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*Environmental Protection Division
Water Quality & RCRA Group (ENV-RCRA)*
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Date: May 9, 2011
Refer To: ENV-RCRA-11-0089
LAUR: 11-10607

Mr. Art Vollmer
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6313

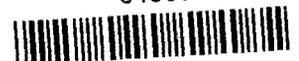
MAY 2011

Dear Mr. Vollmer:

SUBJECT: DESTRUCTION OF UNSTABLE CHEMICALS AND REFRIGERATOR AT TA-49, LOS ALAMOS NATIONAL LABORATORY

On April 4, 2011, Los Alamos National Laboratory (LANL) Environmental Stewardship Division Water Quality and RCRA Group (ENV-RCRA) representative Mark Haagenstad contacted New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB) on-duty representative Brady Christensen and yourself regarding the need to conduct emergency treatment (detonation) on unstable chemicals and refrigerator at Technical Area (TA) 49. As captured in a phone conversation and email with you on April 4, 2011 and as stated in a letter dated May 5, 2011, NMED-HWB granted Emergency Authorization for treatment by detonation of the unstable chemicals and refrigerator. Destruction was conducted on the unstable chemicals in accordance with 20.4.1.900 NMAC, incorporating 40 CFR 270.1(c)(3). Detonation treatment on the refrigerator was determined to be unnecessary. The refrigerator will be safely decontaminated through steam cleaning at TA-16-260. All decontamination water will be collected, stored, and managed properly.

Unstable chemicals were identified in a refrigerator at TA-35-455 during a routine environmental assessment on May 3, 2011. Immediately upon identification of the unstable chemicals, LANL environmental and facility representatives contacted LANL Emergency Operations Center (EOC) and Hazardous Materials (HAZ-MAT) Team personnel. LANL EOC and HAZ-MAT personnel responded and conducted a thorough assessment of the chemicals within the refrigerator. As part of the assessment and mitigation process, separation of the stable chemicals from the unstable chemicals was conducted. Attached is a list of the containers that were treated by emergency detonation. All unstable chemicals showed characteristics of crystal formation and/or charring of the labels. Due to crystal formation within the refrigerator, HAZ-MAT personnel determined that the refrigerator was contaminated and needed to be decontaminated through steam cleaning. Upon completion of the assessment and segregation, EOC and HAZ-MAT personnel determined that the unstable chemicals posed an imminent risk to human health and safety; therefore, the chemicals could not be managed through normal practices. LANL EOC, HAZ-MAT, and Industrial Hygiene (IH) personnel

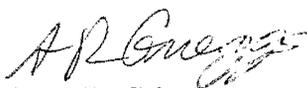


determined that the safest option for managing these unstable chemicals was to detonate them at TA-49 in a controlled and safe manner. The unstable chemicals were safely removed from the refrigerator and safely transported to TA-49 where four detonations were completed on May 4, 2011 in a controlled and safe manner.

The detonations completely consumed the unstable chemicals and containers. EOC and HAZ-MAT personnel assessed the detonation area and did not identify any remaining detonation residue.

Please contact Mark Haagenstad of my staff at (505) 665-2014 if additional information would be helpful.

Sincerely,



Anthony R. Grieggs
Group Leader
Water Quality & RCRA Group (ENV-RCRA)

ARG:MH/lm

Enclosure: a/s

Cy: John Kieling, NMED/HWB, Santa Fe, NM, w/enc.
Brady Christensen, NMED/HWB, Santa Fe, NM, w/enc.
Gene Turner, LASO-EO, w/enc., A316
Carl A. Beard, PADOPS, w/o enc., A102
J. Chris Cantwell, ADESHQ, w/o enc., K491
Denny Hjeresen, ENV-DO, w/enc., K404
Mark Haagenstad, ENV-RCRA, w/enc., K490 (E-File)
ENV-RCRA File, w/enc., K490
IRM-RMMSO, w/enc., A150

TA-35-455 Unstable Chemical Items Emergency Treatment (Detonation)
Los Alamos National Laboratory
May 4, 2011

- 1 500 mL 34 -37% H₂O₂ (hydrogen peroxide)
- 2 30 mL liquid in 100 mL bottle nitric acid
- 3 500 mL formic acid 88%
- 4 Unknown residue in 30 mL vial
- 5 Narrow rectangular vial with unknown red liquid 2-3 mL
- 6 Whitish powder in 13 x 100 test tube – 500 mg (0.5 g)
- 7 Aniline in 50 mL bottle wrapped with aluminum foil
- 8 500 mL triethylamine
- 9 1 Molar solution p-toluene sulfonic acid, volumetric flask 100mL
- 10 50 mL 99% aniline distilled under argon
- 11 O-phenetidine 20 mL in 30 mL vial
- 12 N-methyl pyrrolidone in 30 mL vial
- 13 1 Molar Pd in 50 mL nitric acid
- 14 1 Molar nitric acid 25 mL
- 15 Allyl bromide 100 mL
- 16 Allyl bromide 100 mL
- 17 Three (3) - 250 mL erlenmeyer flask with unknown reactants
- 18 30 mL brown liquid (unknown reactants)
- 19 250 mL round bottom flasks with ~100 mL of a bluish purple material liquid
- 20 30 mL hexanes and toluene
- 21 norbornylene 500g
- 22 40 mL vial unknown red liquid
- 23 BUFFER SOLUTION (PH 4.63)
- 24 500 mL ethyl vinyl ether
- 25 sodium acetate 250 mL
- 26 4L aniline
- 27 Unknown volume of methacrylate
- 28 1L aniline
- 29 Beaker with unknown brown residue coated (no more than 1 gram)
- 30 Refrigerator with less than 5 pounds refrigerant (will be decontaminated through steam cleaning)

Crystal formations and/or charring of labels identified on all containers at varying quantities