

# FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (FFACO)

## RECORD OF TECHNICAL CHANGE (ROTC)

**Corrective Action Unit (CAU) Number:** 5

**CAU Description:** Landfills

**CAU Owner:** Industrial Sites - Environmental Restoration (ER)

**ROTC No.** DOE/NV--1108-ROTC 2 **Page** 1 **of** 54

**Document Type** Closure Report (CR) **Date** 02/07/2019

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The following technical changes (including justification) are requested by:

Tiffany Gamero

Requestor Name

Long-Term Monitoring Activity Lead

Requestor Title

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### Description of Change:

1. This ROTC replaces the Use Restriction (UR) forms listed in the CAU 5 Closure Report (DOE/NV--1108).  
These UR forms have been updated to list all UR requirements, including but not limited to: post-closure site controls, inspection and maintenance requirements, Geographic Information Systems (GIS) coordinate information. The UR Forms attached to this ROTC are the current UR requirements for each UR in this CAU and supersede any existing UR documentation.
2. UR boundary coordinate values changed due to conversion from North American Datum (NAD) 1927 to NAD 1983 for corrective action sites (CASs) 05-15-01, 05-16-01, 06-08-01, 12-15-01, 20-15-01, and 23-15-03.
3. The UR for CASs 06-15-02 and CAS 06-15-03 were split into two URs with separate boundaries associated with each CAS.
4. Added to FFACO UR Requirements Comments section of the URs for

### Justification:

1. Changes in UR requirements from those found in closure documents have been documented in letters, memos, and inspection reports. This has resulted in difficulty in determining current UR requirements. A review of the post-closure requirements for this CAU has been conducted to ensure that all UR requirements have been identified and documented on the new UR form. The new UR form was developed to be inclusive of all requirements for long-term monitoring and standardize information contained in the URs.
2. UR boundary coordinates need to be in one standardized coordinate system.
3. Current protocol is to have separate URs for each CAS. The separate UR boundaries were determined from the CAU 5 Corrective Action Plan.
4. These units are landfills covered by clean soil.

**FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (FFACO)**  
**RECORD OF TECHNICAL CHANGE (ROTC)**

**Corrective Action Unit (CAU) Number:** 5

**CAU Description:** Landfills

**CAU Owner:** Industrial Sites - Environmental Restoration (ER)

**ROTC No.** DOE/NV--1108-ROTC 2 **Page** 2 **of** 54

**Document Type** Closure Report (CR) **Date** 02/07/2019

**Description of Change:**

CASs 05-15-01, 05-16-01, 06-08-01, 06-15-02, 06-15-03, 12-15-01, 20-15-01, and 23-15-03: "Surface of soil cover is uncontaminated."

5. Changed the inspection frequency from "...every five years, for a total of thirty years" to "Every 5 Years" for CASs 05-15-01, 05-16-01, 06-08-01, 12-15-01, 20-15-01, and 23-15-03.
6. Changed the inspection frequency from "Inspections will be conducted annually" to "Every 5 Years" for CASs 06-15-02 and 06-15-03.
7. Removed statement "Refer to the Closure Report for more details..." for CASs 06-08-01, 12-15-01, and 23-15-03, and "See the Closure Report for additional information..." for CASs 05-15-01, 05-16-01, and 20-15-01.
8. Removed requirements for monuments from URs for CASs 06-15-02 and 06-15-03. Removed requirements for fencing from URs for CASs 05-16-01, 06-08-01, and 12-15-01.

**Justification:**

5. The risk posed by contaminants assumed to be present in the landfills is not expected to significantly diminish in 30 years.
6. In a Jan 24, 2019 email from Justin Costa Rica to Tiffany Gamero it was requested to change the inspection frequency from 1 year to 5 years for CAS 06-15-02 - Sanitary Landfill and CAS 06-15-03 - Sanitary Landfill; Burn Pit.
7. All requirements are listed on the new UR form.
8. Monuments and fencing were used to hold UR signs. Signs will be secured using any means necessary to meet the requirement that signs are present and legible. Fencing is not necessary to keep workers out because the surface of the site is not contaminated.

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**Schedule Impacts:**

No impacts to schedule.

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**FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (FFACO)**  
**RECORD OF TECHNICAL CHANGE (ROTC)**

**Corrective Action Unit (CAU) Number:** 5

**CAU Description:** Landfills

**CAU Owner:** Industrial Sites - Environmental Restoration (ER)

**ROTC No.** DOE/NV--1108-ROTC 2 **Page** 3 **of** 54

**Document Type** Closure Report (CR) **Date** 02/07/2019

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**ROTC applies to the following document(s):**

- U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office, 2006. Closure Report for Corrective Action Unit 5: Landfills, Nevada Test Site, Nevada, Rev. 0, DOE/NV--1108. Las Vegas, NV.
- Errata Sheet for CAU 5 CR (DOE/NV--1108), issued 03/06/2006.
- ROTC 1 for CAU 5 CR (DOE/NV--1108), dated 10/04/2017.

**FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (FFACO)**  
**RECORD OF TECHNICAL CHANGE (ROTC)**

**Corrective Action Unit (CAU) Number:** 5

**CAU Description:** Landfills

**CAU Owner:** Industrial Sites - Environmental Restoration (ER)

ROTC No. DOE/NV--1108-ROTC 2 Page 4 of 54

Document Type Closure Report (CR) Date 02/07/2019

**Approvals:**

/s/ Tiffany Gamero

Date 2/7/2019

Tiffany Gamero

Activity Lead

Environmental Management (EM) Nevada Program

/s/ Wilhelm R. Wilborn

Date 2/7/2019

Bill Wilborn

Deputy Program Manager, Operations

Environmental Management (EM) Nevada Program

/s/ Chris Andres

Date 2/11/19

Chris Andres

Chief, Bureau of Federal Facilities

Nevada Division of Environmental Protection (NDEP)

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

### General Information

Use Restriction (UR) Type(s):	FFACO Only
Corrective Action Unit (CAU) Number & Description:	5 - Landfills
Corrective Action Site (CAS) Number & Description:	05-15-01 - Sanitary Landfill
CAU/CAS Owner:	Industrial Sites - ER
Note:	N/A

### Section I. Federal Facility Agreement and Consent Order (FFACO) UR

#### Basis for FFACO UR

**Summary Statement:** This FFACO UR is established to protect workers from inadvertent exposure to Radiological and Chemical contaminants that were released at this site. Radiological and Chemical contaminants are assumed to be present that exceed CAS 05-15-01 final action levels under the Industrial Area (2,000 hours per year) exposure scenario.

#### FFACO UR Physical Description

##### Surveyed Area (UTM, Zone 11, NAD 83, meters):

UR Boundary	UR Point <sup>1</sup>	Easting <sup>2</sup>	Northing <sup>2</sup>
FFACO Boundary	1	590,968	4,074,092
	2	590,859	4,074,164
	3	590,881	4,074,221
	4	590,988	4,074,131
	5	590,968	4,074,092

<sup>1</sup>UR Points are listed clockwise beginning at the southernmost point. If multiple points share the southernmost Northing coordinate, the easternmost point is listed as Point 1.

<sup>2</sup>UR coordinate values presented herein were transformed from the North American Datum of 1927, and rounded to the nearest meter; resultant coordinates may not reflect the original precision of values contained within the source GIS data set.

**Boundary Applies to:** Subsurface

**Depth is unknown.**

**Survey Source:** GPS

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

### FFACO UR Requirements

#### Site Controls:

This FFACO UR is recorded as described in **Section IV. Recordation Requirements** to restrict activities within the area by the coordinates listed above and depicted in the attached figure without prior notification of NDEP unless the activities are conducted under the provisions of 10 CFR, Part 835, Occupational Radiation Protection and 10 CFR, Part 851, Worker Safety and Health Program.

Control	Criteria
Signage	Present and legible.
Soil Cover	Must completely cover waste material.

**Inspection Frequency:** Every 5 Years

#### Additional Considerations:

Consideration	Criteria
None	None

**Requirements Comments:** Surface of soil cover is uncontaminated.

## Section II. Administrative UR

*An Administrative UR is not identified for this site.*

## Section III. Supporting Documentation

### UR Source Document(s)

ROTC 2 for CAU 5 CR (DOE/NV--1108), dated 02/07/2019.

U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office. 2006. Closure Report for Corrective Action Unit 5: Landfills, Nevada Test Site, Nevada, Rev. 0, DOE/NV--1108. Las Vegas, NV.

