

July 12, 2012

Sent via Certified Mail

Attn: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Mr. Keith I. McConnell, Deputy Director  
Decommissioning & Uranium Recovery Licensing Directorate  
Division of Waste Management & Environmental Protection  
Office of Federal and State Materials &  
Environmental Management Programs  
11545 Rockville Pike  
Rockville, MD 20852-2738

**Subject: License SUA-1341, Docket No. 40-8502  
Willow Creek Project  
Christensen Ranch Mine Unit 8  
8AR217-1 Injection Well Release June 17, 2012  
8AK181-1 Injection Well Release June 18, 2012  
8AK190-2 Recovery Well Release June 18, 2012  
8AO194-2 Injection Well Release June 30, 2012**

Dear Mr. McConnell:

In accordance with License Conditions 12.2 and 9.2 of the referenced license, this correspondence serves as the written notification for releases of ISR injection fluid from Injection Wells 8AR217-1, 8AK181-2, 8AO194-2 and recovery fluid from Recovery Well 8AK190-1 located in the Mine Unit 8 wellfield area at Willow Creek (Christensen Ranch) located in Johnson County.

The spills were discovered on June 17, 18 and 30, 2012. These areas are entirely within the fenced MU-8 Controlled Area. The releases were reported via emails to the NRC Project Manager and Region IV personnel and WDEQ on June 18, 2012 and July 2, 2012. The details of the releases are included on the attached Spill Report Summaries along with a map of the location. Note that there were no significant impacts to the public, environment, wildlife or livestock. Uranium One has initiated a significant investigation into the causes for the releases related to pressure buildup at injection well wellheads and failure of two pressure control devices installed on the wellheads to operate as designed. This investigation will utilize engineering consultants familiar with this type of equipment and process design.

Please contact me should you have any questions regarding this report.

Sincerely,



Tim McCullough  
Manager Site SHE

cc: Bill Kearney      Larry Arbogast  
Barry Koch      Rick Kukura  
Ron Linton  
Linda Gersey  
NRC File; Spill Reports

**Uranium One USA, Inc. - Willow Creek Project**  
**Spill Report Summary**  
**Mine Unit 8 ISR Recovery Fluid Release**

**Date and Estimated Time (beginning & end)**

From: June 17, 2012 (19:30 pm)

To: June 17, 2012 (21:00 pm)

**Location**

Christensen Ranch Mine Unit 8

Injection Well 8R217-1

Module 8-4/5

Section 7, Township 45N, Range 77W

Johnson County, Wyoming

(see attached map for detailed location)

**Spill Type**

ISR injection fluid

**Estimated Volume Released**

Spilled: Approximately 500 - 700 gallons of ISR injection fluid was released from Injection Well 8R217-1 when a "pop-off" valve opened to release the pressure in the well and did not close when the pressure was released. The injection fluid flowed approximately 300 feet down a small dry ephemeral draw that is a tributary to ephemeral Willow Creek located in the Mine Unit 8-4/5 Wellfield. The affected area is located entirely within the fenced Controlled Area.

**Estimated Volume Recovered**

All of the released fluid quickly soaked into the dry soil, so it was not possible to recover any of it.

**Spill Analysis Results**

A small volume of the released fluid was obtained on June 18, 2012 and submitted to the Willow Creek on site lab for analysis. The results were as follows:

Uranium            1.4 ppm

**Impacts**

The release followed site drainage and remained within the fenced MU-8 Controlled Area. It is estimated that 600 square feet (0.01 acre) of soil was impacted. No wildlife or livestock were affected. No significant erosion resulted from the spill, as it all soaked into the ground.

**Soil Surveys & Analysis Results**

Due to the limited extent of the release and it occurred inside the fenced wellfield area, no soil samples were obtained for analysis.

**Remediation Actions**

Due to the limited extent of the release, no remediation is anticipated at this time.

**Explanation of the Root Cause**

A “pop-off” valve designed to release pressure in the event of a pressure build up failed to properly close when the pressure was released.

