



Amine Reclamation Program Customer Information Guide

**Amine Tracker Instructions** 



## **HARP Introduction**

**HARP** prevents harmful air pollutants from reaching the atmosphere and reduces a waste stream by allowing for reclamation of the material used in the process.

*HARP* prevents disruptive issues caused by non-compliance with state and federal regulations, as well as makes the foundry a better neighbor to the surrounding areas.



## **HARP Introduction**

The HAI *HARP* program is the most ecologically responsible option to handle the amine catalyst in the PUCB process.

Amine sulphate scrubber solution can be sent to HAI's partner facility.

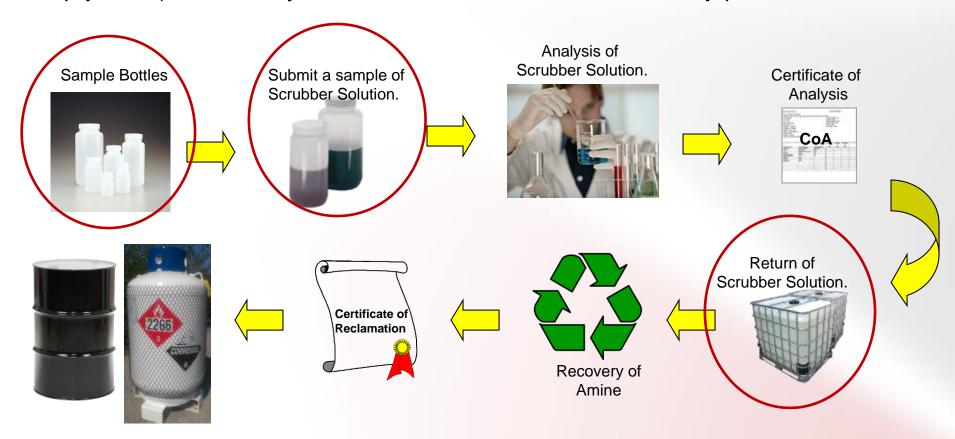
The reclaimed amine is chemically identical to virgin produced material and has the same effectiveness in the PUCB process.

By-product left after the amine is liberated is a salt solution. With proper permitting this solution can be sent through the sewer on to standard water treatment.



# HARP Overall Tracking System

Our online system allows you to easily request supplies (e.g., sample bottles, empty totes) and track your amine scrubber solution recovery process.





# Enrolling in the HARP Amine Reclamation Program

A) To enroll in the HARP program, go to <u>www.ha-international.com</u> and click on the HARP logo







### Sustainability Report

We are pleased to announce our 2011 Sustainability Report.

As an organization, we are committed to all aspects of sustainability applicable to our business not just as socially appropriate activities but as sound long term business practices.

This report highlights our commitment to sustainability with our associates, our customers, our suppliers and our owners.

Learn More >>

### Amine Reclamation

HA International now offers our customers an environmentally conscientious alternative to scrubber solution waste disposal created during Phenolic Urethane Cold Box (PUCB) processing.

With HAIs HARP program, Our Sigma Cat Amines are now recovered to virgin specifications using the latest innovations in process technology.



Learn More>>

#### Round Grain Chromite

HA International is the exclusive North American distributor of <u>SpheriChrome</u>, the only chromite foundry sand mined and processed in the United States.

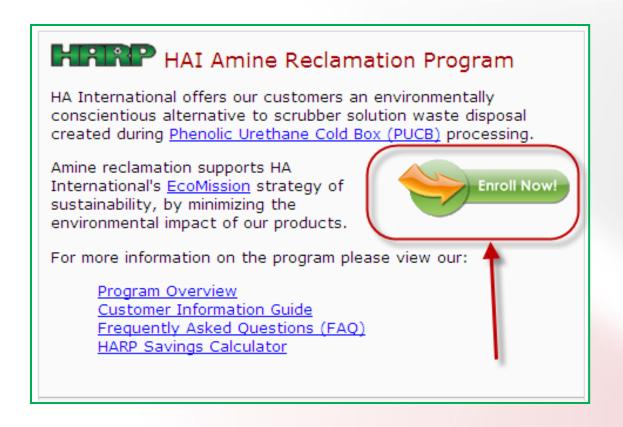


Learn More >>



## **Enroll Now!**

B) Click on the "Enroll Now!" link and fill out the online form. You will receive your login credentials after we process your request (approximately 3-4 business days.)