### Attachments

- CAU 5, CAS 05-15-01 FFACO UR Boundary Map (UTM, Zone 11, NAD 83 meters)
- CAU 5, CAS 05-15-01 Supplemental Information Figure (UTM, Zone 11, NAD 83 meters)

## U.S. Department of Energy, Environmental Management Nevada Program Use Restriction Information

### Section IV. Recordation Requirements

#### Recordation:

The above UR(s) are recorded in the:

- FFACO Database
- NNSA M&O Contractor GIS
- EM Nevada Program CAU/CAS Files

### Section V. EM Nevada Program Approval

/s/ Tiffany Gamero

Tiffany Gamero

Date:

2/7/2019

Activity Lead

EM Nevada Program

590,840

590,880

**590,920**

590,960

591,000

4,074,240

4,074,200

4,074,160

1,074,120

074,080

2  
E: 590,859  
N: 4,074,164

3  
E: 590,881  
N: 4,074,221

1  
E: 590,968  
N: 4,074,092

4  
E: 590,988  
N: 4,074,131

5  
E: 590,968  
N: 4,074,092

5-05

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

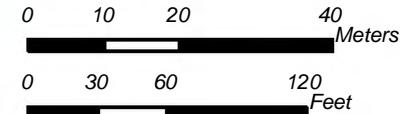


**CAU 5, CAS 05-15-01  
Sanitary Landfill  
FFACCO UR Boundary**

## Explanation\_

FFACO UR

Local Road

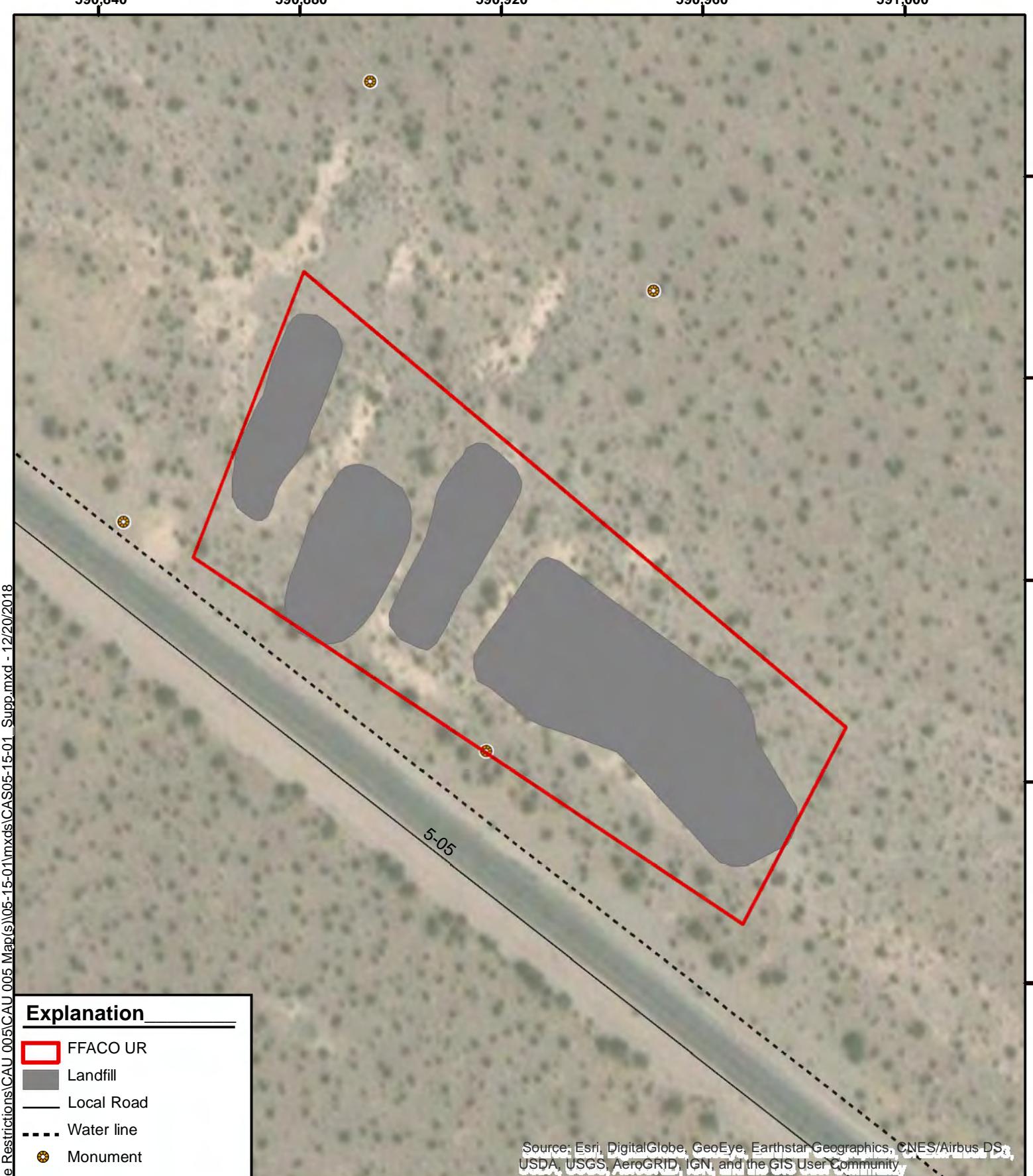


NOTE: Size and location of features are approximated.  
Coordinate System: NAD 1983 UTM Zone 11N, Meter

## **Supplemental Information Figure**

The attached supplemental information figure contains additional information on site features. This information was derived from readily available existing sources and has not been verified. Therefore, site features may not be accurately represented.

This information is not required by the FFACO UR and does not imply any additional regulatory requirements. It is solely intended to benefit site users.



**CAU 5, CAS 05-15-01  
Sanitary Landfill  
Supplemental Information  
General Location of Site Features**



Source: Navarro GIS, 2018

NOTE: Size and location of features are approximated.  
Coordinate System: NAD 1983 UTM Zone 11N, Meter

# U.S. Department of Energy, Environmental Management Nevada Program Use Restriction Information

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## General Information

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Use Restriction (UR) Type(s):	FFACO Only
Corrective Action Unit (CAU) Number & Description:	5 - Landfills
Corrective Action Site (CAS) Number & Description:	05-16-01 - Landfill
CAU/CAS Owner:	Industrial Sites - ER
Note:	N/A

## Section I. *Federal Facility Agreement and Consent Order (FFACO) UR*

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### Basis for FFACO UR

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**Summary Statement:** This FFACO UR is established to protect workers from inadvertent exposure to Radiological and Chemical contaminants that were released at this site. Radiological and Chemical contaminants are assumed to be present that exceed CAS 05-16-01 final action levels under the Industrial Area (2,000 hours per year) exposure scenario.

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

### FFACO UR Physical Description

Surveyed Area (UTM, Zone 11, NAD 83, meters):

UR Boundary	UR Point <sup>1</sup>	Easting <sup>2</sup>	Northing <sup>2</sup>
FFACO Boundary 1	1	593,533	4,079,875
	2	593,412	4,079,905
	3	593,412	4,079,924
	4	593,538	4,079,910
	5	593,533	4,079,875
FFACO Boundary 2	1	593,393	4,079,845
	2	593,389	4,079,857
	3	593,402	4,079,859
	4	593,405	4,079,847
	5	593,393	4,079,845

<sup>1</sup>UR Points are listed clockwise beginning at the southernmost point. If multiple points share the southernmost Northing coordinate, the easternmost point is listed as Point 1.

<sup>2</sup>UR coordinate values presented herein were transformed from the North American Datum of 1927, and rounded to the nearest meter; resultant coordinates may not reflect the original precision of values contained within the source GIS data set.

**Boundary Applies to:** Subsurface

**Depth is unknown.**

**Survey Source:** GPS

### FFACO UR Requirements

#### Site Controls:

This FFACO UR is recorded as described in **Section IV. Recordation Requirements** to restrict activities within the area by the coordinates listed above and depicted in the attached figure without prior notification of NDEP unless the activities are conducted under the provisions of 10 CFR, Part 835, Occupational Radiation Protection and 10 CFR, Part 851, Worker Safety and Health Program.

Control	Criteria
Signage	Present and legible.
Soil Cover	Must completely cover waste material.

