regulations, state rules or requirements in the current land disposal facility operating license regarding radioactive waste packaging, transportation, labeling, notification, classification, marking, manifesting or description."

EnergySolutions (Licensee) Radioactive Material License Number UT2300249, 13.A. states: "In accordance with the Order issued by the U.S. Nuclear Regulatory (NRC) Commission dated January 14, 2003, Docket No. 040-8989, License No. SMC-1559, EnergySolutions may possess Special Nuclear Material (SNM) within the restricted area of the EnergySolutions facility as described in Condition 10 provided that: Concentrations of SNM in individual waste containers must not exceed the values listed in Table 13-A at time of receipt."

Contrary to this requirement on December 3, 2010 Materials and Energy Corporation offered a radioactive waste shipment (manifest No.9069-01-0006) to EnergySolutions (Licensee). The shipment consisted of three 85-gallon drums characterized and described by the Permittee as Class A waste. A review of the NRC Uniform Low-Level Radioactive Waste Manifest indicated that the U-235 concentrations listed on the manifest exceeded the limits authorized. Specifically, U-235 was shown as 1,441 pCi/g which exceeded the 1,190 pCi/g limit listed in Table 13-A.

This violation is of significant concern and has been characterized as Severity Level III. The base penalty for this Severity Level is \$2,500.00

A civil penalty of \$2,500.00 is proposed.

Additionally, in accordance with Utah Radiation Control Rule R313-26-6 the above violation was evaluated utilizing the Generator Site Access Permit Enforcement Policy. Accordingly, Materials and Energy Corporation, Generator Site Access Permit will be assessed 200 points for exceeding the U-235 authorized concentration limits.

2. Utah Radiation Control Rule R313-26-6 states: "Generator Site Access Permittees shall be subject to the provisions of Rule R313-14 for violations of federal regulations, state rules or requirements in the current land disposal facility operating license regarding radioactive waste packaging, transportation, labeling, notification, classification, marking, manifesting or description."

**UTAH RADIATION CONTROL BOARD
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Materials and Energy Corporation
ETTP 2010 Hwy 58, Suite 1020
Oak Ridge, TN 37830

Generator Site Access Permit No. 0112 001 205

EnergySolutions' Radioactive Material License No. UT2300249, Condition 13.F At Receipt states: "EnergySolutions shall require generators of SNM waste to provide a written certification with each waste manifest that states the SNM concentrations reported on the manifest do not exceed the limits in Condition 13.A, that the measurement uncertainty does not exceed the uncertainty value in Condition 13.A, and that the waste meets Conditions 13.B through 13.D."

Contrary to this requirement, at receipt the SNM certification was not included with this shipment.

This violation has been characterized as Severity Level III. The base penalty for this Severity Level is \$2,500.00.

A civil penalty of \$2,500.00 is proposed.

Additionally, in accordance with Utah Radiation Control Rule R313-26-6 the above violation was evaluated utilizing the Generator Site Access Permit Enforcement Policy. Accordingly, Materials and Energy Corporation, Generator Site Access Permit will be assessed 150 points for not providing the SNM exception certification.

Therefore, Materials and Energy Corporation Generator Site Permit is assessed a total of \$5,000.00 in civil penalties and 350 Generator Site Access enforcement points for the above violations. The permittee may, within 30 working days of receipt of this Notice, pay the civil penalty in the cumulative amount of \$5000.00, or may protest the imposition of the civil penalty in whole or in part by a written answer. Should the permittee fail to answer in the time specified, the Utah Radiation Control Board will issue an order imposing a civil penalty in the amount proposed.

Any reply to the Notice of Violation should include, for each violation: (1) the corrective steps which have been taken and the results achieved; (2) the corrective steps which have been taken to prevent recurrence; and (3) the date full compliance will be achieved. A response protesting the Imposition of Civil Penalties shall include: (1) an admission or denial of the item of non-compliance; (2) a demonstration of extenuating circumstances; (3) a showing of error in the Notice of Violation; or (4) other reasons why the penalty should not be imposed.

Any response or written answer to this Notice of Violation/Notice of Proposed Imposition of Civil Penalty should be addressed to Rusty Lundberg, Executive Secretary, Utah Radiation Control Board, 195 North 1950 West, P.O. Box 144850, Salt Lake City, Utah 84114-4850. The licensee's attention is directed to the Administrative Procedures set forth in Utah Code Annotated (UCA) 63G-4. If a hearing is requested, the Executive Secretary of the Utah Radiation Control Board will designate the time and place of the hearing.