Using the **HARP** Amine Tracker is easy! Once you have received your login simply follow the instructions below to get started.



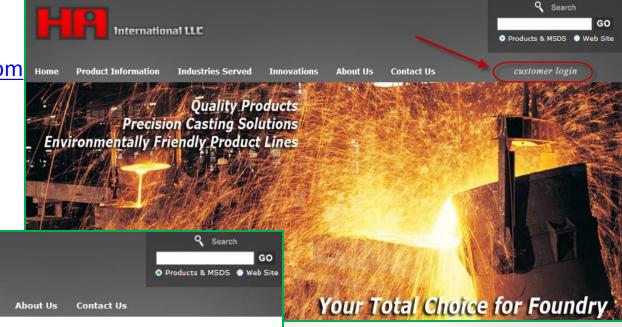
# HARP Amine Reclamation Tracking Instructions

1) Go to www.ha-international.com

**Industries Served** 

2) Click on customer login

International LLC



### **Customer Account**

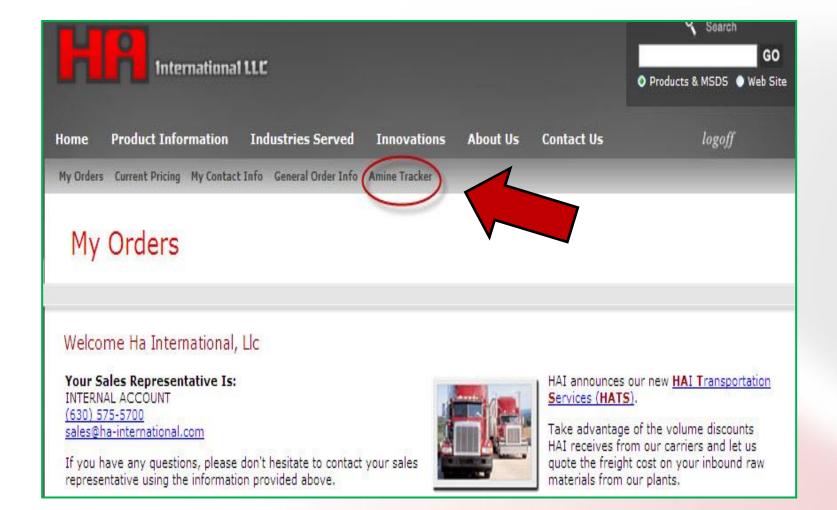
Product Information



Innovations



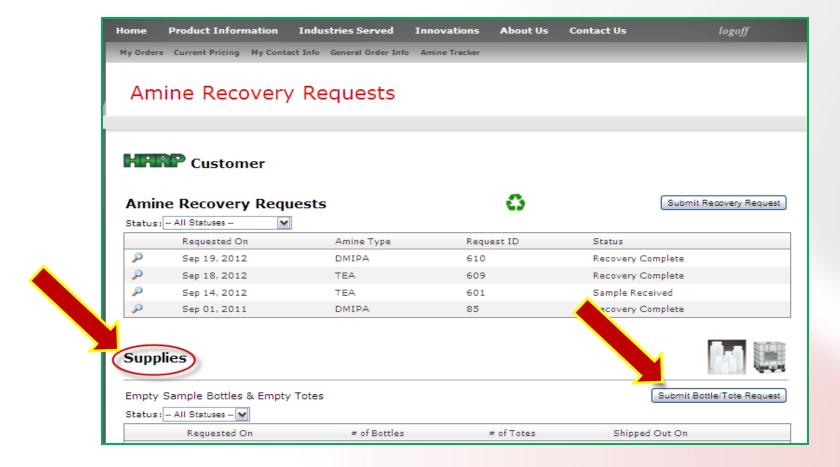
## 4) Click on "Amine Tracker"





# **Supplies**

**5)** You will automatically be linked to the Amine Recovery Request page. Below the Amine Recovery Request, you will find the "Supplies" section. You will need to click on "Submit Bottle / Tote Request" to request sample bottles or empty Totes.





**6)** Enter the number of totes and samples bottles, confirm address and click "Submit Request" We recommend ordering one or two extra sample bottles so that you always have bottles available for future tests.