# U.S. Department of Energy, Environmental Management Nevada Program Use Restriction Information

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**Inspection Frequency:** Every 5 Years

## Additional Considerations:

Consideration	Criteria
None	None

**Requirements Comments:** Surface of soil cover is uncontaminated.

## Section II. Administrative UR

*An Administrative UR is not identified for this site.*

## Section III. Supporting Documentation

### UR Source Document(s)

ROTC 2 for CAU 5 CR (DOE/NV--1108), dated 02/07/2019.

Errata Sheet for CAU 5 CR (DOE/NV--1108), issued 03/06/2006.

U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office. 2006. Closure Report for Corrective Action Unit 5: Landfills, Nevada Test Site, Nevada, Rev. 0, DOE/NV--1108. Las Vegas, NV.

### Attachments

- CAU 5, CAS 05-16-01 FFACO UR Boundary Map (UTM, Zone 11, NAD 83 meters)
- CAU 5, CAS 05-16-01 Supplemental Information Figure (UTM, Zone 11, NAD 83 meters)

## U.S. Department of Energy, Environmental Management Nevada Program Use Restriction Information

### Section IV. Recordation Requirements

#### Recordation:

The above UR(s) are recorded in the:

- FFACO Database
- NNSA M&O Contractor GIS
- EM Nevada Program CAU/CAS Files

### Section V. EM Nevada Program Approval

/s/ Tiffany Gamero

  
Tiffany Gamero

Date:

2/7/2019

Activity Lead

EM Nevada Program

593,400

593,475

593,550

4,079,950

4,079,875

4,079,800

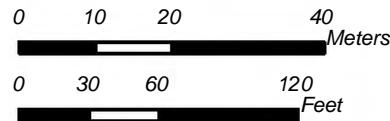


### CAU 5, CAS 05-16-01 Landfill FFACO UR Boundary

Source: Navarro GIS, 2018

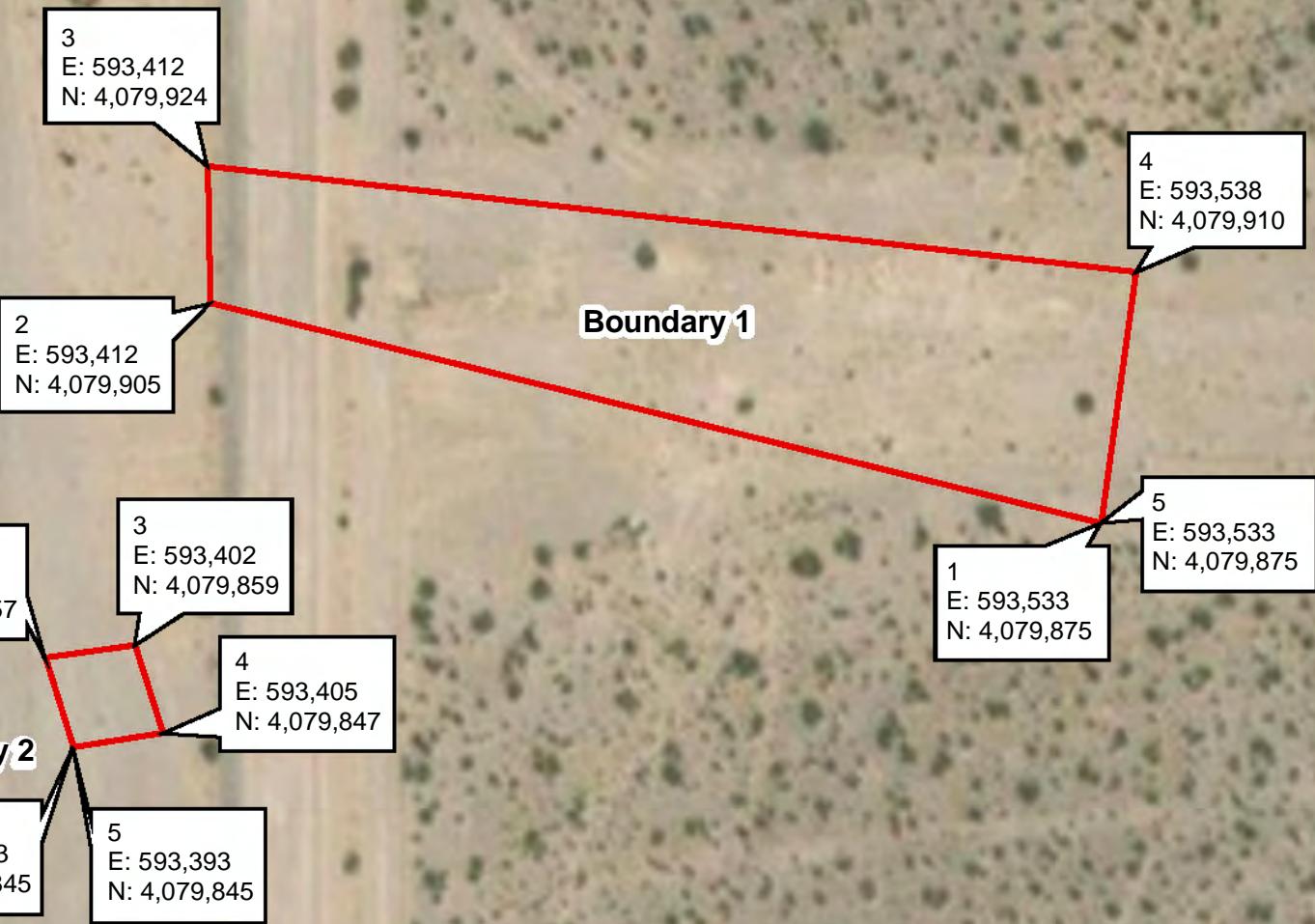
#### Explanation

FFACO UR



NOTE: Size and location of features are approximated.  
Coordinate System: NAD 1983 UTM Zone 11N, Meter

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



## **Supplemental Information Figure**

The attached supplemental information figure contains additional information on site features. This information was derived from readily available existing sources and has not been verified. Therefore, site features may not be accurately represented.

This information is not required by the FFACO UR and does not imply any additional regulatory requirements. It is solely intended to benefit site users.

593,400

593,475

593,550

593,625

4,080,025

4,079,950

4,079,875

4,079,800

4,079,725

**Boundary 2**



**Boundary 1**

Flood Dike

#### Explanation

- FFACO UR
- Landfill
- Flood Dike
- Local Road
- Vehicular Trail
- Fence
- Overhead Wire
- Monument

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

## CAU 5, CAS 05-16-01 Landfill Supplemental Information General Location of Site Features

0 15 30 60 Meters

0 50 100 200 Feet



Source: Navarro GIS, 2018

NOTE: Size and location of features are approximated.  
Coordinate System: NAD 1983 UTM Zone 11N, Meter

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

### General Information

Use Restriction (UR) Type(s):	FFACO Only
Corrective Action Unit (CAU) Number & Description:	5 - Landfills
Corrective Action Site (CAS) Number & Description:	06-08-01 - Landfill
CAU/CAS Owner:	Industrial Sites - ER
Note:	N/A

### Section I. Federal Facility Agreement and Consent Order (FFACO) UR

#### Basis for FFACO UR

**Summary Statement:** This FFACO UR is established to protect workers from inadvertent exposure to Radiological and Chemical contaminants that were released at this site. Radiological and Chemical contaminants are assumed to be present that exceed CAS 06-08-01 final action levels under the Industrial Area (2,000 hours per year) exposure scenario.

#### FFACO UR Physical Description

##### Surveyed Area (UTM, Zone 11, NAD 83, meters):

UR Boundary	UR Point <sup>1</sup>	Easting <sup>2</sup>	Northing <sup>2</sup>
FFACO Boundary	1	585,172	4,088,446
	2	585,060	4,088,678
	3	585,318	4,088,518
	4	585,172	4,088,446

<sup>1</sup>UR Points are listed clockwise beginning at the southernmost point. If multiple points share the southernmost Northing coordinate, the easternmost point is listed as Point 1.

<sup>2</sup>UR coordinate values presented herein were transformed from the North American Datum of 1927, and rounded to the nearest meter; resultant coordinates may not reflect the original precision of values contained within the source GIS data set.

**Boundary Applies to:** Subsurface

**Depth is unknown.**

**Survey Source:** GPS

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

### FFACO UR Requirements

#### Site Controls:

This FFACO UR is recorded as described in **Section IV. Recordation Requirements** to restrict activities within the area by the coordinates listed above and depicted in the attached figure without prior notification of NDEP unless the activities are conducted under the provisions of 10 CFR, Part 835, Occupational Radiation Protection and 10 CFR, Part 851, Worker Safety and Health Program.

