Use Case Name: Request a chemical		ID: UC-2	Priority: High

Actor: Lawn Chemical Applicator (LCA)

Description: The Lawn Chemical Applicator (LCA) specifies the lawn chemical needed for a job by entering its name or ID number. The system satisfies the request by reserving the quantity requested or the quantity available and notifying the Chemical Supply Warehouse of the pick-up.

Trigger: A Lawn Chemical Applicator (LCA) needs a chemical for a job.

Type: ☑ External ☐ Temporal

Preconditions:
1. The LCA identity is authenticated.
2. The LCA has necessary training and credentials on file.
3. The Chemical Supply datastore is up-to-date and on-line.

Normal Course:	Information for Steps:
1.0 Request a lawn chemical from the chemical supply warehouse.	
1. The LCA specifies the desired lawn chemical	Chemical name or ID
2. The system verifies the chemical is approved for usage	List of approved chemicals
3. The system displays the quantity of the lawn chemical on hand	Quantity on hand
4. The LCA specifies the quantity needed	Quantity needed
5. The system asks the LCA to confirm the request for the quantity needed or the quantity available (Alternative Course 1.1)	Request confirmation
6. The system gives the LCA a Chemical Pick-up Authorization for the quantity requested	Chemical Pick-up Authorization
7. The system notifies the Chemical Supply Warehouse of the chemical pick-up	Chemical Pick-up Notice
8. The system stores the Lawn Chemical Request in the Chemical Request datastore	Lawn Chemical Request

Alternative Courses:

1.1   Quantity available is less than quantity needed (branch at step 5)

1. The system asks the LCA if he wants the quantity available or to cancel the request	
2a. The LCA asks to take the quantity available	Request quantity available
3a. The system changes the quantity requested to the quantity available	
4a. The system gives the LCA a Chemical Pick-up-Authorization for the quantity available	Chemical Pick-up Authorization
5a. The system notifies the Chemical Supply Warehouse of the chemical pick-up	Chemical Pick-up Notice
6a. The system stores the Lawn Chemical Request in the Chemical Management System	Lawn Chemical Request
7a. The system notifies Purchasing of the chemical outage	Chemical Outage Notice
2b. The LCA asks to cancel the request	Cancellation
3b. The system terminates the use case	

Postconditions:
1. The Lawn Chemical Request is stored in the Chemical Management System.
2. The Chemical Pick-up Authorization is produced for the LCA.
3. The Chemical Supply Warehouse is notified of the chemical pick-up.
4. Purchasing is notified of chemical outage.

Exceptions:

E1: Chemical is no longer approved for use (occurs at step 2)
1. The system displays message. "That chemical is no longer approved for use"
2. The system asks the LCA if he wants to request another chemical or to exit
3a The LCA asks to request another chemical
4a. The system starts Normal Course again
3b. The LCA asks to exit
4b. The system terminates the use case

Summary

Inputs	Source	Outputs	Destination
Chemical name or ID	LCA	Chemical Pick-up Authorization	LCA
List of approved chemicals	Lawn Chemicals Supply datastore		
Chemical quantity on hand	Lawn Chemicals Supply datastore	Chemical Pick-up Notice	Chemical Supply Warehouse
Quantity needed	LCA		
Request confirmation	LCA	Lawn Chemical Request	Chemical Request datastore
Request quantity available or cancellation	LCA	Chemical Outage Notice	Purchasing

FIGURE 4-1
Request a Chemical Use Case