STATE OF TENNESSEE
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
JOHNSON CITY ENVIRONMENTAL FIELD OFFICE
2305 SILVERDALE ROAD
JOHNSON CITY, TENNESSEE 37601-2162
(423) 854-5400 STATEWIDE 1-888-891-8332 FAX (423) 854-5401

January 7, 2016

Certified Mail 7015 0640 0006 6785 8467
Return Receipt Requested

Mr. J. Daniel Taylor
Chemical Technologies, LLC
5 Tony Fuller Road
Elizabethton, TN 37643

RE: Seventh Notice
Chemical Technologies, LLC
Hazardous Waste Follow-up Inspection
Hazardous Waste ID Number: TNR 00-000-8482

Dear Mr. Taylor:

The Division of Solid Waste Management (DSWM) has issued numerous Notices of Violation regarding the Rules and Regulations promulgated pursuant to the Hazardous Waste Management Act, T.C.A. 68-212 part 1. On October 29, 2015 DSWM staff made a site visit on to conduct a follow-up inspection and you informed DSWM personnel of the following:

1. Filter cake and laboratory waste in the tank will be analyzed by TCLP for RCRA metals in accordance with EPA SW-846 to make waste determinations.

2. Chemical Technologies, LLC will begin recycling wastes that are in existing Step1, 2 and 3a as outlined in January 27, 2015 correspondence. No new or additional waste may be introduced into the process.

DSWM most recently made a site visit to the facility on January 6, 2016 to conduct another follow-up inspection. During the latest follow-up inspection you informed DSWM personnel that:

1. Laboratory waste in the tank was sampled on or about December 17, 2015 and you are awaiting analytical results.

2. Filter press cake will be sampled by January 8, 2016.

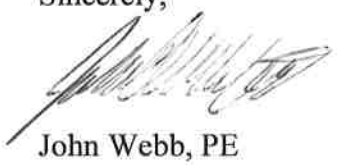
3. Chemical Technologies, LLC will begin recycling Step 1 waste that is currently in three polyethylene (2,500 gallon) tanks as soon as practical.

4. The Step 2 waste will no longer be placed into an evaporator but will be processed through the filter press with the liquid being the finished caustic product.

The enclosed inspection report documents that Chemical Technologies, LLC continues to be in violation, as detailed in the attached report. Chemical Technologies, LLC must continue correcting the outstanding violations. The DSWM will conduct a follow-up inspection within forty-five days to verify the facility's compliance status.

The DSWM appreciates the courtesy and cooperation shown by Chemical Technologies, LLC during the inspection. Should you have any questions concerning this report, please do not hesitate to contact me at 423-854-5465 or by email: John.C.Webb@TN.GOV.

Sincerely,



John Webb, PE
Division of Solid Waste Management

cc:

Ms. Lisa Hughey, DSWM, Nashville
Ms. Ashley Holt, DSWM, Nashville
Enforcement Section, DSWM, Nashville
Ms. Daisy Crary, DSWM, Nashville
DSWM, JCEFO File #10-53-1 35

HAZARDOUS WASTE INSPECTION REPORT

SITE/PHYSICAL LOCATION:

Chemical Technologies, LLC
TNR 00-000-8482
Bemberg Industrial Center
5 Tony Fuller Road
Elizabethton, TN 37643
Carter County

PRIMARY CONTACT:

Mr. J. Daniel Taylor, Operator
Chemical Technologies, LLC
5 Tony Fuller Road
Elizabethton, TN 37643
865-567-2221

DATE/TIME OF INSPECTION:

January 6, 2016 8:30 AM

INSPECTION PARTICIPANTS:

J. Daniel Taylor, Chemical Technologies, LLC
Richard Whitson, DSWM
John Webb, DSWM

REPORT PREPARED BY:

John Webb
Division of Solid Waste Management
2305 Silverdale Road
Johnson City, Tennessee 37601
423/854-5465

PURPOSE OF INSPECTION:

This inspection was conducted to evaluate Chemical Technologies, LLC's compliance with the applicable requirements of the Rules and Regulations promulgated pursuant to the Hazardous Waste Management Act, T.C.A. 68-212 part 1.

FACILITY DESCRIPTION:

Chemical Technologies, LLC operates a solid waste processing facility (SWP 10-1382) which processes nitriding solids to produce a 20% liquid caustic soda solution for commercial use.
NAICS Code: 325180

INSPECTION FINDINGS:

Based on the information provided to the Division, the hazardous waste generator status of Chemical Technologies, LLC cannot be determined at this time. Based on the information provided, the following is a description of the processes and wastes generated:

Processing
KQ-500 sludge (also referred to as KQ-500 spent salt and quench solids) has been received from offsite. Mr. Taylor stated that the process to recycle the KQ-500 sludge (also referred to as KQ-500 spent salt and quench solids) consisted of four steps as follows:

1. The KQ-500 sludge is added to a poly tank. The sludge is dissolved by adding municipal city water at a ratio of two/three volumes of water to KQ-500 sludge (Step 1 Waste);

2. After a time period that is dependent on the temperature inside the facility, the Step 1 Waste is placed into containers (totes or drums) and ferrous sulfate is added (Step 2 Waste);

3. The Step 2 Waste use to be placed into an evaporator to remove excess water and once treated, the liquid portion (Step 3a Waste) was pumped to a tank and the sodium nitrate solids (Step 3b Waste/Material) are placed in drums;

4. The Step 2 Waste (formerly the Step 3a Waste) will now be processed through a filter press with the liquid being the finished caustic product, which is comparable to virgin caustic product, and is placed in containers/tanks. The filter cake (Step 4 Waste) is placed in drums. Sometimes virgin caustic product is added to the finished caustic product in order to meet the specifications of the customer.