Control	Criteria
Signage	Present and legible.
Soil Cover	Must completely cover waste material.

**Inspection Frequency:** Every 5 Years

#### Additional Considerations:

Consideration	Criteria
None	None

**Requirements Comments:** Surface of soil cover is uncontaminated.

## Section II. Administrative UR

*An Administrative UR is not identified for this site.*

## Section III. Supporting Documentation

### UR Source Document(s)

ROTC 2 for CAU 5 CR (DOE/NV--1108), dated 02/07/2019.

U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office. 2006. Closure Report for Corrective Action Unit 5: Landfills, Nevada Test Site, Nevada, Rev. 0, DOE/NV--1108. Las Vegas, NV.

### Attachments

- CAU 5, CAS 06-08-01 FFACO UR Boundary Map (UTM, Zone 11, NAD 83 meters)
- CAU 5, CAS 06-08-01 Supplemental Information Figure (UTM, Zone 11, NAD 83 meters)

## U.S. Department of Energy, Environmental Management Nevada Program Use Restriction Information

### Section IV. Recordation Requirements

#### Recordation:

The above UR(s) are recorded in the:

- FFACO Database
- NNSA M&O Contractor GIS
- EM Nevada Program CAU/CAS Files

### Section V. EM Nevada Program Approval

/s/ Tiffany Gamero

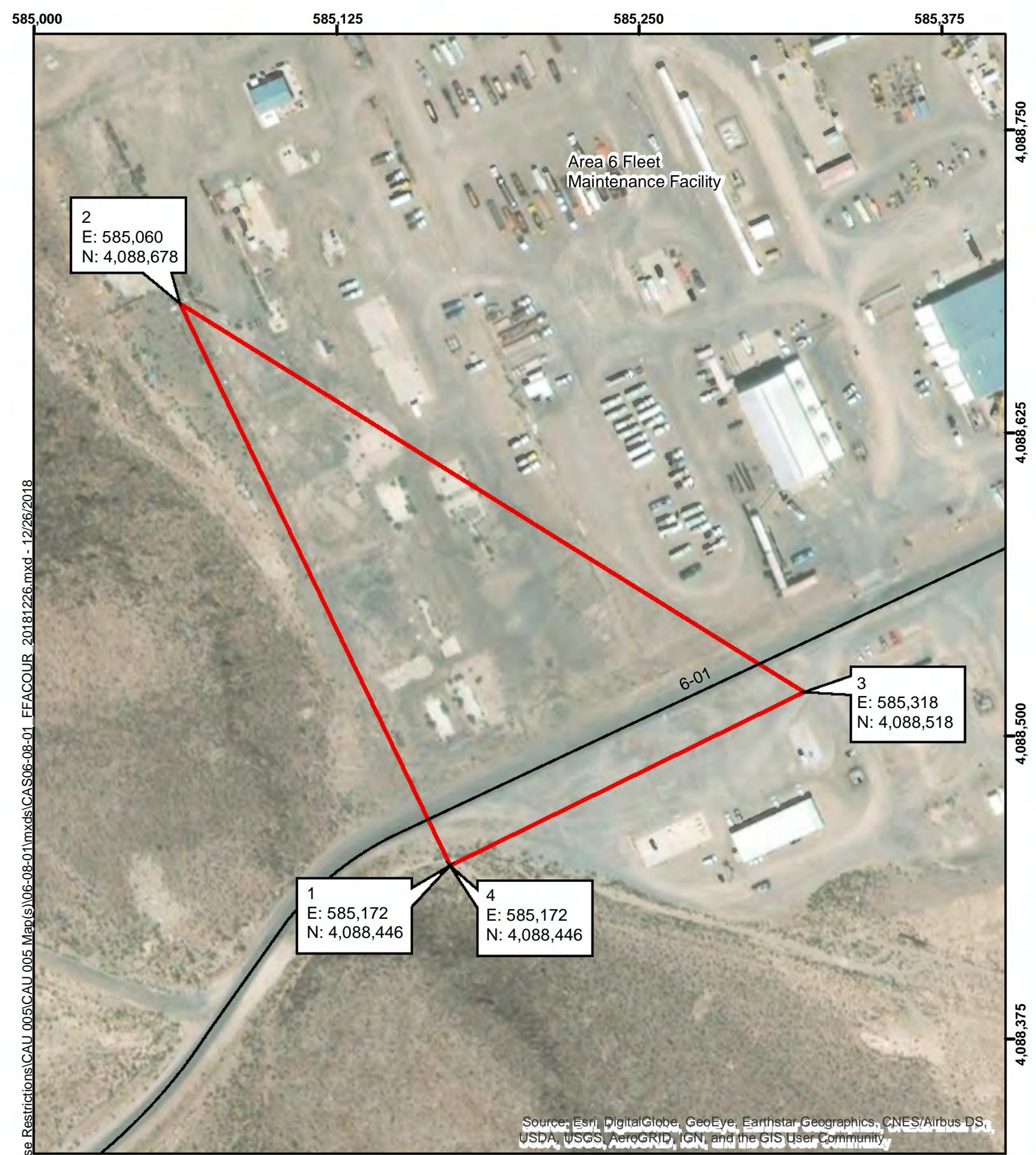


Date:

2/7/2019

Activity Lead

EM Nevada Program



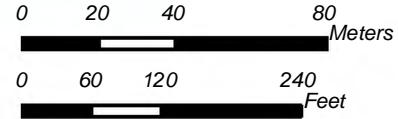
Source: Navarro GIS, 2018

**CAU 5, CAS 06-08-01  
Landfill  
FFACO UR Boundary**

## Explanation

FFACO UR  
Local Road

Local Roads



NOTE: Size and location of features are approximated.  
Coordinate System: NAD 1983 UTM Zone 11N, Meter

## **Supplemental Information Figure**

The attached supplemental information figure contains additional information on site features. This information was derived from readily available existing sources and has not been verified. Therefore, site features may not be accurately represented.

This information is not required by the FFACO UR and does not imply any additional regulatory requirements. It is solely intended to benefit site users.



**CAU 5, CAS 06-08-01  
Landfill  
Supplemental Information  
General Location of Site Features**

NOTE: Size and location of features are approximated.  
Coordinate System: NAD 1983 UTM Zone 11N, Meter



Source: Navarro GIS, 2018

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

### General Information

Use Restriction (UR) Type(s):	FFACO Only
Corrective Action Unit (CAU) Number & Description:	5 - Landfills
Corrective Action Site (CAS) Number & Description:	06-15-02 - Sanitary Landfill
CAU/CAS Owner:	Industrial Sites - ER
Note:	CAS previously shared UR Form with CAS 06-15-03.

### Section I. Federal Facility Agreement and Consent Order (FFACO) UR

#### Basis for FFACO UR

**Summary Statement:** This FFACO UR is established to protect workers from inadvertent exposure to Radiological and Chemical contaminants that were released at this site. Radiological and Chemical contaminants are assumed to be present that exceed CAS 06-15-02 final action levels under the Industrial Area (2,000 hours per year) exposure scenario.

#### FFACO UR Physical Description

##### Surveyed Area (UTM, Zone 11, NAD 83, meters):

UR Boundary	UR Point <sup>1</sup>	Easting <sup>2</sup>	Northing <sup>2</sup>
FFACO Boundary	1	586,474	4,087,550
	2	586,260	4,087,663
	3	586,273	4,087,838
	4	586,543	4,087,685
	5	586,474	4,087,550

<sup>1</sup>UR Points are listed clockwise beginning at the southernmost point. If multiple points share the southernmost Northing coordinate, the easternmost point is listed as Point 1.

<sup>2</sup>UR coordinate values presented herein were transformed from the North American Datum of 1927, and rounded to the nearest meter; resultant coordinates may not reflect the original precision of values contained within the source GIS data set.

**Boundary Applies to:** Subsurface

**Starting Depth:** 0

**Ending Depth:** 8

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

**Depth Unit:** Meters

**Survey Source:** GPS

### FFACO UR Requirements

#### Site Controls:

This FFACO UR is recorded as described in **Section IV. Recordation Requirements** to restrict activities within the area by the coordinates listed above and depicted in the attached figure without prior notification of NDEP unless the activities are conducted under the provisions of 10 CFR, Part 835, Occupational Radiation Protection and 10 CFR, Part 851, Worker Safety and Health Program.

Control	Criteria
Signage	Present and legible.
Soil Cover	Must completely cover waste material.