Note: Separate request for sample bottles and empty totes are required.



7) Status will be updated once your empty sample bottles are shipped.





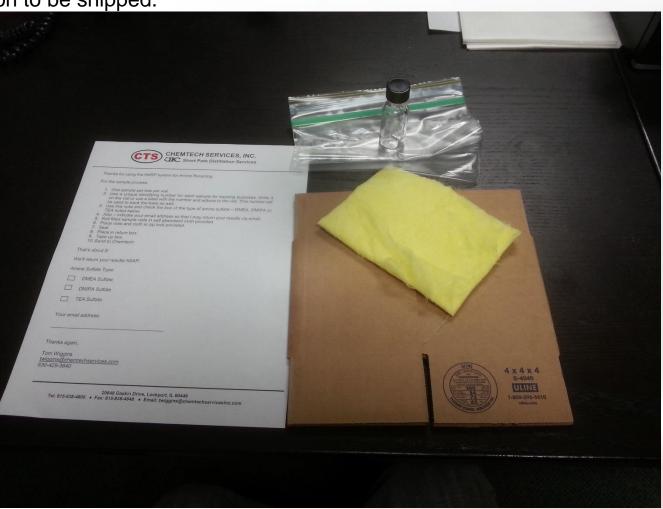


# Sample Kit

8) Once you receive a sample package you will need to return a representative sample of the spent scrubber solution to be shipped.

## **Sample Kit**

- Instructions
- Glass sample bottle
- Absorbent fabric
- Carton box





# Scrubber Solution Sampling Instruction Guidelines



Thanks for using the HARP system for Amine Recycling.

For the sample process:

- 1. One sample per tote per vial.
- Use a unique identifying number for each sample for tracking purposes. Write it on the vial or use a label with the number and adhere to the vial. This number will be used to track the totes as well.
- Use this note and check the box of the type of amine sulfate DMEA, DMIPA or DMPA noted below.
- Also-indicate your email address so that I may return your results via email.
- 5. Roll filled sample vials in self absorbent cloth provided
- Place vials and cloth in zip lock provided.
- Seal

Thanks again,

- 8. Place in return box
- 9. Tape up box
- Send to Chemtech.

That's about it!

We'll return your results ASAP.

Amine Sulfate Type:

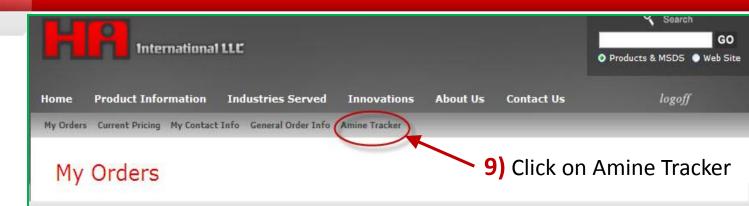
DMEA Sulfate – Sigma Cat 2195 catalyst

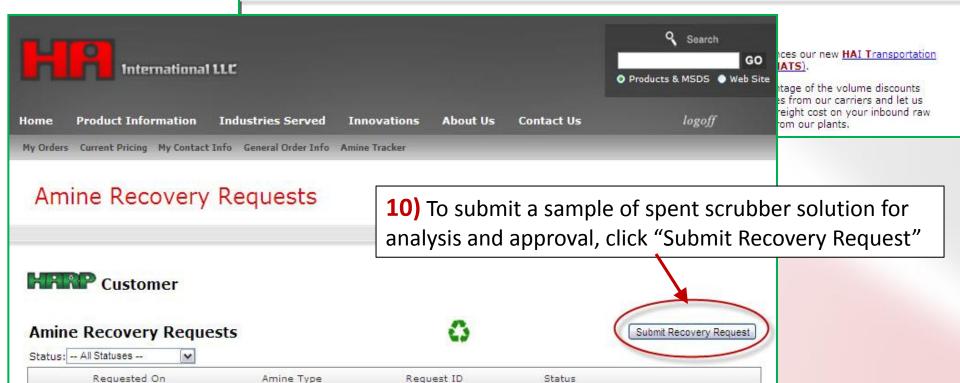
DMIPA Sulfate – Sigma Cat 2190 catalyst

DMPA Sulfate – Sigma Cat 2198 catalyst

Your email address:



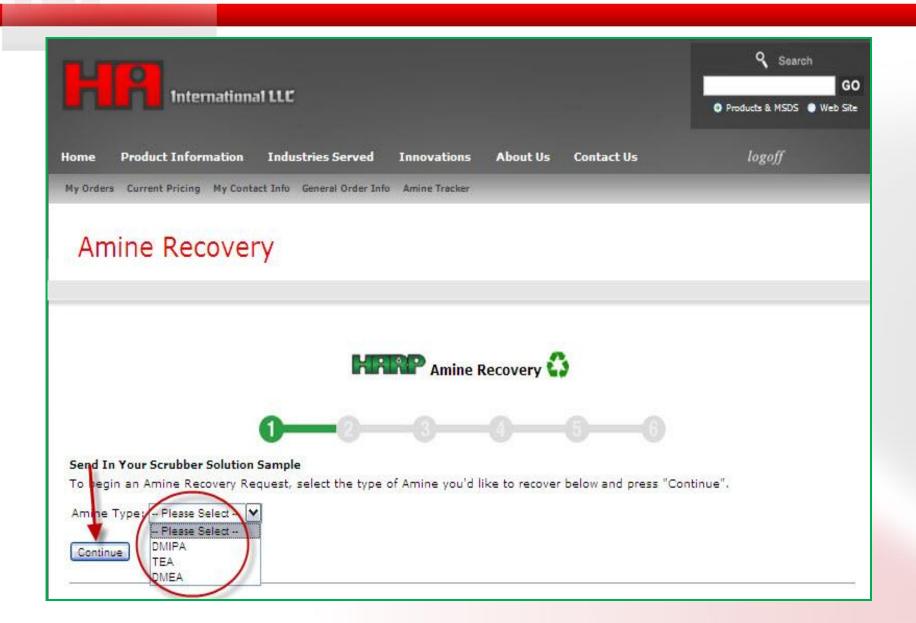




Amine Type



11) Select Amine type (DMEA, DMIPA, or DMPA) from the drop down list and click "Continue"





## **12)** Download tracking label, print, and include it with your sample



Request Created. Please Click Here to print a tracking label to include with your shipment. Samples will only be accepted with the approved tracking label and Request ID number.

For every tote of scrubber solution, an individual sample bottle of representative material must be submitted. Please generate an additional request for each tote of scrubber solution.

Tracking label contains the request ID number, which links your sample and request

Sample From: HA International - Test Customer

Amine Recovery Program

Chemtech Services Inc. 20648 Gaskin Drive Lockport, IL 60441

Attn: Tom Wiggins

REQUEST ID: 1397



## Link your Sample Bottle with your Request ID

**13)** In order to properly identify the sample you are sending to Polychem, you must attach a copy of the Sample ID request label. The ID label can be printed from your Request ID in the HARP website.

### Samples must be sent to:

Amine Recovery Program Chem Tech Services Inc. 20648 Gaskin Drive Lockport, IL 60441 Attn: Niklas Wagner

**Note:** No sample will be processed without ID request number

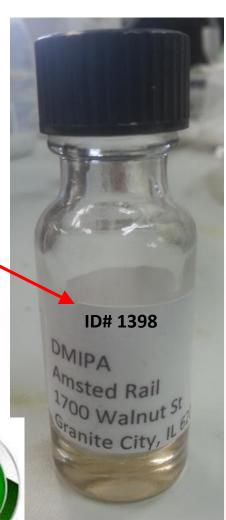




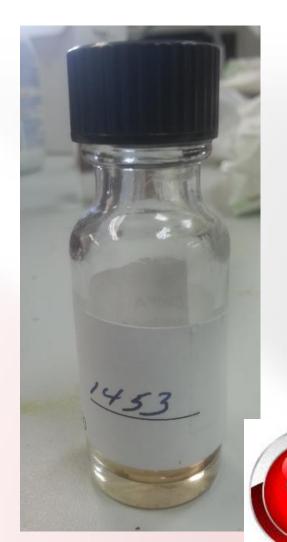
# Example of a well-documented sample bottle vs. a poorly marked sample bottle

Remember to attach the tracking number to the sample bottle.

