

SAMPLE

PHASE 2 SOIL FUMIGATION MANAGEMENT PLAN (METAM SODIUM/METAM POTASSIUM PRODUCTS)

FMP Elements:

I. Certified Applicator Supervising the Fumigation

II. General Site Information

III. Application Block Owner Information

IV. Recordkeeping

V. General Application Information

VI. Buffer Zones

VII. Emergency Response Plan

VIII. Communication Between Applicator, Owner and Other On-site Handlers

IX. Handler Information

X. Tarp Plan

XI. Soil Conditions

XII. Posting Signs – Fumigant Treated Area and Buffer Zone

XIII. Emergency Preparedness and Response Measures

XIV. State and/or Tribal Lead Agency Advance Notification

XV. Air Monitoring Plan

XVI. Good Agricultural Practices (GAPs)

Attachments:

Check the boxes if the information below is attached as a separate document to the FMP.

- Site Map, aerial photo or detailed sketch
- Description of evacuation routes (this can be included in the site map)
- Written agreement, if the buffer zone extends onto land not under the control of the owner of the application block
- Handler Information (Use EPA's Microsoft Word or PDF template)
- GAPs
- Other:

PHASE 2 SOIL FUMIGANT MANAGEMENT PLAN (METAM SODIUM/METAM POTASSIUM PRODUCTS)

The text fields below will expand as the text is entered. After completing each field, use Tab key to go to next text field or check box.

I. Certified Applicator Supervising the Fumigation			
Name: Peter Hall	Phone number: 610-986-4521	License and/or certificate number: 23GH4	<input checked="" type="checkbox"/> Commercial applicator <input type="checkbox"/> Private applicator
Employer name: US Application Co.	Employer address: 745 Hilltop Circle Las Cruces, NM 88001		
Date and location of completing EPA approved certified applicator training program: 1/10/2013			
II. General Site Information			
Application block location (e.g., county, township-range-section quadrant), address, or global positioning system (GPS) coordinates: 100 acre crop circle to the east of Farmville Boulevard and west of Interstate 10.			
<input checked="" type="checkbox"/> Site Map, aerial photo attached to the FMP or detailed sketch provided below that shows (application block location, application block dimensions, buffer zone dimensions, property lines, roadways, rights-of-ways, sidewalks, permanent walking paths, bus stops, nearby application blocks, surrounding structures (occupied and non-occupied), locations of Buffer Zone signs, and locations of difficult to evacuate sites within ¼ mile of the application block if the buffer zone is greater than 300 feet, or 1/8 mile if the buffer zone is 300 feet or less.			
Comments:			
III. Application Block Owner Information			
Name: Dale Smith	Address: 5647 State Road 34 Las Cruces, NM 88001		Phone number: 659-852-4521
IV. Recordkeeping			
<input checked="" type="checkbox"/> The owner/operator of the application block has been informed that he/she as well as the certified applicator must keep a signed copy of the site-specific FMP and the post-application summary for 2 years from the date of application.			
V. General Application Information			
Target application date/window: October 27-31, 2013	EPA Registration Number: 61842-6	Fumigant Product Name: Sectagon-42	
VI. Buffer Zones			
Application method: <input type="checkbox"/> Center Pivot/Lateral Move Irrigation - High Release Equipment <input type="checkbox"/> Center Pivot/Lateral Move Irrigation - Medium Release Equipment <input checked="" type="checkbox"/> Center Pivot/Lateral Move Irrigation - Low Release Equipment <input type="checkbox"/> Solid Set Sprinkler <input type="checkbox"/> Drench <input type="checkbox"/> Drip <input type="checkbox"/> Flood Basin, Furrow and Border <input type="checkbox"/> Shank <input type="checkbox"/> Spray Blade <input type="checkbox"/> Rotary Tiller	Application Rate from the buffer zone table on the label, (if the rate used is not in the buffer zone table, round up to the next value): 61 gallons of product/A	Injection Depth (inches): NA	Application Block Size from the buffer zone table on the label, (if the block size is not in the buffer zone table, round up to the next value): 100 A
Credits applied and measurements taken (if applicable): <input type="checkbox"/> Tarp (Brand name and tarp manufacturer: , Lot Number: , Batch Number: , Part Number , Thickness: , Color:): % <input type="checkbox"/> Organic matter content: (measurement), % <input type="checkbox"/> Clay content: (measurement), % <input checked="" type="checkbox"/> Soil temperature: 45 deg F (measurement), 10 %			
Total credits: 10%			
Buffer zone distance: 844.2 feet			
Are there areas in the buffer zone that are not under the control of the owner of the application block? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
If yes, describe the areas and attach the written agreement to the FMP. Buffer extends onto land owned by Brooks Farms to the west of the application block and Joey Smith's property to the northeast. Written agreements are attached.			
VII. Emergency Response Plan			
Description of evacuation routes (a diagram or drawing may be attached to the FMP): Everyone should move upwind of the incident and meet either at the northwest corner of the property line or at Storage Shed C in the southwestern corner of the property. Drawing included on attached site map.			

Check here if diagram or drawing is attached or if evacuation routes are included in the site map

Locations of telephones: **Cell phone to be kept with certified applicator**

Contact information for first responders: **911**

Local/state/federal contacts: **NM Program Manager: 575-646-2799**

Emergency procedures/responsibilities in case of an incident, sensory irritation is experienced outside of the buffer zone and/or there are equipment/tarp/seal failure, complaints or other emergencies: **All handlers must report any problems to the certified applicator in charge of the application who will decide if additional action must be taken.**

VIII. Communication Between Applicator, Owner, and Other On-site Handlers

Pesticide product labels and material safety data sheets are at the application site and available for employees to review.