**Inspection Frequency:** Every 5 Years

#### Additional Considerations:

Consideration	Criteria
None	None

**Requirements Comments:** Surface of soil cover is uncontaminated.

## Section II. Administrative UR

*An Administrative UR is not identified for this site.*

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

### Section III. Supporting Documentation

#### UR Source Document(s)

ROTC 2 for CAU 5 CR (DOE/NV--1108), dated 02/07/2019.

ROTC 1 for CAU 5 CR (DOE/NV--1108), dated 10/04/2017.

Errata Sheet for CAU 5 CR (DOE/NV--1108), issued 03/06/2006.

U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office. 2006. Closure Report for Corrective Action Unit 5: Landfills, Nevada Test Site, Nevada, Rev. 0, DOE/NV--1108. Las Vegas, NV.

#### Attachments

- CAU 5, CAS 06-15-02 FFACO UR Boundary Map (UTM, Zone 11, NAD 83 meters)
- CAU 5, CAS 06-15-02 Supplemental Information Figure (UTM, Zone 11, NAD 83 meters)

### Section IV. Recordation Requirements

#### Recordation:

The above UR(s) are recorded in the:

- FFACO Database
- NNSA M&O Contractor GIS
- EM Nevada Program CAU/CAS Files

### Section V. EM Nevada Program Approval

/s/ Tiffany Gamero

  
Tiffany Gamero

Activity Lead

EM Nevada Program

Date:

  
2/7/2019

586,250

586,500

4,088,000

4,087,750

4,087,500

Yucca Lake  
(Playa)3  
E: 586,273  
N: 4,087,8384  
E: 586,543  
N: 4,087,6852  
E: 586,260  
N: 4,087,6631  
E: 586,474  
N: 4,087,5505  
E: 586,474  
N: 4,087,550

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Source: Navarro GIS, 2018

## CAU 5, CAS 06-15-02 Sanitary Landfill FFACO UR Boundary

### Explanation

FFACO UR

Local Road

0 25 50 100  
Meters

0 75 150 300  
Feet

NOTE: Size and location of features are approximated.  
Coordinate System: NAD 1983 UTM Zone 11N, Meter

## **Supplemental Information Figure**

The attached supplemental information figure contains additional information on site features. This information was derived from readily available existing sources and has not been verified. Therefore, site features may not be accurately represented.

This information is not required by the FFACO UR and does not imply any additional regulatory requirements. It is solely intended to benefit site users.

586,250

586,500

586,750

4,088,000

L:\Soils\Soils Common Use Restrictions\CAU 005\CAU 005 Map(s)\06-15-02\mxds\CAUS06-15-02\_Supp\_2010102.mxd - 1/2/2019

Yucca Lake  
(Playa)

CAS 06-15-03

6-01

Area 6 Hydrocarbon  
Landfill

Access Road to Hydrocarbon Landfill



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**CAU 5, CAS 06-15-02  
Sanitary Landfill  
Supplemental Information  
General Location of Site Features**

0 25 50 100  
Meters0 75 150 300  
Feet

N



Source: Navarro GIS, 2019

NOTE: Size and location of features are approximated.  
Coordinate System: NAD 1983 UTM Zone 11N, Meter

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

### General Information

Use Restriction (UR) Type(s):	FFACO Only
Corrective Action Unit (CAU) Number & Description:	5 - Landfills
Corrective Action Site (CAS) Number & Description:	06-15-03 - Sanitary Landfill; Burn Pit
CAU/CAS Owner:	Industrial Sites - ER
Note:	CAS previously shared UR Form with CAS 06-15-02.

### Section I. Federal Facility Agreement and Consent Order (FFACO) UR

#### Basis for FFACO UR

**Summary Statement:** This FFACO UR is established to protect workers from inadvertent exposure to Radiological and Chemical contaminants that were released at this site. Radiological and Chemical contaminants are assumed to be present that exceed CAS 06-15-03 final action levels under the Industrial Area (2,000 hours per year) exposure scenario.

#### FFACO UR Physical Description

##### Surveyed Area (UTM, Zone 11, NAD 83, meters):

UR Boundary	UR Point <sup>1</sup>	Easting <sup>2</sup>	Northing <sup>2</sup>
FFACO Boundary	1	586,260	4,087,663
	2	586,236	4,087,676
	3	586,066	4,087,689
	4	586,001	4,087,778
	5	586,110	4,087,930
	6	586,273	4,087,838
	7	586,260	4,087,663

<sup>1</sup>UR Points are listed clockwise beginning at the southernmost point. If multiple points share the southernmost Northing coordinate, the easternmost point is listed as Point 1.

<sup>2</sup>UR coordinate values presented herein were transformed from the North American Datum of 1927, and rounded to the nearest meter; resultant coordinates may not reflect the original precision of values contained within the source GIS data set.

**Boundary Applies to:** Subsurface

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

**Starting Depth:** 0 \_\_\_\_\_ **Ending Depth:** 8 \_\_\_\_\_  
**Depth Unit:** Meters  
**Survey Source:** GPS

### FFACO UR Requirements

#### Site Controls:

This FFACO UR is recorded as described in **Section IV. Recordation Requirements** to restrict activities within the area by the coordinates listed above and depicted in the attached figure without prior notification of NDEP unless the activities are conducted under the provisions of 10 CFR, Part 835, Occupational Radiation Protection and 10 CFR, Part 851, Worker Safety and Health Program.

Control	Criteria
Signage	Present and legible.
Soil Cover	Must completely cover waste material.

**Inspection Frequency:** Every 5 Years

#### Additional Considerations:

Consideration	Criteria
None	None

**Requirements Comments:** Surface of soil cover is uncontaminated.

## Section II. Administrative UR

An Administrative UR is not identified for this site.

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

### Section III. Supporting Documentation

#### UR Source Document(s)

ROTC 2 for CAU 5 CR (DOE/NV--1108), dated 02/07/2019.

ROTC 1 for CAU 5 CR (DOE/NV--1108), dated 10/04/2017.

Errata Sheet for CAU 5 CR (DOE/NV--1108), issued 03/06/2006.

U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office. 2006. Closure Report for Corrective Action Unit 5: Landfills, Nevada Test Site, Nevada, Rev. 0, DOE/NV--1108. Las Vegas, NV.

#### Attachments

- CAU 5, CAS 06-15-03 FFACO UR Boundary Map (UTM, Zone 11, NAD 83 meters)
- CAU 5, CAS 06-15-03 Supplemental Information Figure (UTM, Zone 11, NAD 83 meters)

### Section IV. Recordation Requirements

#### Recordation:

The above UR(s) are recorded in the:

- FFACO Database
- NNSA M&O Contractor GIS
- EM Nevada Program CAU/CAS Files

### Section V. EM Nevada Program Approval

/s/ Tiffany Gamero



Tiffany Gamero

Activity Lead

EM Nevada Program

Date:

2/7/2019

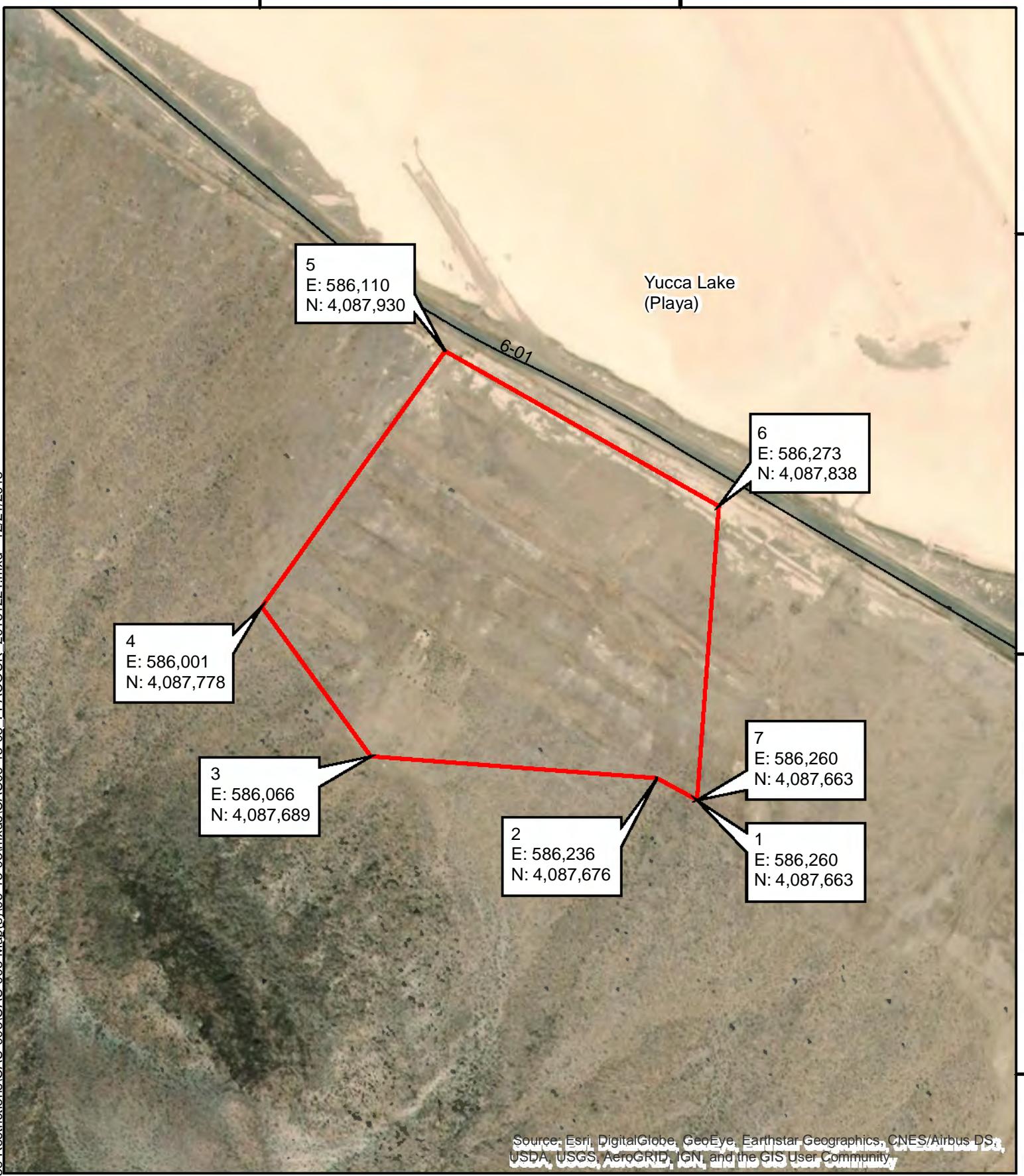
586,000

586,250

4,088,000

4,087,750

L:\Soils\Soils Common\Use Restrictions\CAU 005\CAU 005\Map(s)\06-15-03\mxds\CAU 005.mxd - 12/21/2018

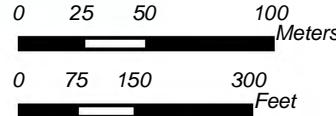


### CAU 5, CAS 06-15-03 Sanitary Landfill; Burn Pit FFACO UR Boundary

Source: Navarro GIS, 2018

#### Explanation

- FFACO UR
- Local Road



NOTE: Size and location of features are approximated.  
Coordinate System: NAD 1983 UTM Zone 11N, Meter

## **Supplemental Information Figure**

The attached supplemental information figure contains additional information on site features. This information was derived from readily available existing sources and has not been verified. Therefore, site features may not be accurately represented.

This information is not required by the FFACO UR and does not imply any additional regulatory requirements. It is solely intended to benefit site users.

586,000

586,250

4,088,000

4,087,750

4,087,500

Yucca Lake  
(Playa)

6-01

CAS 06-15-02



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**CAU 5, CAS 06-15-03**  
**Sanitary Landfill; Burn Pit**  
**Supplemental Information**  
**General Location of Site Features**



NOTE: Size and location of features are approximated.  
 Coordinate System: NAD 1983 UTM Zone 11N, Meter



Source: Navarro GIS, 2018

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

### General Information

Use Restriction (UR) Type(s):	FFACO Only
Corrective Action Unit (CAU) Number & Description:	5 - Landfills
Corrective Action Site (CAS) Number & Description:	12-15-01 - Sanitary Landfill
CAU/CAS Owner:	Industrial Sites - ER
Note:	N/A

### Section I. Federal Facility Agreement and Consent Order (FFACO) UR

#### Basis for FFACO UR

**Summary Statement:** This FFACO UR is established to protect workers from inadvertent exposure to Chemical contaminants that were released at this site. Chemical contaminants are present that exceed CAS 12-15-01 final action levels under the Industrial Area (2,000 hours per year) exposure scenario.

#### FFACO UR Physical Description

##### Surveyed Area (UTM, Zone 11, NAD 83, meters):

UR Boundary	UR Point <sup>1</sup>	Easting <sup>2</sup>	Northing <sup>2</sup>
FFACO Boundary	1	575,768	4,116,999
	2	575,584	4,117,042
	3	575,559	4,117,078
	4	575,742	4,117,116
	5	575,891	4,117,063
	6	575,881	4,117,021
	7	575,790	4,117,049
	8	575,768	4,116,999

<sup>1</sup>UR Points are listed clockwise beginning at the southernmost point. If multiple points share the southernmost Northing coordinate, the easternmost point is listed as Point 1.

<sup>2</sup>UR coordinate values presented herein were transformed from the North American Datum of 1927, and rounded to the nearest meter; resultant coordinates may not reflect the original precision of values contained within the source GIS data set.

**Boundary Applies to:** Subsurface

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

Depth is unknown.

Survey Source: GPS

### FFACO UR Requirements

#### Site Controls:

This FFACO UR is recorded as described in **Section IV. Recordation Requirements** to restrict activities within the area by the coordinates listed above and depicted in the attached figure without prior notification of NDEP unless the activities are conducted under the provisions of 10 CFR, Part 835, Occupational Radiation Protection and 10 CFR, Part 851, Worker Safety and Health Program.

Control	Criteria
Signage	Present and legible.
Soil Cover	Must completely cover waste material.

Inspection Frequency: Every 5 Years

#### Additional Considerations:

Consideration	Criteria
None	None

Requirements Comments: Surface of soil cover is uncontaminated.

## Section II. Administrative UR

An Administrative UR is not identified for this site.

## Section III. Supporting Documentation

#### UR Source Document(s)

ROTC 2 for CAU 5 CR (DOE/NV--1108), dated 02/07/2019.

U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office. 2006. Closure Report for Corrective Action Unit 5: Landfills, Nevada Test Site, Nevada, Rev. 0, DOE/NV--1108. Las Vegas, NV.

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

### Attachments

- CAU 5, CAS 12-15-01 FFACO UR Boundary Map (UTM, Zone 11, NAD 83 meters)
- CAU 5, CAS 12-15-01 Supplemental Information Figure (UTM, Zone 11, NAD 83 meters)

## Section IV. Recordation Requirements

### Recordation:

The above UR(s) are recorded in the:

- FFACO Database
- NNSA M&O Contractor GIS
- EM Nevada Program CAU/CAS Files

## Section V. EM Nevada Program Approval

/s/ Tiffany Gamero

  
Tiffany Gamero

Date:

2/7/2019

Activity Lead

EM Nevada Program

575,500

575,625

575,750

575,875

EEAC01/B 20181226 mixed - 12/26/2018

**CAU 5, CAS 12-15-01  
Sanitary Landfill  
FFACO UR Boundary**

Source: Navarro GIS, 2018

## Explanation

FFACO UR

Vehicular Tra



NOTE: Size and location of features are approximated.  
Coordinate System: NAD 1983 UTM Zone 11N. Meter

## **Supplemental Information Figure**

The attached supplemental information figure contains additional information on site features. This information was derived from readily available existing sources and has not been verified. Therefore, site features may not be accurately represented.

This information is not required by the FFACO UR and does not imply any additional regulatory requirements. It is solely intended to benefit site users.