The tracking number is created when a reclamation request is issued

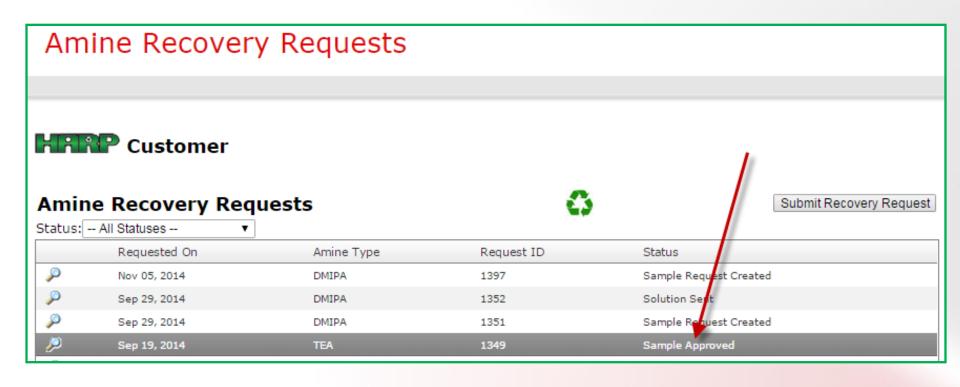






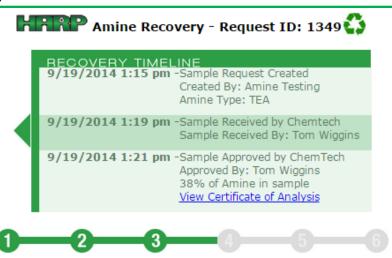


**14)** Once the sample is sent and analyzed, status will change to "Approved" or "Denied." Click on magnifying glass to open and view request.





**15)** View Certificate of Analysis for your sample and print out tracking label to send with your bulk totes of spent scrubber solution. Click on "Mark Solution As Sent" once you ship your totes of scrubber solution to Polychem for reclamation.



#### Scrubber Solution Sample Approved

Chamtesh has approved your sample for recovery. The sample contained 38% amine. Click Here to view the Certificate of Analysis (CoA).

### Print Tracking Label

Click Here to print a tracking label that must be included with the shipment. Totes will only be accepted with the approved tracking label and request to number.

#### Attach Hazardous Material Label

You will receive a Hazardous Material Label from Chemtech that MUST BE attached to the tote prior to shipment.

#### Hazardous Placards

The customer is responsible for the appropriate shipping placards when shipping bulk totes or drums of spent scrubber solution. Four placards must be given to the freight driver before the driver will accept the shipment. Placards can be purchased at: http://www.labelmaster.com/store/scripts/view-product.cfm?product=ZEZ41760

#### Please Mark Tote As Shipped

When you have shipped out your totes, please click the button below so Chemtech knows it is in transit.

Mark Solution As Sent

Back To Requests



## Sending Totes with Spent Scrubber Solution

**16)** Once your sample is approved, you should be able to send your tote with spent scrubber solution to Polychem.



You can review the status of the sample ID Request by logging in to the HARP website and clicking on your request ID number.

Tote with spent scrubber solution must be sent to:

HARP – Amine Recycling Program C/o Polychem Services, Inc. 374 East Joe Orr Road Chicago Heights, IL 60411 Attn: Tom Wiggins



# Proper Way to Label a Tote

With sample approval, the customer will receive a self-adhesive hazardous label from Chemtech Services.

The customer is the shipper on record and is responsible for completing the label (see example below where **all areas marked in RED need to be completed**) and applying it to the tote prior to shipment to the Polychem Services facility in Chicago Heights.