**Corrective Actions**

The well was immediately shut off and repaired.

**Agency Reporting**

WDEQ: Glenn Mooney - Permit Coordinator; June 18, 2012 (e-mail)  
Joe Hunter – Spill Coordinator; June 18, 2012 (e-mail)

NRC: Blair Spitzberg- Region IV Branch Chief; June 18, 2012 (e-mail)  
Ron Linton - Project Manager; June 18, 2012 (e-mail)  
Linda Gersey – Health Physicist, Region IV; June 18, 2012 (e-mail)

**Map of Spill Location and Impacted Area**

Attached

The location and extent of the spill is recorded in the on-site historical spill file.

8MW10



**VERIFY SCALE**  
**SCALE : 1" = 120'**



Christensen Ranch Satellite Project  
Module 85 Map

|                               |               |          |           |
|-------------------------------|---------------|----------|-----------|
| Date:10/25/10                 | By:CM         | Checked: | Approved: |
| Rev. No.                      | Description   | Date     | By        |
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| Project Name:<br>WILLOW CREEK |               | Figure # | REV<br>0  |

**Uranium One USA, Inc. - Willow Creek Project  
Spill Report Summary  
Mine Unit 8 ISR Recovery Fluid Release**

**Date and Estimated Time (beginning & end)**

From: June 18, 2012 (18:30 pm)

To: June 18, 2012 (19:30 pm)

**Location**

Christensen Ranch Mine Unit 8

Injection Well 8AK181-1

Module 8-1

Section 7, Township 45N, Range 77W

Johnson County, Wyoming

(see attached map for detailed location)

**Spill Type**

ISR injection fluid

**Estimated Volume Released**

Spilled: Approximately 300 gallons of ISR injection fluid was released from Injection Well 8AK181-1 when a "pop-off" valve failed to open and the pressure build up caused the wellhead to fail. The injection fluid flowed approximately 435 feet down a dry ephemeral swale tributary to ephemeral Willow Creek located in the Mine Unit 8-1 Wellfield. The affected area is located entirely within the fenced Controlled Area.

**Estimated Volume Recovered**

All of the released fluid quickly soaked into the dry soil, so it was not possible to recover any of it.

**Spill Analysis Results**

A small volume of the released fluid was obtained on June 18, 2012 and submitted to the Willow Creek on site lab for analysis. The results were as follows:

Uranium            1.0 ppm

**Impacts**

The release followed site drainage and remained within the fenced MU-8 Controlled Area. It is estimated that 1305 square feet (0.03 acre) of soil was impacted. No wildlife or livestock were affected. No significant erosion resulted from the spill, as it all soaked into the ground.

**Soil Surveys & Analysis Results**

Due to the limited extent of the release and it occurred inside the fenced wellfield area, no soil samples were obtained for analysis.

**Remediation Actions**

Due to the limited extent of the release, no remediation is anticipated at this time.

**Explanation of the Root Cause**

A “pop-off” valve designed to release pressure in the event of a pressure build up failed.

**Corrective Actions**

The well was immediately shut off and repaired.

**Agency Reporting**

WDEQ:            Glenn Mooney - Permit Coordinator; June 19, 2012 (e-mail)  
                      Joe Hunter – Spill Coordinator; June 19, 2012 (e-mail)