Will the certified applicator be at the application site during all handler activities that take place from the beginning of the application until the entry restricted period expires? Yes No

If no, describe how the certified applicator will share the label requirements with owner and/or handlers who will be present at the application block after the application is complete until the entry restricted period expires. Include the name and phone number of persons contacted as well as the date they were contacted. **On 10/25/13 Stacy Evans (c:747-534-5798) was contacted in person by Peter Hall and Peter agreed to pass along the label, FMP, and other application records to Stacy at the application block before leaving the site. Stacey will be responsible for monitoring the application when Peter is not available.**

IX. Handler Information (use EPA's Microsoft Word or Acrobat Adobe version of the handler information template)

Information for all handlers is attached to the FMP

At minimum one handler has the proper respirators and cartridges/canisters

Appropriate respirators and cartridges/canisters are available for each handler that will wear one

Comments/notes:

X. Tarp Plan (check here if section is not applicable)

Schedule for checking tarps for damage, tears, and other problems:

Minimum size of damage that will be repaired:

Factors used to determine when tarp repair will be conducted:

Equipment/methods used to perforate tarps: mechanical: hand:

Target dates for perforating tarps:

Target dates for removing tarps:

XI. Soil Conditions

Soil Temperature: Has the air temperature been above 100 °F in any of the 3 days prior to application? Yes or No

If yes, record the soil temperature measurement:

Soil Texture: **clay loam soil**

Soil Moisture: (check the box of the method used to determine the soil moisture)

USDA Feel and Appearance Method

Instrument

Other

Description of soil: **fine**

Instrument used:

Describe method:

Percent water capacity estimate: **50-75%**

Percent water capacity:

Percent water capacity:

XII. Posting Signs – Fumigant Treated Area and Buffer Zone

Name(s) of person(s) posting Fumigant Treated Area and Buffer Zone signs: **Peter Hall**

Location of Buffer Zone signs: **See attached map for location of signs.**

XIII. Emergency Preparedness and Response Measures (check here if section is not applicable)

If Emergency Preparedness and Response Measures are triggered, check the option below that will be used:

Fumigant site monitoring or Response information for neighbors

Fumigant site monitoring (if applicable)

Response information for neighbors (if applicable)

List when and where it will be conducted:

List residences and businesses informed: **Brooks Farms on Farmville Boulevard**

Name and phone number of person providing the information: **Stacey Evans (c:747-534-5798)**

List the method of providing the information: **Provided information in a handout on 10/24/13**

XIV. State and/or Tribal Lead Agency Advance Notification (check here if section is not applicable)

Date notified:

Person notified:

XV. Air Monitoring Plan

If monitoring indicates air concentrations greater than or equal to 6000 ppb for methyl isothiocyanate (MITC), handlers must stop work

and leave the application block.

If sensory irritation is experienced check which of the following be procedures will be followed:

Intend to cease operations or Intend to continue operations with respiratory protection

Handler Tasks to be Monitored

Monitoring Equipment

Timing

XVI. Good Agricultural Practices (GAPs)

Check here if applicable mandatory GAPs are attached to the FMP (this could be a copy of the label highlighting the applicable GAPs). If this box is not checked, the checklist below must be completed.

Shank

- Wind Speed
- Weather Conditions
- Soil Conditions, Injection Depth, and Soil Sealing
- Tarps (check here if not applicable)
- Soil Temperature
- Soil Moisture
- Application and Equipment

Spray Blade

- Wind Speed
- Weather Conditions
- Soil Conditions, Injection Depth, and Soil Sealing
- Tarps
- Soil Temperature
- Soil Moisture
- Application and Equipment

Rotary Tiller

- Wind Speed
- Weather Conditions
- Soil Conditions, Injection Depth, and Soil Sealing
- Tarps
- Soil Temperature
- Soil Moisture
- Application and Equipment

Center Pivot

- Wind Speed
- Weather Conditions
- Soil Conditions
- Air Temperature
- Soil Temperature
- Soil Moisture
- Flushing Irrigation Lines
- Application and Equipment

Solid Set Sprinkler

- Wind Speed
- Weather Conditions
- Soil Conditions
- Air Temperature
- Soil Temperature
- Soil Moisture
- Flushing Irrigation Lines
- Application and Equipment

Drench

- Wind Speed
- Weather Conditions
- Soil Conditions
- Air Temperature
- Soil Temperature
- Soil Moisture
- Application and Equipment

Drip

- Wind Speed
- Weather Conditions
- Soil Conditions
- Air Temperature
- Soil Temperature
- Soil Moisture
- Tarps
- Flushing Irrigation Lines
- Application and Equipment

Flood Basin, Furrow and Border

- Wind Speed
- Weather Conditions
- Soil Conditions
- Air Temperature
- Soil Temperature
- Soil Moisture
- Tarps
- Application and Equipment