**UTAH RADIATION CONTROL BOARD
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Materials and Energy Corporation
ETTP 2010 Hwy 58, Suite 1020
Oak Ridge, TN 37830

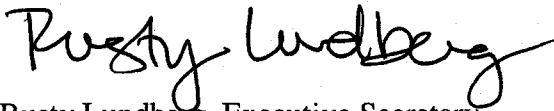
Generator Site Access Permit No. 0112 001 205

Upon failure to pay any civil penalty due which has been subsequently determined in accordance with the applicable provisions of UCA 19-3-109 and R313-14, the matter may be referred to the Attorney General, and the civil penalty may be collected by civil action pursuant to UCA 19-3-109(5).

Dated at Salt Lake City, Utah

This 19th day of January, 2011

UTAH RADIATION CONTROL BOARD



Rusty Lundberg, Executive Secretary

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER

Energy Solutions, LLC

SHIPPING PAPER

1. EMERGENCY TELEPHONE NUMBER (Include Area Code)
865-574-3282

ORGANIZATION
ETTP Plant Shift Superintendent

2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?
 YES NO

3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST
3

4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?
If "Yes," provide Manifest Number ----->
 YES NO
EPA MANIFEST NUMBER
004858934 JJK

11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)

12. DOT LABEL "RADIOACTIVE"

13. TRANSPORT INDEX

14. PHYSICAL AND CHEMICAL FORM

15. INDIVIDUAL RADIONUCLIDES

16. TOTAL PACKAGE ACTIVITY
MBq mCi

17. LSASCO CLASS

18. TOTAL WEIGHT OR VOLUME (Use appropriate units)
19. IDENTIFICATION NUMBER OF PACKAGE

5. SHIPPER - NAME AND FACILITY
Material & Energy Corporation
East Tennessee Technology Park
2010 Highway 58, Suite 1020
Oak Ridge, TN 37830

Uran Generator Site Access Permit No.
0112001205

CONTACT
Kim Holt

6. CARRIER - Name and Address
Specialty Transport
2530 Mitchell Street
Knoxville, TN 37917

CONTACT
David Pemberton

SIGNATURE - Authorized carrier acknowledging waste receipt
David Pemberton

DATE
11-25-10

TELEPHONE (Include Area Code)
865-524-5592, 107

SHIPPER I.D. NUMBER
9069-01-0006

COLLECTOR

PROCESSOR

GENERATOR TYPE (Specify)
ETTP-10-308

TELEPHONE NUMBER (Include Area Code)
865-574-0335

EPA I.D. NUMBER
TNR000011247

SHIPPING DATE
11/29/2010

FORM 540 AND 540A PAGE 1 OF 2
FORM 541 AND 541A 4 PAGES
FORM 542 AND 542A 1 PAGE(S)
ADDITIONAL INFORMATION None PAGE(S)

7. CONSIGNEE - Name and Facility
Energy Solutions, LLC
Clive Disposal Site
Interstate 80, Exit 49
Clive, UT 84029

8. MANIFEST NUMBER (Use the number on all continuation pages)
ETTP-10-308

CONTACT
Transportation Compliance
TELEPHONE (Include Area Code)
(435)884-0155
DATE

10. CERTIFICATION
This is to certify that the herein-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and are in proper condition for transportation and disposal as described in accordance with the requirements of 10 CFR Parts 20 and 61, or equivalent state regulations.

AUTHORIZED SIGNATURE
David Pemberton

TITLE
SECRET

DATE
11/29/10

UN3321, RQ Waste Radioactive material, low specific activity (LSA-II), 7, (D009) Fissile Excepted	NA	NA	NA	Solid Oxide	Am-241 Cd-109 Gd-155 Ce-141 Ce-144 Co-57 Co-243 Cm-247	Ce-141 Ce-144 Co-57 Cs-134 Cs-137 I-129 K-40 Nb-95 Np-237 Pu-241 Pu-242 Pu-238 Pu-239 Ra-226 Ru-103 Ru-106 Sb-125 Sr-90 Tc-99 Th-232 Th-233 U-232 U-233 U-235 U-236 U-238 Zr-95	9,3581E+02 2,5293E+01	NA	230 LBS; 11.6 FT3	56172
UN3321, RQ Waste Radioactive material, low specific activity (LSA-II), 7, (D009) Fissile Excepted	NA	NA	NA	Solid Oxide	Am-241 Cd-109 Gd-155 Ce-141 Ce-144 Co-57 Co-243 Cm-247	Ce-141 Ce-144 Co-57 Cs-134 Cs-137 I-129 K-40 Nb-95 Np-237 Pu-241 Pu-242 Pu-238 Pu-239 Ra-226 Ru-103 Ru-106 Sb-125 Sr-90 Tc-99 Th-232 Th-233 U-232 U-233 U-235 U-236 U-238 Zr-95	9,3581E+02 2,5293E+01	NA	230 LBS; 11.6 FT3	56172