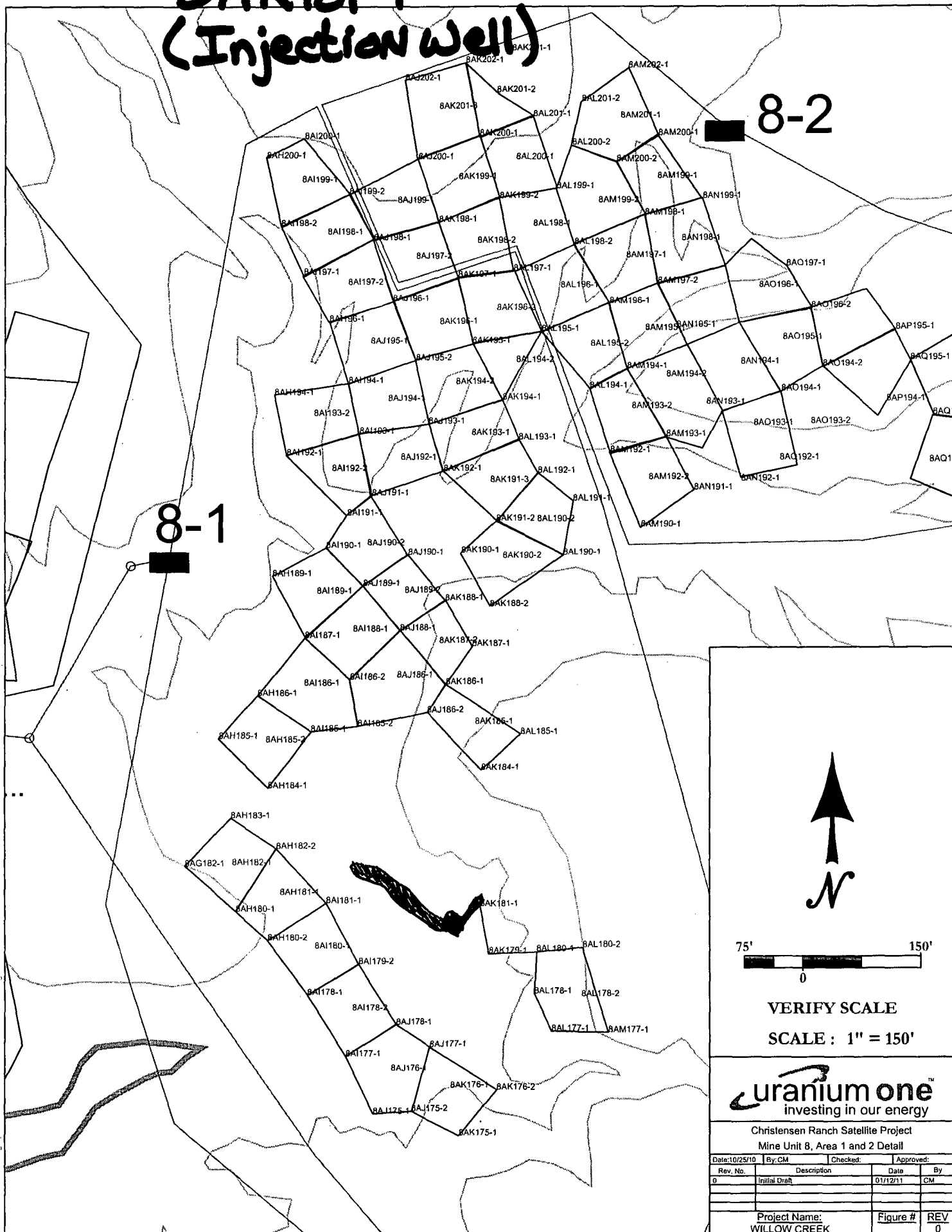
NRC:             Blair Spitzberg- Region IV Branch Chief; June 19, 2012 (e-mail)  
                      Ron Linton - Project Manager; June 19, 2012 (e-mail)  
                      Linda Gersey – Health Physicist, Region IV; June 19, 2012 (e-mail)

**Map of Spill Location and Impacted Area**

Attached

The location and extent of the spill is recorded in the on-site historical spill file.