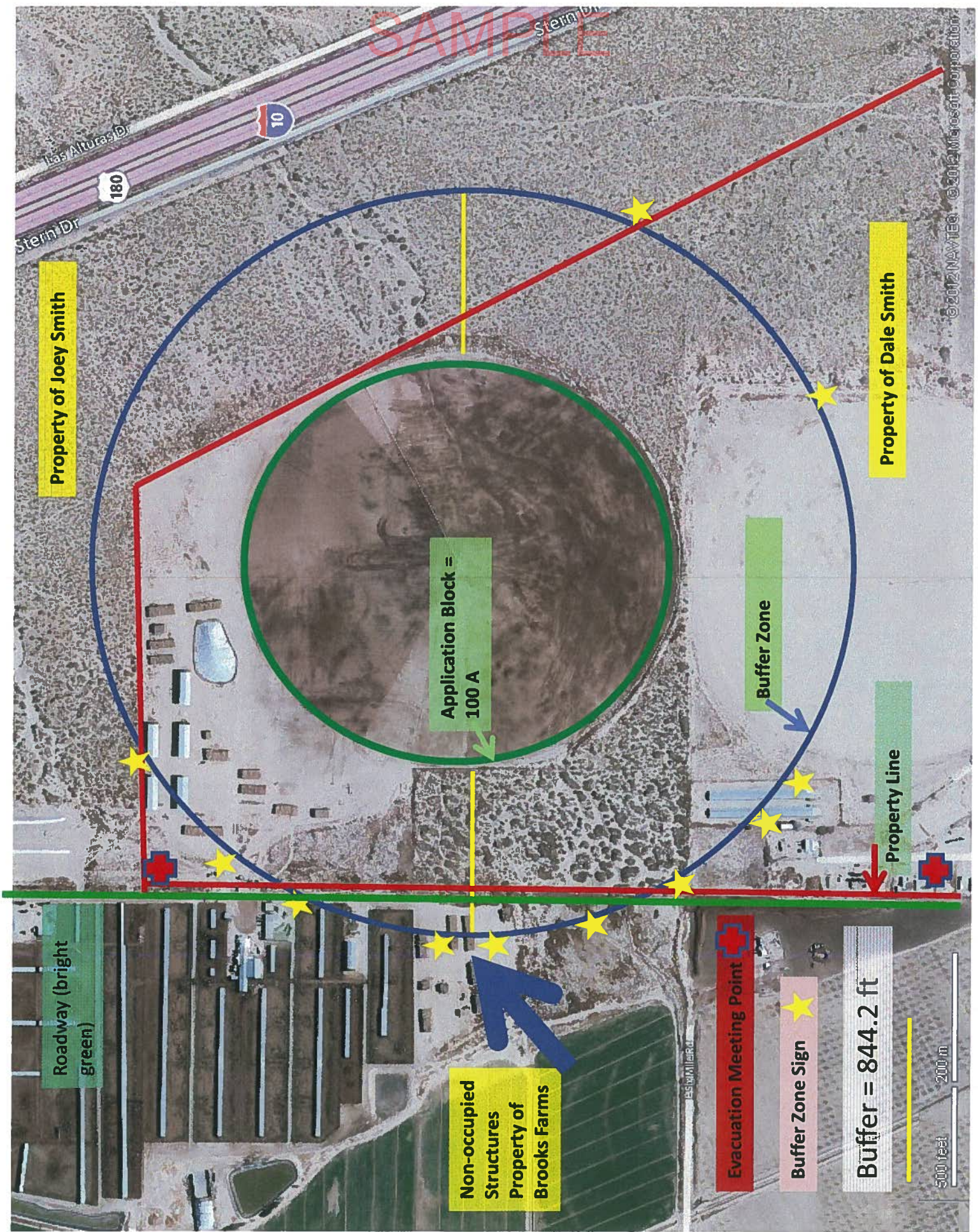
Description of other product specific GAPs from label that will be followed:

Before beginning the fumigation, I have verified that this site-specific FMP reflects current site conditions and product label directions.

Peter Hall
Signature of certified applicator supervising the fumigation

10/20/13
Date

SAMPLE



Neighbor Buffer Zone Written Agreement

SAMPLE

From

Applicator Name: Peter Hall
Company: US Application Company
Address: 745 Hilltop Circle Las Cruces, NM 88001
Phone: 610-986-4521

Date: 10/14/13

To

Joey Smith
589 State Road 358
Las Cruces, NM 88001

Dear Mr. Brooks:

A fumigation is scheduled to occur near your property. This fumigation will require a buffer zone be established around the application site during the application and for at least 48 hours after the completion of the application. We are writing to receive your permission for allowing the buffer zone to extend onto your property. By agreeing to this request, you are:

- Agreeing to voluntarily vacate the buffer zone during the buffer zone period, and
- Agreeing to allow us to post buffer zone warning signs at likely routes of entry into the application block along the portion of the buffer zone extending onto your property.

Here are the details of the fumigation:

Buffer Zone Location: Extends from the east across Farmville Boulevard onto the property of Brooks Farms.

Time of Buffer Zone Restrictions: Estimated as some time from October 27th to November 2nd 2013. We will contact you at least 4 hours before the application begins to let you know when the fumigation will start.

For your convenience, please return the tear-off at the bottom of this letter with your response. Please feel free to contact me with any questions you have regarding the application or this request.

Sincerely,

Peter Hall
Certified Applicator

I agree to voluntarily vacate the buffer zone and allow buffer zone warning signs to be posted on my property for following application:

Buffer Zone Location: Extends from the east across Farmville Boulevard onto the property of Brooks Farms.

Time of Buffer Zone Restrictions: Estimated as some time from October 27th to November 2nd 2013.

Signature: Joey Smith

Date: 10/15/13

Name (print): Joey Smith

Neighbor Buffer Zone Written Agreement

SAMPLE

From

Applicator Name: Peter Hall
Company: US Application Company
Address: 745 Hilltop Circle Las Cruces, NM 88001
Phone: 610-986-4521

Date: 10/14/13

To

Joel Brooks
546 Brooks Ave.
Las Cruces, NM 88001

Dear Mr. Brooks:

A fumigation is scheduled to occur near your property. This fumigation will require a buffer zone be established around the application site during the application and for at least 48 hours after the completion of the application. We are writing to receive your permission for allowing the buffer zone to extend onto your property. By agreeing to this request, you are:

- Agreeing to voluntarily vacate the buffer zone during the buffer zone period, and
- Agreeing to allow us to post buffer zone warning signs at likely routes of entry into the application block along the portion of the buffer zone extending onto your property.

Here are the details of the fumigation:

Buffer Zone Location: Extends from the east across Farmville Boulevard onto the property of Brooks Farms.

