

Frequently Asked Questions
UAA's Closed Chain of Custody Best Management Practice

1. What does an Applicator have to do to retrofit a spray rig to be compliant with this BMP?

For Ready to Use custom blends:

- Supply line valve to connect to supply container
- Supply line transfer pump
- Valve connection between supply line and application equipment.
- Supply container handling and tie down

For Dilute concentrates:

- Supply line valve to connect to supply container
- Supply line transfer pump
- Valve connection between supply line and spray mix tank
- Valve connection between spray mix tank and application equipment if different than mix tank.
- Some means of measuring: fixed volume transfer tank, flow meter, calibrated pump, or used supply container calibration.
- Supply container handling and tie down

2. What does an Applicator have to do to retrofit a backpack to be compliant with this BMP?

While not a requirement, the *preferred practice* is to maintain a closed connection all the way to a backpack tank. This is accomplished by retrofitting the backpack tank with a closed connection. This requires cutting a hole in the top of the tank and installing a valve and gasket.

3. What will it cost an Applicator to adopt the practices in the new BMP?

The estimated cost ranges from \$500 to \$1000 per spray rig. The choice of manual, electric or both types of transfer pumps is the main cost driver. The estimated cost of retrofitting each backpack is <\$20.

4. I'm an Applicator, are there any opportunities to recover my initial investment in equipment?

Applicators are eligible for participation in a rebate program. Financial analysis suggests that medium and large-scale applicators have the potential to recover 100% of their costs in the first season.

5. I'm a Utility, what do I have to do to adopt the new CCC BMP?

This could be as simple as including the requirements of the CCC BMP in your UVM specification and contracts. The BMP is not copyrighted so its text may be included directly, or the document can be referenced similar to the way in which your VM spec may reference ANSI A300 and/or other ISA BMP's

6. I'm a Utility, What will it cost to adopt the new CCC BMP?

Financial analysis demonstrated that the new BMP should result in a slight reduction in *cost per applied acre*. This is the lowest common denominator. The cost of the ingredients that make up a mix should not be priced at a premium. Productivity should increase, and the cost of disposal should be reduced. The Applicator may pass through start-up cost in rates, but these costs should be recoverable at the end of the season in the form of a rebate.

Initial pricing may be quoted at a premium due to uncertainty associated with any new concept, but a competitive marketplace should resolve any short-term premium.

7. What has changed from the way herbicides have traditionally been supplied and applied in UVM work?

Traditionally herbicides have been provided in concentrated form in single use containers that require disposal. They are poured from open containers into spray equipment tanks. The CCC BMP includes the use of custom blends of dilute concentrates and ready to use mixtures, using supply containers that are returnable and reusable.

8. What is the difference between Mixer/Loader and Applicator?

An Applicator is the person or company who is responsible for making the actual application of herbicides to utility rights-of-way (ROW). There is a regulatory distinction between "Applicator" and "Mixer/Loader". These terms have different meanings with respect to regulatory requirements and the way human health assessments are conducted. However in the UVM industry, the same personnel typically mix, load, and apply herbicides.

Frequently Asked Questions
UAA's Closed Chain of Custody Best Management Practice

9. What is a Custom Blend?

A custom blend is a mixture of registered active ingredients, adjuvants and diluents that is created on demand for a specific Applicator and project. Custom Blends can be Dilute Concentrates or Ready to Apply mixes. Custom Blends are typically provided in Returnable Reusable Closed Supply Containers.

10. What is the difference between a *Ready to Apply* RTA and *Ready to Use* RTU?

- *RTA* formulations are created on demand by Custom Blenders and are intended for use by a specific Applicator on a project. They are supplied as mixtures of registered products diluted to the required concentration as required by an Applicator for a project.
- *RTU* formulations are labeled products that are registered for a specific use and are diluted, unique formulations. Their registration is supported by their own product chemistry documentation packages and thus can only come from producers.

11. What is the difference between a Supply Container and a Service Container?

Supply Containers are the containers in which custom blends are supplied to an Applicator. Service Containers are used by Applicators to transfer herbicide mixtures within their own operations.

12. How can leaks be reduced at transfer points?

It is important to inspect, clean, and maintain valves. Early formulations were known to crystallize and compromise seals and pumps. This issue has largely been resolved by making changes in gasket materials, in the types of valves and transfer pumps used, and in work practices.

13. How can spills be reduced at transfer points?

It is important to use care when connecting/disconnecting closed systems when exposed to direct sunlight. Heating may increase pressure within the supply container that may be unexpectedly released when making connections.

14. How heavy are the Supply Containers?

Full 15-gallon returnable refillable closed supply containers weigh \pm 150 lbs. They are equipped with lifting handles.

15. Can the total contents of a closed supply container be drawn out?

Yes, nearly all of it. Early container designs sometimes resulted in the inability to completely empty it of its contents, sometimes leaving more than a gallon of custom blend in the “empty” closed container. This was due to internal sumps that either leaked or were too short. This problem has been addressed by making improvements to the sump tubes and the inclusion of a basin-like sump in the container bottom

16. Is the intent of the BMP that all UVM applications adopt a closed system approach?

No. Some important and useful active ingredients such as wettable powders and dry flowables are applied as suspensions that will settle out, so are not suitable for inclusion in a dilute concentrate or ready to apply mixture. In addition, traditional “package goods” supplied in one-way containers make sense in cases such as small jobs and for small applicators.

17. Can all types of formulations of active ingredients be supplied as custom blends?

No, dry flowable formulations will not remain in suspension so cannot be included in a premix.