# 8AK181-1 (Injection Well)



**VERIFY SCALE**  
**SCALE : 1" = 150'**

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Christensen Ranch Satellite Project  
Mine Unit 8, Area 1 and 2 Detail

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| Project Name: WILLOW CREEK |               |          | Figure # REV 0 |



**Uranium One USA, Inc. - Willow Creek Project  
Spill Report Summary  
Mine Unit 8 ISR Recovery Fluid Release**

**Date and Estimated Time (beginning & end)**

From: June 18, 2012 (18:30 pm)

To: June 18, 2012 (22:30 pm)

**Location**

Christensen Ranch Mine Unit 8

Recovery Well 8AK190-2

Module 8-1

Section 7, Township 45N, Range 77W

Johnson County, Wyoming

(see attached map for detailed location)

**Spill Type**

ISR recovery fluid

**Estimated Volume Released**

Spilled: Approximately 1,200 gallons of ISR recovery fluid was released from Recovery Well 8AK190-2 when a sanitary seal failed on the well allowing the fluid to escape the wellhead. The recovery fluid flowed approximately 585 feet down a dry ephemeral swale tributary to ephemeral Willow Creek located in the Mine Unit 8-1 Wellfield. The affected area is located entirely within the fenced Controlled Area.

**Estimated Volume Recovered**

200 gallons

**Spill Analysis Results**

A small volume of the released fluid was obtained on June 18, 2012 and submitted to the Willow Creek on site lab for analysis. The results were as follows:

Uranium        7.5 ppm

**Impacts**

The release followed site drainage and remained within the fenced MU-8 Controlled Area. It is estimated that 2,505 square feet (0.06 acre) of soil was impacted. No wildlife or livestock were affected. No significant erosion resulted from the spill, as it all but 200 gallons soaked into the ground.

### **Soil Surveys & Analysis Results**

Three soil samples were collected from the impacted locations and submitted to IML in Sheridan, WY for analyses. They were taken from the well location, at 75 feet and at 150 feet. At the time of this report, the lab analyses is not yet available

### **Remediation Actions**

Due to the limited extent of the release, no remediation is anticipated at this time.

### **Explanation of the Root Cause**

A sanitary seal at the wellhead failed and raised up allowing the fluid to release from the casing.

### **Corrective Actions**

The well was immediately shut off and repaired.

### **Agency Reporting**

WDEQ: Glenn Mooney - Permit Coordinator; June 19, 2012 (e-mail)  
Joe Hunter – Spill Coordinator; June 19, 2012 (e-mail)