Time of Buffer Zone Restrictions: Estimated as some time from October 27th to November 2nd 2013. We will contact you at least 4 hours before the application begins to let you know when the fumigation will start.

For your convenience, please return the tear-off at the bottom of this letter with your response. Please feel free to contact me with any questions you have regarding the application or this request.

Sincerely,

Peter Hall
Certified Applicator

I agree to voluntarily vacate the buffer zone and allow buffer zone warning signs to be posted on my property for following application:

Buffer Zone Location: Extends from the east across Farmville Boulevard onto the property of Brooks Farms.

Time of Buffer Zone Restrictions: Estimated as some time from October 27th to November 2nd 2013.

Signature: Joel Brooks

Date: 10/19/13

Name (print): Joel Brooks

Please return to:
Peter Hall, US Application Co.
745 Hilltop Circle Las Cruces, NM 88001

Page 7 of 11

- At the beginning of the application, the soil temperature at the injection depth must be between 35° and 90°F.
- If air temperatures have been above 100°F in any of the three days prior to application, then soil temperature must be measured and recorded in the FMP. Record temperature measurements at the application depth or 12 inches, whichever is shallower.

Soil Moisture

- The soil moisture in the top six inches of soil must be between 60% to 80% of available water capacity immediately prior to the application, subject to the exception below.
- **EXCEPTION:** In areas where soil moisture must exceed available water capacity to form a bed (e.g., certain regions in Florida), soil moisture content may exceed the 80%.
- If appropriate measuring equipment is not used to determine whether the soil moisture in the top six inches of soil is between 60% to 80% available water capacity immediately prior the application, the *USDA Feel and Appearance Method* test may be used to estimate whether the 60% to 80% soil moisture content requirement is met:

For coarse textured soils (fine sand and loamy fine sand) there must be enough moisture (50 - 75% of available water capacity) to form a weak ball with loose and clustered sand grains on fingers, darkened color, moderate water staining on fingers, will not ribbon.

For moderately coarse textured soils (sandy loam and fine sandy loam) there must be enough moisture (50 - 75% of available water capacity) to form a ball with defined finger marks, very light soil/water staining on fingers, darkened color will not stick.

For medium textured soils (sandy clay loam, loam, and silt loam) there must be enough moisture (50 - 75% of available water capacity) to form a ball, very light staining on fingers, darkened color, pliable, and forms a weak ribbon between the thumb and forefinger.

For fine textured soils (clay, clay loam, and silty clay loam) there must be enough moisture (50 - 75% of available water capacity) to form a smooth ball with defined finger marks, light soil/water staining on fingers, ribbons between thumb and forefinger.

For fields with more than one soil texture, soil moisture content in the lightest textured (most sandy) areas must comply with this soil moisture requirement. The field may be divided into areas of similar soil texture and the soil moisture of each area should be adjusted as needed. Coarser textured soils can be fumigated under conditions of higher soil moisture than finer textured soils; however, if the soil moisture is too high, fumigant movement will be retarded and effectiveness of the treatment will be reduced. Previous and/or local experience with the soil to be treated or the crop to be planted can often serve as a guide to conditions that will be acceptable. If there is uncertainty in determining the soil moisture content of the area to be treated, a local extension service or soil conservationist or pest control advisor (agriculture consultant) should be consulted for assistance.

- If there is insufficient moisture throughout the top six inches of soil immediately prior to the application, the soil moisture must be adjusted. If there is adequate soil moisture below six inches, soil moisture can be brought to the surface by tillage before or during injection. To conserve existing soil moisture, tillage should be done as close to the time of application as possible.

Application and Equipment Considerations

- Do not apply or allow fumigant to drain or drip onto the soil surface.
- Application equipment must be in good working order.
- All tanks, hoses, fittings, valves and connections must be serviceable, tightened, sealed and not leaking.
- Dry disconnect couplings (closed transfer system) must be installed on all tanks and transfer hoses.
- Sight gauges and pressure gauges must be properly functioning.
- Nozzles and metering devices must be the correct size and sealed and unobstructed.
- Use only tanks, hoses and fittings designed to withstand the pressure of the system and resistant to metam.
- Each nozzle must be equipped with a flow monitor, e.g. mechanical, electronic, or Red-ball type monitor.
- For undiluted product, aluminum, brass, copper, galvanized iron, and zinc materials cannot be used.
- All rigs must include a filter to remove any particulates from the fumigant, and a check valve that is visible to the tractor driver during application to prevent backflow of the fumigant into the pressurizing cylinder.
- Before using a fumigation rig for the first time, or when preparing it for use after storage, the operator must check the following items carefully:

- Check the filter, and clean or replace the filter element as required.
- Check all tubes and chisels shanks to make sure they are free of debris and obstructions.
- Check and clean the orifice plates.

Center Pivot Applications

Wind Speed

- For lateral move or center pivot applications: 1) not using a solid stream type nozzle, OR 2) having a release height or spray height greater than 4 feet, OR 3) having 30 lbs or greater PSI at the sprinkler head, wind speed at the application site must be a minimum of 2 mph at the start of the application or forecasted to reach 5 mph during the application and the maximum wind speed is 10 mph.
- For lateral move or center pivot applications using: 1) solid stream, AND 2) having release height and spray height less than 4 feet, AND 3) having 29 lbs. or less PSI at the sprinkler head, wind speed at the application site must be a minimum of 2 mph at the start of the application or forecasted to reach 5 mph during the application and the maximum wind speed is 25 mph.