FOR CONSIGNEE USE ONLY

Record Waste Description Inadequate
Contamination or Leakage Detected
Unexpected Exposure Rates Detected
Labels, Markings, etc. Inadequate
Container Integrity Inadequate
Other
No Violations Detected on this Shipment

20. TERMS AND CONDITIONS

A. HAZARDOUS MATERIALS: Generator represents & warrants that Waste Material is (or is not) a hazardous waste as defined in 40 CFR 261. Where the material is a hazardous waste, this shipment is also accompanied by a separate and completed hazardous waste manifest, along with the appropriate land-disposal restriction notice and/or certification as required by 40 CFR 268.1.

B. TITLE: Upon acceptance at the disposal site by EnergySolutions, LLC, and all appropriate regulatory authorities, title to the Waste Material which conforms to Generator's representations herein shall hereupon transfer from Generator and be vested in EnergySolutions, LLC.

C. WASTE MATERIAL: Generator represents and warrants that all data set forth in this (UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST) are true and correct in all respects and in accordance with all applicable governmental laws, rules, regulations and EnergySolutions LLC's facility license.

D. INDEMNIFICATION: Generator agrees to indemnify EnergySolutions, LLC, its officers, employees and agents against all losses and liability whatsoever if such losses or liability results from the failure of the Waste Material to conform in all material respects to the data supplied on the (UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST) or if this shipment fails to meet the standards prescribed by the Department of Transportation or any governmental agency having jurisdiction over such matters.

**UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST
SHIPPING PAPER (CONTINUATION)**

EnergySolutions, LLC

B. MANIFEST NUMBER
(Use this number on all continuation pages)
ETTP-10-308

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11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES				16. TOTAL PACKAGE ACTIVITY MBq	16. TOTAL PACKAGE ACTIVITY mCi	17. LSAS/CO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
UN3321, RQ Waste Radioactive material, low specific activity (LSA-II), 7, (D009) Fissile Excepted	NA	NA	Solid Oxide	Co-60	Cs-134	Cs-137	I-129	3.8814E+02	1.0490E+01	NA	230 LBS; 11.6 FT ³	56172
UN3321, RQ Waste Radioactive material, low specific activity (LSA-II), 7, (D009) Fissile Excepted	NA	NA	Solid Oxide	Am-241	Co-57	Co-60	Cs-134	9.1385E+02	2.4699E+01	NA	578 LBS; 11.6 FT ³	67414
				Cs-137	I-129	K-40	Nb-95					
				Pu-237	Pb-210	Pu-238	Pu-239					
				Pu-244	Ra-226	Ru-103	Ru-106					
				Sb-125	Sr-90	Tc-99	Th-230					
				Th-232	U-232	U-233	U-234					
				U-235	U-236	U-238	Zr-95					

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

CONTAINER AND WASTE DESCRIPTION

Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste

1. MANIFEST TOTALS		SPECIAL NUCLEAR MATERIAL (grams)		2. MANIFEST NUMBER	
NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME	NET WASTE WEIGHT	U-233	U-235	ETTP-10-308
3	m ³ 0.9855 #13 34,8000	kg 510.2914 lb 1125.05625	Pu	Total	
			6.0930E-03	6.0930E-03	
			3 Containers	3 Containers	
					3. PAGE 1 OF 4 PAGE(S)
					4. SHIPPER NAME Material & Energy Corporation
					SHIPMENT ID NUMBER 9069-01-0006