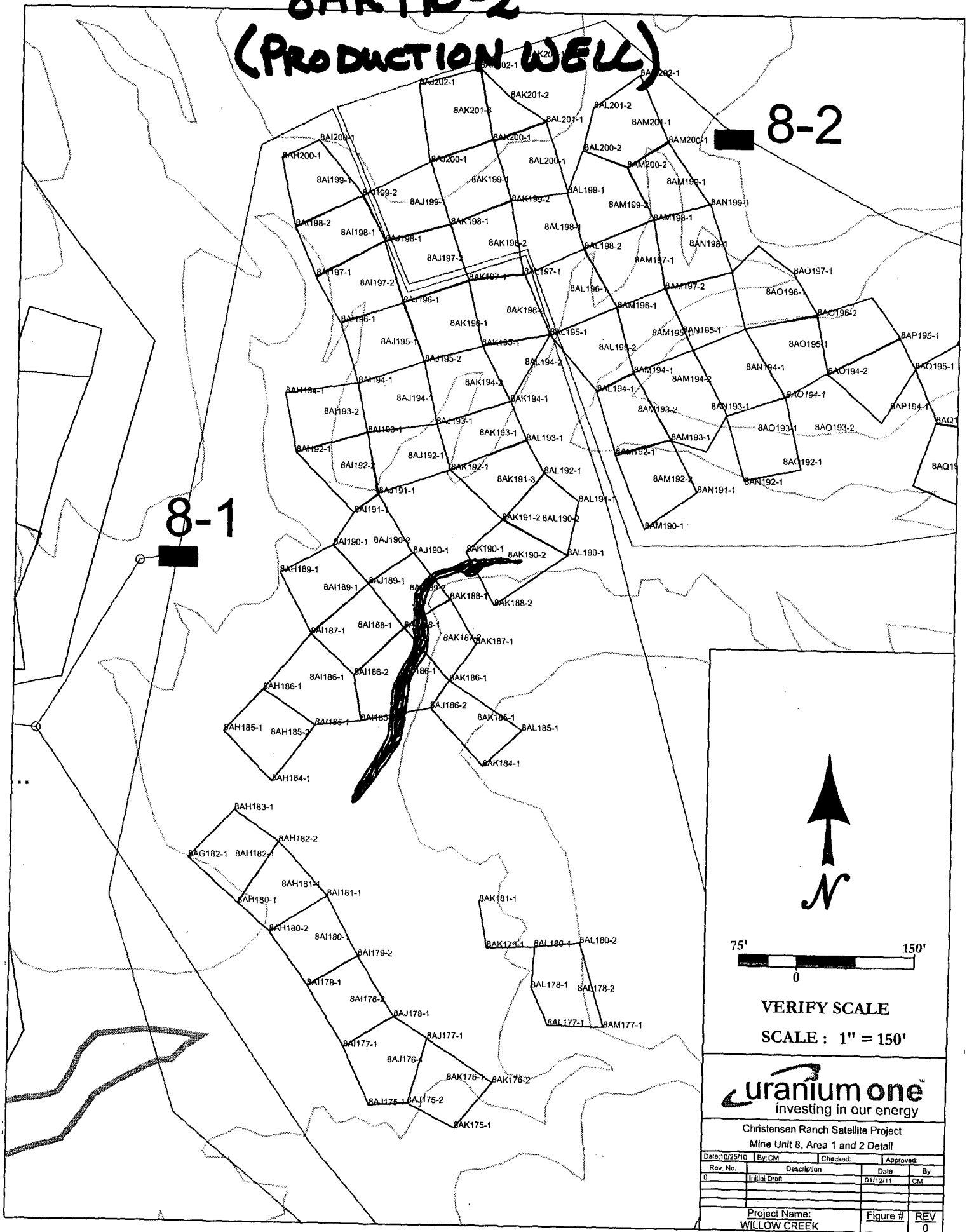
NRC: Blair Spitzberg- Region IV Branch Chief; June 19, 2012 (e-mail)  
Ron Linton - Project Manager; June 19, 2012 (e-mail)  
Linda Gersey – Health Physicist, Region IV; June 19, 2012 (e-mail)

### **Map of Spill Location and Impacted Area**

Attached

The location and extent of the spill is recorded in the on-site historical spill file.

# 8AK 190-2 (PRODUCTION WELL)



75' 150'

VERIFY SCALE

SCALE : 1" = 150'

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Mine Unit 8, Area 1 and 2 Detail

|                |               |          |           |
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| Project Name:  |               | Figure # | REV       |
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**Uranium One USA, Inc. - Willow Creek Project**  
**Spill Report Summary**  
**Mine Unit 8 ISR Injection Fluid Release**

**Date and Estimated Time (beginning & end)**

From: June 29, 2012 (22:00 pm)

To: June 30, 2012 (00:15 pm)

**Location**

Christensen Ranch Mine Unit 8

Injection Well 8AO194-2

Module 8-2

Section 7, Township 45N, Range 77W

Johnson County, Wyoming

(see attached map for detailed location)

**Spill Type**

ISR injection fluid

**Estimated Volume Released**

Spilled: Approximately 1,500 gallons of ISR injection fluid was released from Injection Well 8AO194-2 when a "pop-off" valve failed to open and the pressure build up caused the wellhead to fail. The injection fluid flowed approximately 900 feet down a dry ephemeral swale tributary to ephemeral Willow Creek located in the Mine Unit 8-2 Wellfield. The affected area is located entirely within the fenced Controlled Area.

**Estimated Volume Recovered**

All of the released fluid quickly soaked into the dry soil, so it was not possible to recover any of it.