Weather Conditions

- To determine if unfavorable weather conditions exist or are predicted (see *Identifying Unfavorable Weather Conditions* section) and whether an application should proceed, the National Weather Service weather forecast must be checked by the certified applicator supervising the application:
 - o on the day of, but prior to the start of the application, and
 - o on a daily basis during the application if the time period from the start of the application until the application is complete is greater than 24 hours.
- Do not apply if an air-stagnation advisory issued by the National Weather Service is in effect for the area in which the application is planned, during the application, or the 48 hours after the application is complete.
- Do not apply if light wind conditions (< 2 mph) are forecast to persist for more than 18 consecutive hours from the time the application starts until 48 hours after the application is complete.
- Detailed National Weather Service forecasts for local weather conditions, wind speed, and air stagnation advisories may be obtained online at: <http://www.nws.noaa.gov>, on NOAA weather radio, or by contacting your local National Weather Service Forecasting Office.

Identifying Unfavorable Weather Conditions

- Unfavorable weather conditions block upward movement of air, which results in trapping fumigant vapors near the ground. The resulting air mass can move off-site in unpredictable directions. These conditions typically exist prior to sunset and continue past sunrise and persist as late as noontime. Unfavorable conditions are common on nights with limited cloud cover and light to no wind and their presence can be indicated by ground fog or smog and can also be identified by smoke from a ground source that flattens out below a ceiling layer and moves laterally in a concentrated cloud.

Soil Conditions

- Soil must be in good tilth, free of large clods, and tilled at a minimum to the depth of the treatment zone. Large clods can prevent effective soil sealing and reduce effectiveness of the application. If subsurface soil compaction layers (hardpans) are present within the intended fumigation treatment zone, a deep tillage to fracture these layers must occur prior to or during the soil fumigant application.
- Plant residue that is present must not interfere with the application or the soil seal. Non-decomposed plant material may harbor pests that will not be controlled by fumigation. Except when applying over cover crops as set forth in the Product Instructions, crop residue that is present must lie flat to permit the soil to be sealed effectively and limit the natural "chimneys" that may occur in the soil when plant residue is present. These "chimneys" allow the soil fumigants to move through the soil quickly and escape into the atmosphere. This may create potentially harmful conditions for workers and bystanders and limits the efficacy of the fumigant. Plant residue on the field serves to prevent soil erosion from both wind and water.

Soil Temperature

- At the beginning of the application, the soil temperature at the injection depth must be between 35° and 90°F, measured at 3 inches in depth.
- If air temperatures have been above 100°F in any of the three days prior to application, then soil temperature must be measured and recorded in the FMP. Record temperature measurements at the application depth or 12 inches, whichever is shallower.

Soil Moisture

- The soil moisture in the top six inches of soil must be between 60% to 80% of available water capacity immediately prior to the application, subject to the exception below.
- **EXCEPTION:** In areas where soil moisture must exceed available water capacity to form a bed (e.g., certain regions in Florida), soil moisture content may exceed the 80%.
- If appropriate measuring equipment is not used to determine whether the soil moisture in the top six inches of soil is between 60% to 80% available water capacity immediately prior to the application, the **USDA Feel and Appearance Method** test may be used to estimate whether the 60% to 80% soil moisture content requirement is met:

For **coarse** textured soils (fine sand and loamy fine sand) there must be enough moisture (50 - 75% of available water capacity) to form a weak ball with loose and clustered sand grains on fingers, darkened color, moderate water staining on fingers, will not ribbon.

For **moderately coarse** textured soils (sandy loam and fine sandy loam) there must be enough moisture (50 - 75% of available water capacity) to form a ball with defined finger marks, very light soil/water staining on fingers, darkened color will not stick.

For **medium** textured soils (sandy clay loam, loam, and silt loam) there must be enough moisture (50 - 75% of available water capacity) to form a ball, very light staining on fingers, darkened color, pliable, and forms a weak ribbon between the thumb and forefinger.

For **fine** textured soils (clay, clay loam, and silty clay loam) there must be enough moisture (50 - 75% of available water capacity) to form a smooth ball with defined finger marks, light soil/water staining on fingers, ribbons between thumb and forefinger.

For **fields with more than one soil texture**, soil moisture content in the lightest textured (most sandy) areas must comply with this soil moisture requirement. The field may be divided into areas of similar soil texture and the soil moisture of each area should be adjusted as needed. Coarser textured soils can be fumigated under conditions of higher soil moisture than finer textured soils; however, if the soil moisture is too high, fumigant movement will be retarded and effectiveness of the treatment will be reduced. Previous and/or local experience with the soil to be treated or the crop to be planted can often serve as a guide to conditions that will be acceptable. If there is uncertainty in determining the soil moisture content of the area to be treated, a local extension service or soil conservationist or pest control advisor (agriculture consultant) should be consulted for assistance.

- If there is insufficient moisture throughout the top six inches of soil immediately prior to the application, the soil moisture must be adjusted. If there is adequate soil moisture below six inches, soil moisture can be brought to the surface by tillage prior to the application. To conserve soil moisture, tillage should be done as close to the time of application as possible.

Flushing Irrigation Lines

- Do not allow fumigant to remain in the irrigation system after the application is complete. After application of the fumigant, flush the injection and irrigation system with untreated water. The flush time must be adequate to purge the fumigant from the injection and irrigation system, but should be less than the amount that could over-saturate the beds. If common lines are used for both the fumigant application and the water treatment/seal (if applied), these lines must be adequately flushed before starting the water treatment/seal.

Application and Equipment Considerations

- Anti-siphon and back-flow prevention devices must be installed and in working order.
- Tanks must be in good condition to ensure product does not spill or leak.
- Tanks must have sealable covers on access ports.
- Tanks must have proper pesticide labels affixed to them.
- All tanks, hoses, fittings, valves and connections must be serviceable, tightened, sealed and not leaking.
- Use only tanks, hoses and fittings designed to withstand the pressure of the system and resistant to metam.
- Use only positive displacement pumps. Do NOT use impellers made of brass, aluminum, or galvanized material.
- For undiluted product, aluminum, brass, copper, galvanized iron, and zinc materials cannot be used.
- The system must contain a functional check valve, vacuum relief valve, inspection port, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally-closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Any alternatives to the required safety devices in this label must conform to the list of EPA-approved alternative devices.