DMIPA Sulfate Solution Scrubber Sludge Destined for Recovery	
FOR INDUSTRIAL USE ONLY	
DANGER!  Toxic if inhaled. Harmful if swallowed. Corrosive to the eyes, skin and respiratory system. Cauntil ready for use. Avoid exposure - obtain special instructions before use. Do not breathe vor clothing. Use only with adequate ventilation. Contains material that can cause target orga Risk of cancer depends on duration and level of exposure. Wash thoroughly after handling.	apor or mist. Do not ingest. Do not get in eyes or on skin
EYES: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelds. Get medical attents SKIN. Flush contaminated skin with plenty of water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Co minute and the contaminated present, the resource should were an appropriate mask respiratory arrest occurs, provide strictial respiration or oxygen by trained personnel. Get medical attention immediate respiratory or not induce venting unless directed to do so by medical personnel. Hewer give anything by mouth to an unconscious person.	ntinue to rinse for at least 10 minutes. Get medical attention immediately. or self-contained breathing apparatus. If not breathing, if breathing is irregular or if
FIRE: Suitable - Use an extinguishing agent suitable for the surrounding fire. Not suitable - None known. Personal protection - Fire-lighters s (SCBA) with a full face-piece operated in positive pressure mode.	hould wear appropriate protective equipment and self-contained breathing apparatus
SPIL OR LEAK. Large spill - Stop leak if without risk. Prevent entry into severs, water courses, basements or confined areas. Contain and diatomaceous earth and place in container for disposal according to local regulations. Small spill - Stop leak if without risk. Dilute with water a anomorpide water disposal order disposal order.	
STORAGE: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilate ready for use.	ed area, away from incompatible materials. Keep container tightly closed and sealed un
CONTAINS: Dimethylisopropylammonium sulfate: Sulfurio Acid: 7664-93-9;	
For Emergency Medical Assistance Call Health & Safety Information Services 1-866-303-6949.	HMIS® = H-*3, F-1, PH-0
Read and understand the Material Safety Data Sheet before using, handling or exposure to this product.  Made in IUS by Address.	MFG Date:
HMIS* is a trademark owned by the National Paint and Coatings Association, Inc., and is licensed through J.J. Keller.	Revision Date: 01-AUG-2011  Gross Wt: LB Net Wt: LB
_OT:	Gross Wt: LB Net Wt: LB KG  Tare Wt: LB KG
Please Fill in All Boxes Before Sh	



## **Placards**

The customer is also responsible for providing 4 identical corrosive placards for the shipping provider. Shipping placards are available for purchase through the following website: <a href="http://www.labelmaster.com/store/scripts/view-product.cfm?product=ZEZ41760">http://www.labelmaster.com/store/scripts/view-product.cfm?product=ZEZ41760</a>

Below is an example of the appropriate placard, required for all four amine types (Sigma Cat 2190 DMIPA, Sigma Cat 2198 DMPA, and Sigma Cat 2195 DMEA).



Corrosive Liquid, N.O.S., (contains sulfuric acid and amine salts), 8, III UN 1760

**Note:** Incorrect labeling and/or placarding may represent a violation of DOT regulations. The customer is responsibility for citations which may result from such violations. **Please do not ship any tote which has noticeable damage or leakage.** 



# How to Label a Tote with Spent Scrubber Solution for Shipping

# **DOT Freight Description**



Corrosive Liquid, N.O.S., (contains sulfuric acid and amine salts), 8, III UN 1760





**ID Request Number** 

Transport
1650 kg max

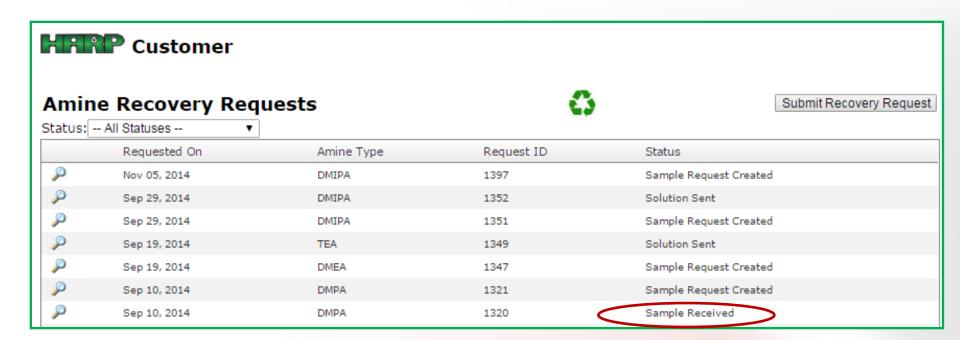
The substance of the substance of

COA attached -

It is the customer's responsibility, as the generator and shipper of spent scrubber solution, to make sure it is a non-hazardous waste, according to federal and local regulations.