**Spill Analysis Results**

A small volume of the released fluid was obtained on June 30, 2012 and submitted to the Willow Creek on site lab for analysis. The results were as follows:

Uranium        0.9 ppm

**Impacts**

The release followed site drainage and remained within the fenced MU-8 Controlled Area. It is estimated that 7,823 square feet (0.18 acre) of soil was impacted. No wildlife or livestock were affected. No significant erosion resulted from the spill, as it all soaked into the ground.

### **Soil Surveys & Analysis Results**

Three soil samples were collected. Two samples were obtained from the impacted location, and one background sample was obtained and submitted to IML in Sheridan, WY for analyses. They were taken from the well location and at 150 feet. At the time of this report, the lab analyses is not yet available

### **Remediation Actions**

Due to the limited extent of the release, no remediation is anticipated at this time.

### **Explanation of the Root Cause**

A “pop-off” valve designed to release pressure in the event of a pressure build up failed. The “Root Cause” for the failure has not been determined at this time. Uranium One has initiated a significant investigation into the causes for this and other releases related to pressure buildup at injection well wellheads and failure of two pressure control devices installed on the wellheads to operate as designed. This investigation will utilize engineering consultants familiar with this type of equipment and process design.

### **Corrective Actions**

The well was immediately shut off and repaired.

### **Agency Reporting**

WDEQ:            Glenn Mooney - Permit Coordinator; July 2, 2012 (e-mail)  
                      Joe Hunter – Spill Coordinator; July 2, 2012 (e-mail)

NRC:             Blair Spitzberg- Region IV Branch Chief; July 2, 2012 (e-mail)  
                      Ron Linton - Project Manager; July 2, 2012 (e-mail)  
                      Linda Gersey – Health Physicist, Region IV; July 2, 2012 (e-mail)

### **Map of Spill Location and Impacted Area**

Attached

The location and extent of the spill is recorded in the on-site historical spill file.

### **Soil Surveys & Analysis Results**

Three soil samples were collected. Two samples were obtained from the impacted location, and one background sample was obtained and submitted to IML in Sheridan, WY for analyses. They were taken from the well location and at 150 feet. At the time of this report, the lab analyses is not yet available

### **Remediation Actions**

Due to the limited extent of the release, no remediation is anticipated at this time.

### **Explanation of the Root Cause**

A “pop-off” valve designed to release pressure in the event of a pressure build up failed. The “Root Cause” for the failure has not been determined at this time. Uranium One has initiated a significant investigation into the causes for this and other releases related to pressure buildup at injection well wellheads and failure of two pressure control devices installed on the wellheads to operate as designed. This investigation will utilize engineering consultants familiar with this type of equipment and process design.

### **Corrective Actions**

The well was immediately shut off and repaired.

### **Agency Reporting**

WDEQ: Glenn Mooney - Permit Coordinator; July 2, 2012 (e-mail)  
Joe Hunter – Spill Coordinator; July 2, 2012 (e-mail)