5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1 & Note 1A)	7. VOLUME (m ³) (ft ³)	8. WASTE AND CONTAINER WEIGHT (kg) (ton)	9. SURFACE RADIATION LEVEL (mSv/hr) (mrem/hr)	10. SURFACE CONTAMINATION (dpm/100cm ²)		11. WASTE DESCRIPTION (See Note 2 & Note 2A)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m ³) (ft ³)	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	15. RADIOLOGICAL DESCRIPTION	16. WASTE CLASSIFICATION				
					ALPHA	BETA-GAMMA										
56163/TNR000005387	4	0.3285 11.8000	320.6898 0.3535	<5.0000E-03 <5.0000E-01	<3.3400E-07 <2.0000E-01	<1.6700E-05 <1.0000E+03	26-H	0.3285 11.8000	99 - OTHER (DESCRIBE)	Oxide/INP	NP	Am-241 Cd-109 Ce-141 Ce-144 Cs-134 Cs-137 Cs-137 K-40 Nb-95 Nd-237 Pu-210 Pu-238 Pu-239 Pu-241 Pu-242 Pu-244 Ra-226 Ra-103 Ru-106 Sb-125 Sr-90 Tc-99 Th-230	1.62249E-01 4.69131E+01 1.21113E+01 1.30713E+00 3.56454E-02 7.02339E-02 3.61788E-02 7.75744E-03 2.81886E-01 4.80961E-01 1.66785E-01 1.45064E+00 8.18410E-01 5.52718E-02 2.84216E+00 5.93444E+00 9.91581E-01 1.85019E+00 1.06724E+00 6.79940E-02 2.31560E-01 7.28617E-02 3.29400E-01 4.93664E-01 1.54179E+00 1.77106E+00 4.13437E+04	1.5712E-03 4.5429E-01 1.17728E-01 1.2658E-02 3.4518E-04 6.8013E-04 3.5035E-04 7.5121E-05 2.7297E-03 4.6576E-03 1.6151E-03 1.4047E-02 7.9254E-04 5.3524E-04 2.7523E-02 5.7468E-02 9.6022E-03 1.7917E-02 2.7932E-02 6.5842E-04 2.2423E-03 7.0555E-04 3.1898E-03 4.7804E-03 1.4930E-02 1.7150E-02 4.0038E+02	4.2464E-05 1.2278E-02 3.1698E-03 3.4210E-04 9.3292E-06 1.8382E-05 9.4688E-06 2.0303E-06 7.3776E-05 1.2588E-04 4.3651E-05 3.7966E-04 2.1420E-04 1.4466E-05 7.4386E-04 1.5532E-03 2.5952E-04 4.8424E-04 2.7932E-04 1.7795E-05 6.0604E-05 1.9069E-05 8.6211E-05 1.2920E-04 4.6352E-04 1.0821E+01 6.2381E-03	AU

Note 1: Container Description Codes. For containers/waste requiring disposal in approved structural over-packs the numerical code must be followed by "-OP."

Note 1A: Bulk Packaging Description Codes. (Choose one code as may be applicable.)

NOTE 2: Waste Descriptor Codes. (Choose up to three which predominate by volume.)

NOTE 2A: Specific Waste Descriptions (Choose all applicable codes.)

Note 3: Solidification and Stabilization Media Codes. (Choose up to three which predominate by volume.) For media meeting disposal site structural stability requirements, the numerical code must also be identified by "-S," and the media vendor and brand name must also be identified in item 13. Code 100=NONE REQUIRED.

1. Wooden Box or Crate
2. Metal Box
3. Plastic Drum or Pail
4. Metal Drum or Pail
5. Metal Tank or Liner
6. Concrete Tank or Liner
7. Polyethylene Tank or Liner
8. Fiberglass Tank or Liner
9. Demineralizer
10. Gas Cylinder
11. Bulk, Unpackaged Waste
12. Unpackaged Components
13. High Integrity Container
14. Other: Describe in Item 6, or additional page

- A. Gondola
- B. Intermodal
- C. End-Dump
- D. Roll-off
- E. Seavan

20. Charcoal
21. Incinerator Ash
22. Soil
23. Gas
24. Oil
25. Aqueous Liquid
26. Filler Media
27. Mechanical Filter
28. EPA or State Hazardous
29. Demolition Rubble
30. Cation Ion-exchange Media
31. Anion Ion-exchange Media
32. Mixed Bed Ion-exchange Media
33. Contaminated Equipment
34. Organic Liquid (except oil)
35. Glassware or Labware
36. Sealed Source/Device
37. Paint or Plating
38. Evaporator Bottoms/Sludges/ Concentrates
39. Compactible Trash
40. Noncompactible Trash
41. Animal Carcass
42. Biological Material (except animal carcasses)
43. Activated Material
59. Other: Describe in item 11, or additional page

- G. Dewatered
- H. Solid
- I. Non-combustible
- J. Air Filtration Filters
- K. Asbestos
- L. Asbestos

94. Vinyl Ester Sylene
99. Other: Describe in item 13, or additional page
92. Bitumen
93. Vinyl Chloride
100. None Required