575,500

575,625

575,750

575,875

4,117,250  
4,117,125

4,117,000

4,116,875

L:\Soils\Soils Common Use Restrictions\CAU 005\CAU 005 Map(s)\12-15-01\mxds\CAU 12-15-01\_Supp\_20181226.mxd - 12/26/2018



#### Explanation

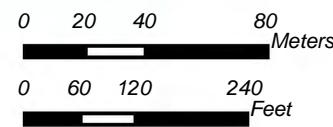
<span style="border: 2px solid red; display: inline-block; width: 15px; height: 10px;"></span>	FFACO UR	<span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>	Fence
<span style="background-color: #666; display: inline-block; width: 15px; height: 10px;"></span>	Landfill	<span style="border-top: 1px dashed black; border-bottom: 1px dashed black; display: inline-block; width: 10px; height: 10px;"></span>	Sewer Line
<span style="border-top: 1px dashed black; border-bottom: 1px dashed black; display: inline-block; width: 10px; height: 10px;"></span>	Vehicular Trail	<span style="border: 1px solid black; border-radius: 50%; display: inline-block; width: 10px; height: 10px;"></span>	Monument
<span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>	Overhead Powerline		
<span style="border-top: 1px dashed black; border-bottom: 1px dashed black; display: inline-block; width: 10px; height: 10px;"></span>	Underground Wire		

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Source: Navarro GIS, 2018

#### CAU 5, CAS 12-15-01 Sanitary Landfill Supplemental Information General Location of Site Features



NOTE: Size and location of features are approximated.  
Coordinate System: NAD 1983 UTM Zone 11N, Meter

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

### General Information

Use Restriction (UR) Type(s):	FFACO Only
Corrective Action Unit (CAU) Number & Description:	5 - Landfills
Corrective Action Site (CAS) Number & Description:	20-15-01 - Landfill
CAU/CAS Owner:	Industrial Sites - ER
Note:	N/A

### Section I. Federal Facility Agreement and Consent Order (FFACO) UR

#### Basis for FFACO UR

**Summary Statement:** This FFACO UR is established to protect workers from inadvertent exposure to Radiological and Chemical contaminants that were released at this site. Radiological and Chemical contaminants are assumed to be present that exceed CAS 20-15-01 final action levels under the Industrial Area (2,000 hours per year) exposure scenario.

#### FFACO UR Physical Description

##### Surveyed Area (UTM, Zone 11, NAD 83, meters):

UR Boundary	UR Point <sup>1</sup>	Easting <sup>2</sup>	Northing <sup>2</sup>
FFACO Boundary	1	547,594	4,120,802
	2	547,594	4,120,832
	3	547,678	4,120,831
	4	547,677	4,120,806
	5	547,594	4,120,802

<sup>1</sup>UR Points are listed clockwise beginning at the southernmost point. If multiple points share the southernmost Northing coordinate, the easternmost point is listed as Point 1.

<sup>2</sup>UR coordinate values presented herein were transformed from the North American Datum of 1927, and rounded to the nearest meter; resultant coordinates may not reflect the original precision of values contained within the source GIS data set.

**Boundary Applies to:** Subsurface

**Depth is unknown.**

**Survey Source:** GPS

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

### FFACO UR Requirements

#### Site Controls:

This FFACO UR is recorded as described in **Section IV. Recordation Requirements** to restrict activities within the area by the coordinates listed above and depicted in the attached figure without prior notification of NDEP unless the activities are conducted under the provisions of 10 CFR, Part 835, Occupational Radiation Protection and 10 CFR, Part 851, Worker Safety and Health Program.

Control	Criteria
Signage	Present and legible.
Soil Cover	Must completely cover waste material.

**Inspection Frequency:** Every 5 Years

#### Additional Considerations:

Consideration	Criteria
None	None

**Requirements Comments:** Surface of soil cover is uncontaminated.

## Section II. Administrative UR

*An Administrative UR is not identified for this site.*

## Section III. Supporting Documentation

### UR Source Document(s)

ROTC 2 for CAU 5 CR (DOE/NV--1108), dated 02/07/2019.

Errata Sheet for CAU 5 CR (DOE/NV--1108), issued 03/06/2006.

U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office. 2006. Closure Report for Corrective Action Unit 5: Landfills, Nevada Test Site, Nevada, Rev. 0, DOE/NV--1108. Las Vegas, NV.

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

### Attachments

- CAU 5, CAS 20-15-01 FFACO UR Boundary Map (UTM, Zone 11, NAD 83 meters)
- CAU 5, CAS 20-15-01 Supplemental Information Figure (UTM, Zone 11, NAD 83 meters)

## Section IV. Recordation Requirements

### Recordation:

The above UR(s) are recorded in the:

- FFACO Database
- NNSA M&O Contractor GIS
- EM Nevada Program CAU/CAS Files

## Section V. EM Nevada Program Approval

/s/ Tiffany Gamero

  
Tiffany Gamero

Activity Lead

EM Nevada Program

Date:

2/7/2019

547,600

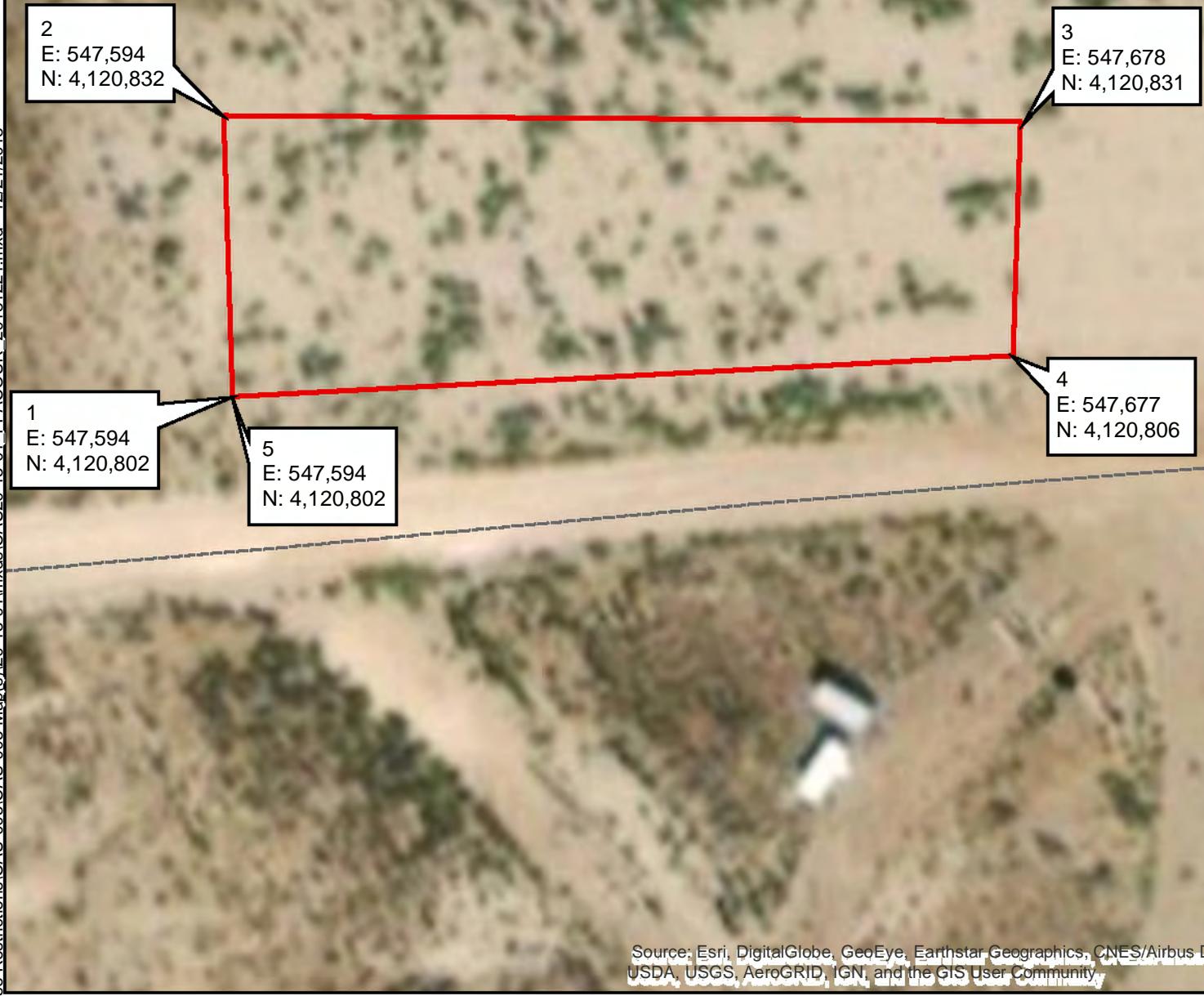
547,640

547,680

4,120,855

4,120,800

4,120,745



**CAU 5, CAS 20-15-01  
Landfill  
FFACO UR Boundary**



Source: Navarro GIS, 2018

**Explanation**

- FFACO UR (Red Box)
- Vehicular Trail (Dashed Line)