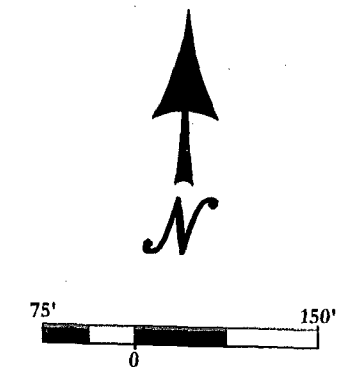
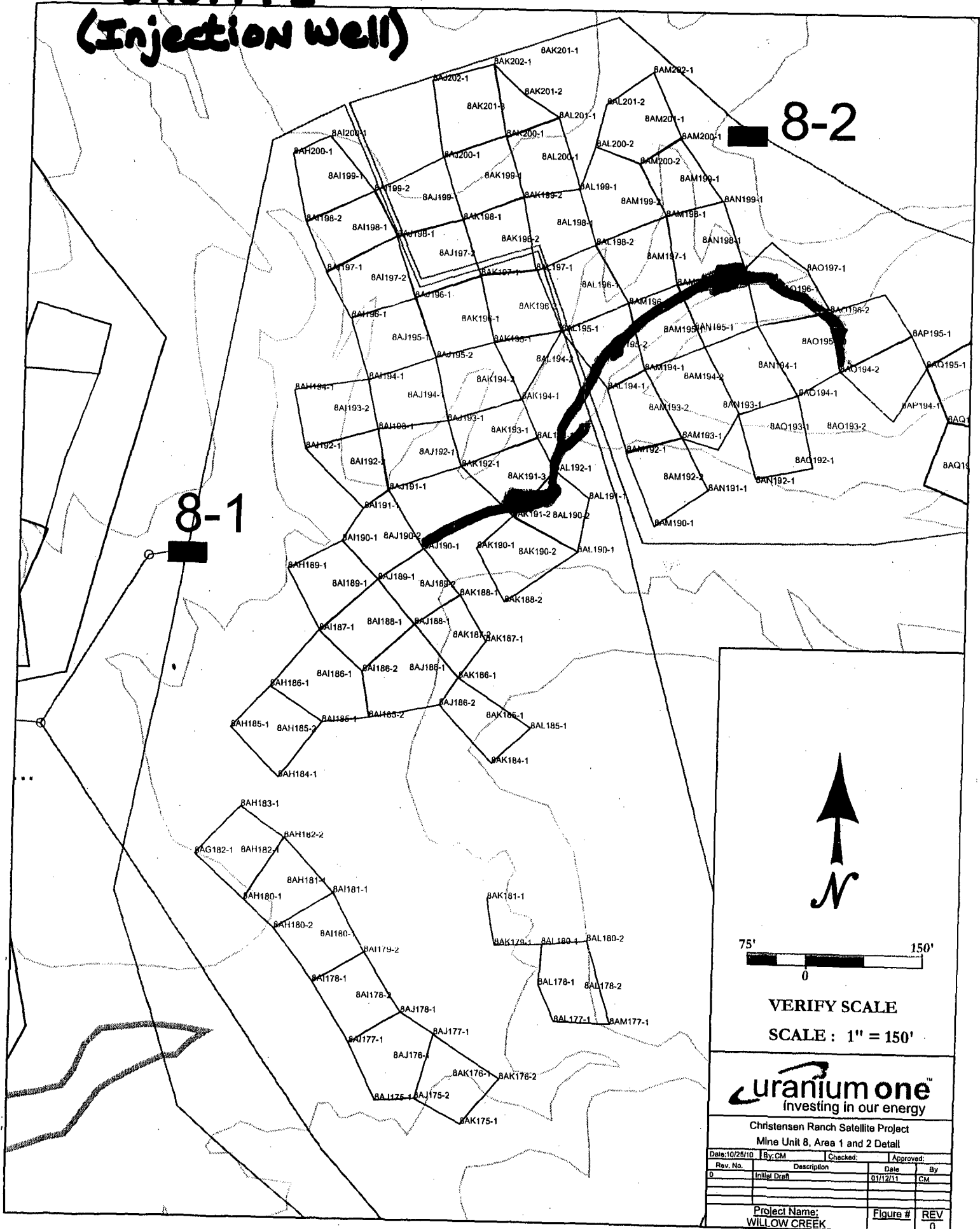
NRC: Blair Spitzberg- Region IV Branch Chief; July 2, 2012 (e-mail)  
Ron Linton - Project Manager; July 2, 2012 (e-mail)  
Linda Gersey – Health Physicist, Region IV; July 2, 2012 (e-mail)

### **Map of Spill Location and Impacted Area**

Attached

The location and extent of the spill is recorded in the on-site historical spill file.

# 8AO194-2 (Injection well)




VERIFY SCALE  
SCALE : 1" = 150'

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| Project Name: WILLOW CREEK |               | Figure # | REV       |
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907 North Poplar St., Suite 260  
Casper, Wyoming 82601

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