18. How stable are Custom Blends?

They are reasonably stable. Some early attempts at supplying custom blends proved to be unstable. Improvements in product chemistry, emulsifiers, and diluents have largely resolved this problem. Instability of a blend can be observed, as the contents of the supply container should appear uniform throughout the liquid column. A layered appearance may be an indication of instability.

A dilute concentrate should generally be expected to remain stable for up to two years.

19. How durable are the Returnable Reusable Supply Containers?

Very, they are designed to last five years and/or 30 refill cycles. Early container designs sometimes cracked and leaked. This problem has been addressed by improvements in container design specifications and handling procedures.

Frequently Asked Questions
UAA's Closed Chain of Custody Best Management Practice

20. Does the new CCC BMP increase the cost of UVM herbicide mixtures I buy?

No, it shouldn't, and may actually result in a slight reduction in purchase prices. Initially the pricing for bulk products supplied in custom blends was higher than that for products supplied as package goods in one-way disposable containers. The market has adjusted such that bulk pricing (and custom blends) is more cost-competitive than package goods. This includes the cost of blending and shipping.

21. What are the labeling requirements for R/R Closed Supply Containers?

- A unique container ID (bar code)
- EPA product registration numbers and product labels of all registered herbicides
- The concentrations of all ingredients
- A reference to the specific lot or batch contained therein.
- Application equipment-specific mixing/dilution instructions.
- Specific reference to the Utility project and Applicator

22. If we're using a closed system do we need to wear PPE? If so, how much?

Yes, all PPE requirements per the labels of the registered products remain in effect. While the use of dilute concentrates, closed containers, and closed transfer points reduces an applicator's exposure to concentrated formulations, it does not alter any regulatory requirements including those related to PPE.

23. Up to now if I have a problem I would call the producer's product representative. With a custom blend who's responsible for non-performance?

It is still appropriate to contact the product representative. It may also be necessary to consult with the custom blender. QA/QC procedures including retention of samples of custom blends will help determine the cause of problems in the field.

24. My current practice is to add in a little something extra to the mix when a particular species is encountered, and/or when conditions change. Will I have to give up that flexibility?

No, the CCC BMP recognizes the need for an adaptive IVM strategy involving change in application-ready mixtures at the time of application. It may be appropriate to add an active ingredient or adjuvant such as more surfactant and/or drift control agent as site conditions change.

25. What do I do with a container that I believe has been tampered with?

R/R Closed Supply Containers are owned by the Custom Blenders. If you suspect damage or tampering that has breached the integrity of the closed system, contact the container's owner for guidance.

26. What do paraffin oil-based foliar mix carriers such as Thinvert require?

Paraffin oil-based foliar mix carriers (e.g. "Thinvert") act as both a surfactant and drift control agent. These formulations require additional field agitation to assure that the carrier and active ingredients are in an optimum suspension.

27. The CCC BMP includes "just in time" inventory. What does that really mean?

The goal is to reduce the quantity of herbicide that an Applicator has on hand at any given time. Some rules of thumb include store no more than three weeks' supply on hand at any given time to meet anticipated demand, and store no more than 1/2 of the estimated job requirement on hand at any given time, unless it will be used within a few days. It is also a good idea to minimize carry-over between spray seasons, and to minimize the number of open, partially full containers.

28. Can R/R Closed Supply Containers be refilled/reused by an Applicator or Distributor?

No. They are owned by the Custom Blenders. They are product-dedicated, and intended to be refilled with similar active ingredients. Each container represents an investment of approximately \$85.

29. What if the closed connection doesn't work? Can I manually pour the product into the sprayer?

No. Before you breach the integrity of the closed system, contact the Custom Blender for guidance. It may be that they will instruct you to open the container so that the contents are accessible to your operations.

30. My crew does not speak English; how are they going to understand what to do?

A Spanish language version of the CCC BMP is planned. Adoption of the CCC BMP actually reduces the complexity of tasks that must be performed on the job site by spray crew personnel. It is up to the licensed applicator to assure that spray crew personnel are trained and follow procedures.

Frequently Asked Questions
UAA's Closed Chain of Custody Best Management Practice

31. If I follow the BMP will I be in compliance with pesticide regulations?

Yes. However, regulations can change; if the BMP is found to be inconsistent with current regulations, the regulatory requirements supersede the BMP's stated practices.

32. Some regulatory agencies at the state level (e.g., NY, CA) seem to operate independent of Federal pesticide regulations; is UAA sure that the requirements of the CCC BMP are consistent with state jurisdictions?

We believe so. USEPA participated on UAA's BMP Oversight Committee, and we believe it is consistent with all Federal requirements. The Custom Blenders have been providing dilute concentrates and ready to apply formulations in closed returnable reusable containers to customers in most states, including those known to be very active in pesticide regulation.

33. What precautions do I need to take related to storing Custom Blends?

Do not store containers for long periods in direct sunlight. It can lead to photodecomposition of container contents, and shorten the service life of the plastic containers themselves.

Do not store water-based custom blends in environments where there is risk of the contents freezing. Freezing may adversely effect the stability of the mix, and may cause swelling, brittleness and cracking of the plastic containers themselves.

34. What do I do with a R/R Supply Container when it is empty?

Ship it back to the Custom Blender for reuse. It's that simple. There is no Applicator requirement for triple rinsing, handling rinsate, and container disposal. Care should be taken to minimize container damage, wear and tear. It is important to maintain the integrity of the container closure if it is to be reused.

35. Does the BMP restrict from whom I can buy herbicides?

No. Applicators purchase herbicides through Distributors. The BMP does not change that relationship. There are several Custom Blenders that are capable of providing dilute concentrates and ready to apply mixtures to the UVM industry.