In a letter dated January 27, 2015, Chemical Technologies, LLC was advised the recycling process is exempt from regulation in accordance with Rule 1400-12-01-.02(1)(f)3(i) which states "Owners and operators of facilities that store recyclable materials before they are recycled are regulated under all applicable provisions of paragraphs (1) through (12), (27), (28) and (29) of Rule 0400-12-01-.05 and paragraphs (1) through (12), (30), (31) and (32) of Rule 0400-12-01-.06, and under Rules 0400- 12-01-.07, .09, and .10, and the notification requirements under Rule 0400-12- 01-.07(2)(b) and (d), except as provided in part 1 of this subparagraph. (The recycling process itself is exempt from regulation except as provided in Rule 0400-12-01-.02(1)(f)4.)"

Based on the above cited regulation, any Step 1, 2, and 3a wastes may be processed by recycling. Any wastes (including Step 3B sodium nitrate solids, and Step 4 filter cake) that are not processed by recycling must undergo hazardous waste determinations and are subject to land disposal restrictions, as required of all wastes generated at the facility. Chemical Technologies, LLC may not process any KQ-500 salt-bath sludge, currently stored in containers or tanks.

At the time of the inspection, no processing of the existing Step 1,2, and 3a wastes has occurred.

Laboratory
The facility has an onsite laboratory for quality assurance testing. Laboratory waste was observed in one 3000-gallon holding tank. ***At the time of the inspection no documentation was available regarding a hazardous waste determination for the laboratory waste stored at the facility. Mr. Taylor informed DSWM personnel that a representative sample of the lab waste had been collected on or around 12/17/2015 and analysis is pending.***

Other Warehouse Materials
During the inspection, Mr Taylor identified the material in tanks, except for the tank storing laboratory waste, as Step 1, 2 or 3a process material. Mr. Taylor identified material in several containers and stated they will be reclaimed, used, or returned to the manufacturer. ***Some drums were inaccessible, but all unmarked drums and remaining material was identified by Mr Taylor as either: Manganese, Steel Shot, Sodium Nitrate, non-hazardous asphalt wash (soap),or Lutetium.***

VIOLATIONS: The following violations were identified during this follow-up compliance evaluation inspection:

Violation #1 Rule 0400-12-01-.03(1)(b) states in part:

A person who generates a solid waste, as defined in Rule 0400-12-01-.02(1)(b), must determine if that waste is a hazardous waste using the following method:

1. He should first determine if the waste is excluded from regulation under Rule 0400-12-01-.02(1)(d).

2. He must then determine if the waste is listed as a hazardous waste in Rule 0400-12-01-.02(4).

3. For purposes of compliance with Rule 0400-12-01-.10, or if the waste is not listed in Rule 0400-12-01-.02(4), the generator must then determine whether the waste is identified in Rule 0400-12-01-.02(3) by either:

   (i) Testing the waste according to the methods set forth in Rule 0400-12-01-.02, or according to an equivalent method approved by the Commissioner under Rule 0400-12-01-.01(3)(b); or

   (ii) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.

4. If the waste is determined to be hazardous, the generator must refer to Rules 0400-12-01-.02, .05, .06, .09, .10 and .12 for possible exclusions or restrictions pertaining to management of the specific waste.

Rule 0400-12-01-.03(5)(a)(3) states:

A generator must keep records as necessary to demonstrate compliance with subparagraph (1)(b) of this rule - to include any test results, waste analyses, or other determinations made in accordance with that subparagraph - for at least three years from the date that the waste

was last sent to on-site or off-site hazardous or nonhazardous waste treatment, storage, or disposal facilities. Such records must document the basis for the hazardous waste determination, including those determinations based on the generator's knowledge of materials and processes utilized rather than on laboratory analyses. Pursuant to Rule 0400-12-01-.03(2)(a)2, this requirement does not apply to individual wastewater streams in cases where the hazardous waste determination is made on the conglomerate waste stream.

Violation #1 Observation:

The facility has not made hazardous waste determinations for all wastes located at the facility.

Required Action/Action Taken:

Filter cake and laboratory waste must be analyzed by TCLP for RCRA metals in accordance with EPA SW-846 to make hazardous waste determinations.

Processing of Step 1, 2, and 3a wastes must begin immediately or the wastes must undergo hazardous waste determinations.

A hazardous waste determination must be made and documented on drums containing material listed in "Other Warehouse Material".

SIGNED: _____ DATE: 1-7-2016

REVIEWED: _____ DATE: 1-7-2016

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