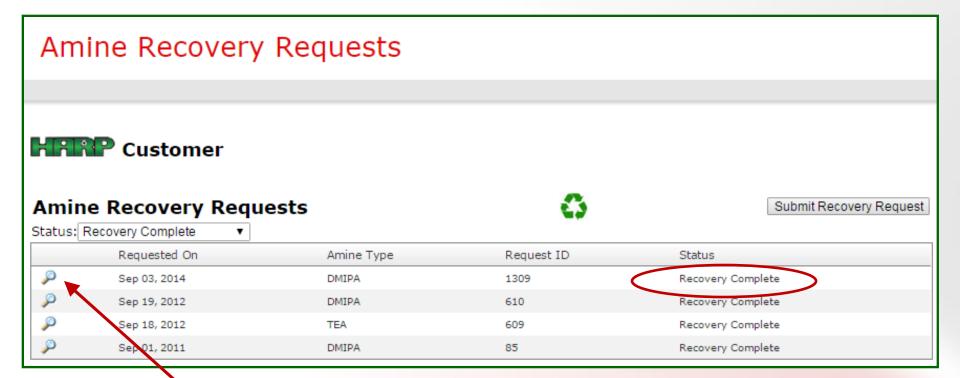


**17)** Status will indicate when the tote with spent scrubber solution is received at Polychem



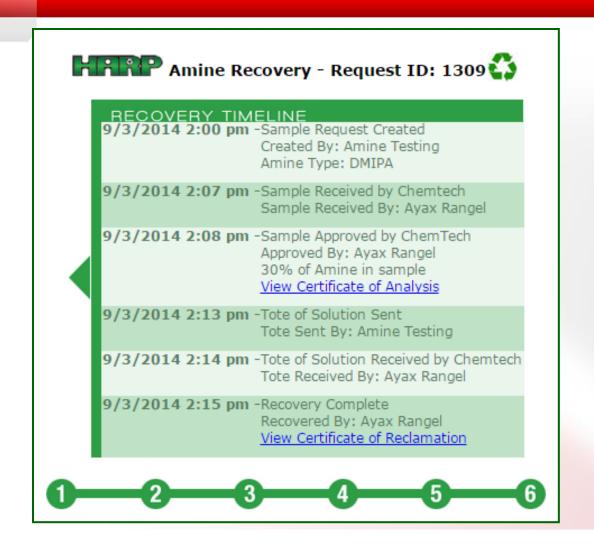


**18)** Status will update once scrubber solution is reclaimed. Click on magnifying glass to view details and download Certificate of Reclamation.





19) View entire process history and download Certificate of Reclamation



### **Recovery Complete**

Chemtech processed your solution on 9/3/2014 2:15 pm and amine recovery is now complete. Click Here to view the Certificate of Reclamation (CoR).



Additional information and guidelines on how to properly charged and assure full compliance with the Scrubber Solution can be viewed in the presentation # 2 named:

**Amine Scrubber General Design & Operating Principles** 



# Amine Reclamation

Contact your HAI Representative for more details.

- OR –

Ayax Rangel, Product Manager <a href="mailto:ayax.rangel@ha-international.com">ayax.rangel@ha-international.com</a>, 630-575-5775

Sara Hutchinson, Marketing Specialist <a href="mailto:sara.hutchinson@ha-international.com">sara.hutchinson@ha-international.com</a>, 630-575-5762

Specifics at each customer site, such as: local codes, plant layout, soils condition, & environmental issues, are beyond the scope of this presentation. This presentation is intended to assist HA International customers of Sigma Cat cold box catalysts in the effective handling and tracking of the amine scrubber solution sample bottles and totes. It is suggested that for the handling of any other container besides the HARP sample bottles and scrubber solution totes, you contact your HA International representative.

The information contained in this presentation is, to our best knowledge, true and accurate; however, all recommendations or suggestions are made without guarantee or representation thereof or of results since the conditions of use are beyond our control. We suggest that you evaluate these recommendations or suggestions with your own staff prior to put these recommendations in practice. HA-International LLC disclaims all express and implied warranties including merchantability and suitability for a particular use or purpose. Freedom to use any patent owned by HA-International LLC or other is not to be inferred from any statement herein. HA-International LLC disclaims any and all liability in connection with the use of this recommendations and or suggestions.