Solid Set Sprinkler Applications

Wind Speed

- Wind speed at the application site *must* be a minimum of 2 mph at the start of the application or forecasted to reach 5 mph during the application and the maximum wind speed is 10 mph.

Weather Conditions

- To determine if unfavorable weather conditions exist or are predicted (see *Identifying Unfavorable Weather Conditions* section) and whether an application should proceed, the National Weather Service weather forecast must be checked by the certified applicator supervising the application:
 - on the day of, but prior to the start of the application, and
 - on a daily basis during the application if the time period from the start of the application until the application is complete is greater than 24 hours.
- Do not apply if an air-stagnation advisory issued by the National Weather Service is in effect for the area in which the application is planned, during the application, or the 48 hours after the application is complete.
- Do not apply if light wind conditions (< 2 mph) are forecast to persist for more than 18 consecutive hours from the time the application starts until 48 hours after the application is complete.
- Detailed National Weather Service forecasts for local weather conditions, wind speed, and air stagnation advisories may be obtained online at: <http://www.nws.noaa.gov>, on NOAA weather radio, or by contacting your local National Weather Service Forecasting Office.

Identifying Unfavorable Weather Conditions

- Unfavorable weather conditions block upward movement of air, which results in trapping fumigant vapors near the ground. The resulting air mass can move off-site in unpredictable directions. These conditions typically exist prior to sunset and continue past sunrise and persist as late as noontime. Unfavorable conditions are common on nights with limited cloud cover and light to no wind and their presence can be indicated by ground fog or smog and can also be identified by smoke from a ground source that flattens out below a ceiling layer and moves laterally in a concentrated cloud.

Soil Conditions

- Soil must be in good tilth, free of large clods, and tilled at a minimum to the depth of the treatment zone. Large clods can prevent effective soil sealing and reduce effectiveness of the application. If subsurface soil compaction layers (hardpans) are present within the intended fumigation treatment zone, a deep tillage to fracture these layers must occur prior to or during the soil fumigant application.
- Plant residue that is present must not interfere with the application or the soil seal. Non-decomposed plant material may harbor pests that will not be controlled by fumigation. Except when applying over cover crops as set forth in the Product instructions, crop residue that is present must lie flat to permit the soil to be sealed effectively and limit the natural "chimneys" that may occur in the soil when plant residue is present. These "chimneys" allow the soil fumigants to move through the soil quickly and escape into the atmosphere. This may create potentially harmful conditions for workers and bystanders and limits the efficacy of the fumigant. Plant residue on the field serves to prevent soil erosion from both wind and water.

Soil Temperature

Handler Information

Handler Name, Address, and Phone Number Peter Hall 674 Oak Road Las Cruces, NM 88001 (610)986-4521	Employer Name, Address, and Phone Number US Application Co. 745 Hilltop Circle Las Cruces, NM 88001 (610)865-2965	Tasks Handlers are Trained and Authorized to Perform* (check number(s) from below)	PPE (check all that apply)	Respirator Information (leave blank if "no respirator" is checked under PPE)
		<input checked="" type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input checked="" type="checkbox"/> 6 <input checked="" type="checkbox"/> 7 <input checked="" type="checkbox"/> 8 <input checked="" type="checkbox"/> 9 <input checked="" type="checkbox"/> 10 <input checked="" type="checkbox"/> 11	<input checked="" type="checkbox"/> Long-sleeved shirt/long-pants, shoes, socks <input checked="" type="checkbox"/> Chemical-resistant apron <input checked="" type="checkbox"/> Chemical-resistant footwear and socks <input checked="" type="checkbox"/> Protective eyewear (NOT goggles) <input checked="" type="checkbox"/> Chemical-resistant gloves <input checked="" type="checkbox"/> Air-purifying respirator <input type="checkbox"/> Other: <input type="checkbox"/> No respirator PPE training date: 2/6/13	Make: 3M Model: 6700 Type: APR Style: Full-face Size: medium Cartridge type: 3M model 60928 Organic Fit test date: 4/14/13 Training date: 4/14/13 Medical date: 4/14/13 Make: Model: Type: Style: Size: Cartridge type: Fit test date: Training date: Medical date: Make: Model: Type: Style: Size: Cartridge type: Fit test date: Training date: Medical date:
<input checked="" type="checkbox"/> The above handler has received Fumigant Safe Handling information within the past 12 months.				
*1. Loaders, drivers, tractor co-pilots, shovellers, cross-ditchers, or other direct application participants 2. Cleaning up fumigant spills (does not include emergency personnel not associated with the application) 3. Tasks with liquid contact potential 4. Installing, perforating or removing tarps 5. Repairing or monitoring tarps until 14 days after the application is complete if tarps are not perforated and removed during those 14 days. 6. Monitoring fumigant air concentrations 7. Handling or disposing of fumigant containers 8. Cleaning, handling, adjusting, or repairing equipment that may contain fumigant residues 9. Installing, repairing, operating, or removing irrigation equipment in the application block or buffer zone 10. Performing scouting, crop advising, or monitoring tasks in the application block or buffer zone 11. Performing other WPS handling tasks				
Comments/notes:				

SAMPLE

Handler Information

Handler Name, Address, and Phone Number	Employer Name, Address, and Phone Number	Tasks Handlers are Trained and Authorized to Perform* (check number(s) from below)	PPE (check all that apply)	Respirator Information (leave blank if "no respirator" is checked under PPE)
<p>Stacey Evans</p>	<p>US Application Co. 745 Hilltop Circle Las Cruces, NM 88001 (610) 865-2965</p>	<p><input checked="" type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input checked="" type="checkbox"/> 6 <input checked="" type="checkbox"/> 7 <input checked="" type="checkbox"/> 8 <input checked="" type="checkbox"/> 9 <input checked="" type="checkbox"/> 10 <input checked="" type="checkbox"/> 11</p>	<p><input checked="" type="checkbox"/> Long-sleeved shirt/long-pants, shoes, socks <input checked="" type="checkbox"/> Chemical-resistant apron <input checked="" type="checkbox"/> Chemical-resistant footwear and socks <input checked="" type="checkbox"/> Protective eyewear (NOT goggles) <input checked="" type="checkbox"/> Chemical-resistant gloves <input checked="" type="checkbox"/> Air-purifying respirator <input type="checkbox"/> Other: <input type="checkbox"/> No respirator</p> <p>PPE training date: 2/6/13</p>	<p>Make: 3M Model: 6700 Type: APR Style: Full-Face Size: small Cartridge type: 3M model 60928 Organic Fit test date: 4/14/13 Training date: 4/14/13 Medical date: 4/14/13</p> <p>Make: Model: Type: Style: Size: Cartridge type: Fit test date: Training date: Medical date:</p>
SAMPLE				
<p><input checked="" type="checkbox"/> The above handler has received Fumigant Safe Handling information within the past 12 months.</p>				
<p>* 1. Loaders, drivers, tractor co-pilots, shovelers, cross-ditchers, or other direct application participants 2. Cleaning up fumigant spills (does not include emergency personnel not associated with the application) 3. Tasks with liquid contact potential 4. Installing, perforating or removing tarps 5. Repairing or monitoring tarps until 14 days after the application is complete if tarps are not perforated and removed during those 14 days.</p>				
<p>6. Monitoring fumigant air concentrations 7. Handling or disposing of fumigant containers 8. Cleaning, handling, adjusting, or repairing equipment that may contain fumigant residues 9. Installing, repairing, operating, or removing irrigation equipment in the application block or buffer zone 10. Performing scouting, crop advising, or monitoring tasks in the application block or buffer zone 11. Performing other WPS handling tasks</p>				
<p>Comments/notes:</p>				

**PHASE 2 SOIL FUMIGATION POST APPLICATION SUMMARY
(METAM SODIUM / METAM POTASSIUM PRODUCTS)**

Post Application Summary Elements:

General Application Information

Weather Conditions

Tarp Damage and Repair

Tarp Perforation/Removal

Complaints

Description of Incidents

Communication between Applicator, Owner, and Other On-site Handlers

Posting Signs – Fumigant Treated Area and Buffer Zones

Handler Information for Changes since the FMP

Other Deviations from the FMP

Attachments:

Check the boxes if the information below is attached to the Post Application Summary (e.g., there are changes from the FMP or monitoring information has been recorded. Attachments that are not applicable do not need to be included in the final Post Application Summary).

- Handler Information (for changes since the FMP)
- Air Monitoring Results
- Water Run Application Monitoring Results
- Other:

**PHASE 2 SOIL FUMIGATION POST APPLICATION SUMMARY
(METAM SODIUM / METAM POTASSIUM PRODUCTS)**

(Only fill-in information if it is different from the FMP or where the label requires that measurements/information are recorded in the post-application summary)

The text fields below will expand as the text is entered. After completing each field, use Tab key to go to next text field or check box.

General Application Information			
Application date and time: October 29, 2013 - October 31, 2013	Application Rate (e.g., lbs or gallons of product/treated acre or broadcast equivalent rate): 61 gal of product/A broadcast equivalent	Application Block Size: 100 A	
Application method: <input type="checkbox"/> Center Pivot/Lateral Move Irrigation - High Release Equipment <input type="checkbox"/> Center Pivot/Lateral Move Irrigation - Medium Release Equipment <input type="checkbox"/> Center Pivot/Lateral Move Irrigation - Low Release Equipment <input type="checkbox"/> Solid Set Sprinkler <input type="checkbox"/> Drench <input type="checkbox"/> Drip <input type="checkbox"/> Flood Basin, Furrow and Border <input type="checkbox"/> Shank <input type="checkbox"/> Spray Blade <input type="checkbox"/> Rotary Tiller <input checked="" type="checkbox"/> No change from the FMP	EPA Registration Number: <input checked="" type="checkbox"/> No change from the FMP	Fumigant Product Name: <input checked="" type="checkbox"/> No change from the FMP	Injection Depth (inches): <input checked="" type="checkbox"/> No change from the FMP
Weather Conditions			
Summary of the National Weather Service weather forecast (including wind speed and air stagnation advisories, if applicable) during the application and the 48-hours after the application is complete (a printed copy may be attached to the post-application summary): <input type="checkbox"/> Check here if printed copy is attached to the post-application summary or complete the following: National Weather Service weather forecast: 10/29/13: Partly cloudy, with a high around 65. 10/30/13: Sunny, with a high near 70. 10/31/13: Mostly clear, with a high around 65. 11/1/13: Partly cloudy, with a high around 66. 11/2/13: Partly cloudy, with a high around 69. Wind Speed: 10/29/13: 5 to 11 mph. 10/30/13: 8 to 15 mph, 10/31/13: 5 to 14 mph 11/1/13: 5 to 10 mph 11/2/13: 6 to 11 mph Air-Stagnation Advisories: 10/29/13: None 10/30/13: None 10/31/13: None 11/1/13: None 11/2/13: None			
Tarp Damage and Repair (check here if section is not applicable <input checked="" type="checkbox"/>)			
Date of tarp damage discovery:			
Location and size of tarp damage:			
Description of tarp/tarp seal/tarp equipment failure:			
Date and time tarp repair was completed:			
Additional comments or other deviations from FMP (if applicable):			
Tarp Perforation/Removal (check here if section is not applicable <input checked="" type="checkbox"/>)			
Date and time tarps were perforated:		Date tarps were removed:	
Were tarps perforated and/or removed early? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If yes, described the conditions that led to the early tarp perforation and/or removal:			

Complaints (check here if section is not applicable <input type="checkbox"/>)	
Person filing complaint: <input checked="" type="checkbox"/> On-site handler <input type="checkbox"/> Person off-site	If off-site person, name, address, and phone number of person filing complaints:
Description of control measures or emergency procedures followed after complaint: Handler experienced eye irritation. Put respirator on and discovered a broken nozzle. Fixed nozzle, measured air concentrations 15 min apart and removed respirator.	
Additional comments:	
Description of Incidents (check here if section is not applicable <input checked="" type="checkbox"/>)	
Description of incident, equipment failure, or other emergency:	Date and time:
Description of emergency procedures followed:	
Was the incident reported to the state agency? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Additional comments:	
Communication Between Applicator, Owner, and Other On-site Handlers (check if no changes from the FMP <input type="checkbox"/>)	
Was the certified applicator at the application block during all handler activities that took place from the beginning of the application until the entry restricted period expired? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Date contacted: 10/30/13
If no, list the names and phone numbers of persons contacted: Stacy Evans (c:747-534-5798)	
Comments/notes (any deviation from FMP regarding how the information was shared): Stacey Evans was contacted early in the morning on 10/30/13 to check in on the chemigation rig. The FMP, label, and other application information was provided to Stacey at that time.	
Posting Signs – Fumigant Treated Area and Buffer Zone	
Date(s) of Fumigant Treated Area sign posting: 10/28/13	Date(s) of Fumigant Treated Area sign removal: 11/7/13
Date(s) of Buffer Zone sign posting: 10/28/13	Date(s) of Buffer Zone sign removal: 11/3/13
Description of deviations from FMP (if applicable): none	
Handler Information for Changes Since the FMP	
Have there been any changes to the handler information since the FMP was completed (including handlers that were on-site that were not listed in FMP)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, the updated handler information must be attached to the post application summary (use EPA's Microsoft Word or PDF version of the handler information template)	
Other Deviations from the FMP	
Additional comments/notes:	

I have verified that this post application summary reflects the actual site conditions that occurred during the fumigation and is an accurate description of deviations from the FMP (if applicable).

Peter Hall

11/9/13

Signature of certified applicator that supervised the application

Date

Air Monitoring Results

(use to record information about sensory irritation and monitoring with direct read detection devices)

SAMPLE

Date/Time (complete the applicable scenario)	Handler Name	Handler Task/Activity	Handler Location (where irritation is observed or where sample is taken)	Air Concentration Measurements (for sample results)	Resulting Action/Comments
<input checked="" type="checkbox"/> sensory irritation: 10/30/13, 6 AM <input type="checkbox"/> sample with direct read detection device:	Peter Hall	Monitoring Application within buffer zone	SW corner of the pivot		<input type="checkbox"/> Cease operations <input checked="" type="checkbox"/> Respiratory protection <input type="checkbox"/> Implement emergency response plan Comments/Other: Mild eye irritation was experienced
<input type="checkbox"/> sensory irritation: <input checked="" type="checkbox"/> sample with direct read detection device: 10/30/13, 6:30 AM	Peter Hall	Monitoring Application	SW corner of the pivot	< 600 ppb	<input type="checkbox"/> Cease operations <input checked="" type="checkbox"/> Respiratory protection <input type="checkbox"/> Implement emergency response plan Comments/Other: Fixed broken nozzle.
<input type="checkbox"/> sensory irritation: <input checked="" type="checkbox"/> sample with direct read detection device: 10/30/13, 6:45 AM	Peter Hall	Monitoring Application	SW corner of the pivot	< 600 ppb	<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection <input type="checkbox"/> Implement emergency response plan Comments/Other: Removed respirator since second sample 15 min later was ok.
<input type="checkbox"/> sensory irritation: <input type="checkbox"/> sample with direct read detection device:					<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection <input type="checkbox"/> Implement emergency response plan Comments/Other:
<input type="checkbox"/> sensory irritation: <input type="checkbox"/> sample with direct read detection device:					<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection <input type="checkbox"/> Implement emergency response plan Comments/Other:
Additional Comments:					

Water Run Application Monitoring Results

Inspection Date/Time	Name(s) of Person(s) Monitoring	Equipment Properly Functioning (Yes or No)	Comments/Description of Corrective Action Taken (if needed)
10/29/13 2 PM	Peter Hall	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/29/13 4 PM	Peter Hall	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/29/13 6 PM	Peter Hall	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/29/13 8 PM	Peter Hall	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/29/13 10 PM	Peter Hall	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/29/13 Midnight	Peter Hall	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/30/13 2 AM	Stacy Evans	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/30/13 4 AM	Stacy Evans	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/30/13 6 AM	Peter Hall	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Experienced mild eye irritation and put respirator on, fixed nozzle, and remained on-site until 7 AM when air monitoring results were normal.
10/30/13 9 AM	Peter Hall	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/30/13 11 AM	Peter Hall	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/30/13 1 PM	Peter Hall	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/30/13 3 PM	Peter Hall	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/30/13 5 PM	Peter Hall	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/30/13 7 PM	Peter Hall	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/30/13	Peter Hall	<input checked="" type="checkbox"/> Yes	

SAMPLE

9PM		<input type="checkbox"/> No	
10/30/13 11 PM	Peter Hall	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/31/13 1 AM	Stacy Evans	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/30/13 3 AM	Stacy Evans	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/31/13 5 AM	Stacy Evans	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/31/13 7 AM	Stacy Evans	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10/31/13 9 AM	Peter Hall	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	