0 5 10 20 Meters

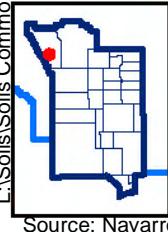
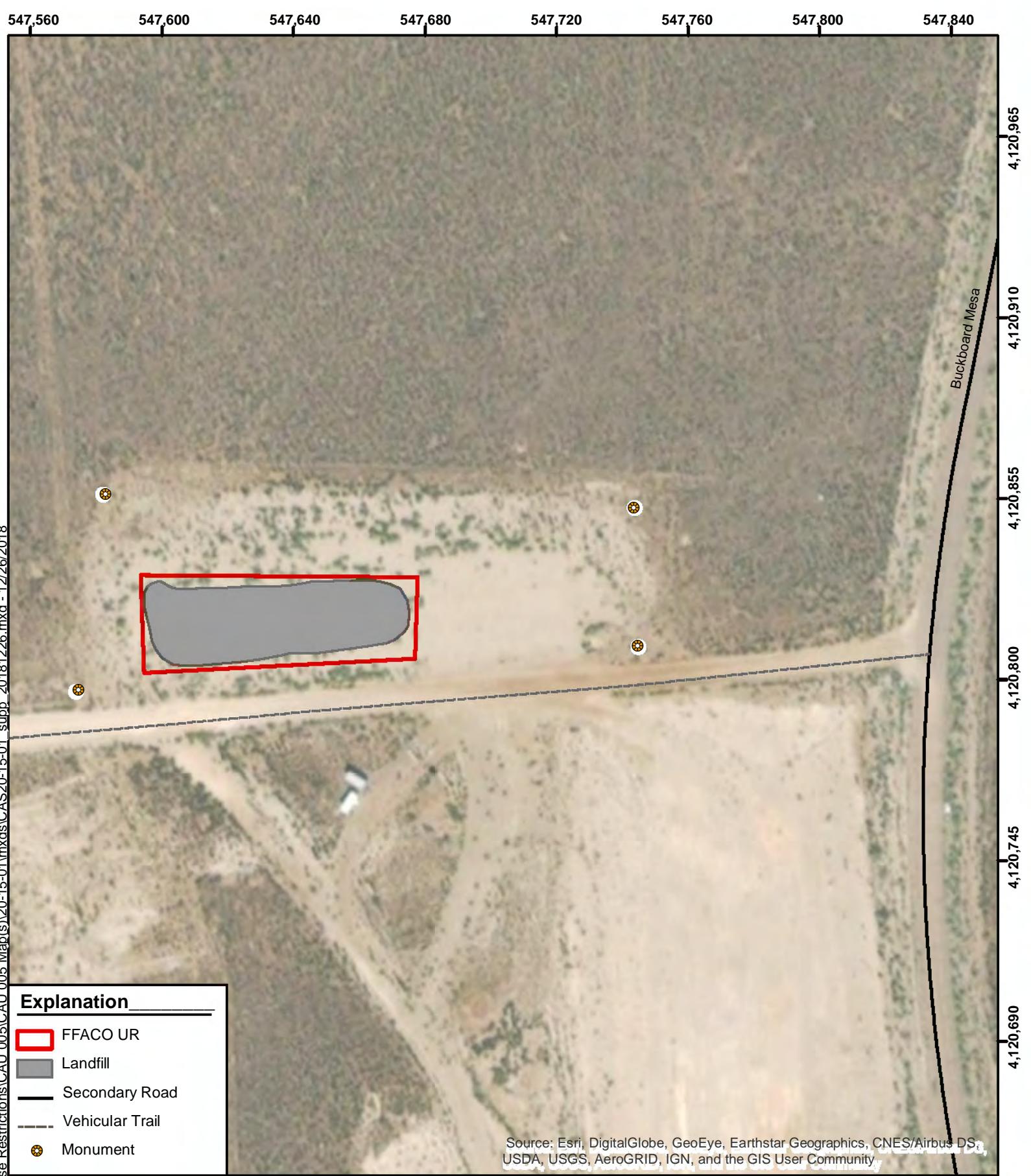
0 15 30 60 Feet

NOTE: Size and location of features are approximated.  
Coordinate System: NAD 1983 UTM Zone 11N, Meter

## **Supplemental Information Figure**

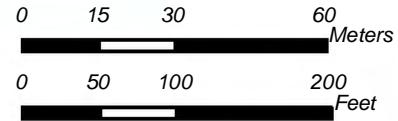
The attached supplemental information figure contains additional information on site features. This information was derived from readily available existing sources and has not been verified. Therefore, site features may not be accurately represented.

This information is not required by the FFACO UR and does not imply any additional regulatory requirements. It is solely intended to benefit site users.



Source: Navarro GIS, 2018

**CAU 5, CAS 20-15-01**  
**Landfill**  
**Supplemental Information**  
**General Location of Site Features**



NOTE: Size and location of features are approximated.  
 Coordinate System: NAD 1983 UTM Zone 11N, Meter

# U.S. Department of Energy, Environmental Management Nevada Program Use Restriction Information

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## General Information

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Use Restriction (UR) Type(s):	FFACO Only
Corrective Action Unit (CAU) Number & Description:	5 - Landfills
Corrective Action Site (CAS) Number & Description:	23-15-03 - Disposal Site
CAU/CAS Owner:	Industrial Sites - ER
Note:	N/A

## Section I. *Federal Facility Agreement and Consent Order (FFACO) UR*

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### Basis for FFACO UR

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**Summary Statement:** This FFACO UR is established to protect workers from inadvertent exposure to Radiological and Chemical contaminants that were released at this site. Radiological and Chemical contaminants are assumed to be present that exceed CAS 23-15-03 final action levels under the Industrial Area (2,000 hours per year) exposure scenario.

# U.S. Department of Energy, Environmental Management Nevada Program

## Use Restriction Information

### FFACO UR Physical Description

Surveyed Area (UTM, Zone 11, NAD 83, meters):

UR Boundary	UR Point <sup>1</sup>	Easting <sup>2</sup>	Northing <sup>2</sup>
FFACO Boundary	1	588,011	4,057,506
	2	587,969	4,057,530
	3	588,083	4,057,693
	4	588,128	4,057,738
	5	588,267	4,057,742
	6	588,264	4,057,624
	7	588,216	4,057,639
	8	588,160	4,057,602
	9	588,134	4,057,540
	10	588,011	4,057,506

<sup>1</sup>UR Points are listed clockwise beginning at the southernmost point. If multiple points share the southernmost Northing coordinate, the easternmost point is listed as Point 1.

<sup>2</sup>UR coordinate values presented herein were transformed from the North American Datum of 1927, and rounded to the nearest meter; resultant coordinates may not reflect the original precision of values contained within the source GIS data set.

**Boundary Applies to:** Subsurface

**Depth is unknown.**

**Survey Source:** GPS

### FFACO UR Requirements

#### Site Controls:

This FFACO UR is recorded as described in **Section IV. Recordation Requirements** to restrict activities within the area by the coordinates listed above and depicted in the attached figure without prior notification of NDEP unless the activities are conducted under the provisions of 10 CFR, Part 835, Occupational Radiation Protection and 10 CFR, Part 851, Worker Safety and Health Program.

Control	Criteria
Signage	Present and legible.
Soil Cover	Must completely cover waste material.

# U.S. Department of Energy, Environmental Management Nevada Program Use Restriction Information

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**Inspection Frequency:** Every 5 Years

## Additional Considerations:

Consideration	Criteria
None	None

**Requirements Comments:** Surface of soil cover is uncontaminated.

## Section II. Administrative UR

An Administrative UR is not identified for this site.

## Section III. Supporting Documentation

### UR Source Document(s)

ROTC 2 for CAU 5 CR (DOE/NV--1108), dated 02/07/2019.

Errata Sheet for CAU 5 CR (DOE/NV--1108), issued 03/06/2006.

U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office. 2006. Closure Report for Corrective Action Unit 5: Landfills, Nevada Test Site, Nevada, Rev. 0, DOE/NV--1108. Las Vegas, NV.

### Attachments

- CAU 5, CAS 23-15-03 FFACO UR Boundary Map (UTM, Zone 11, NAD 83 meters)
- CAU 5, CAS 23-15-03 Supplemental Information Figure (UTM, Zone 11, NAD 83 meters)

## Section IV. Recordation Requirements

### Recordation:

The above UR(s) are recorded in the:

- FFACO Database
- NNSA M&O Contractor GIS
- EM Nevada Program CAU/CAS Files

## U.S. Department of Energy, Environmental Management Nevada Program Use Restriction Information

### Section V. EM Nevada Program Approval

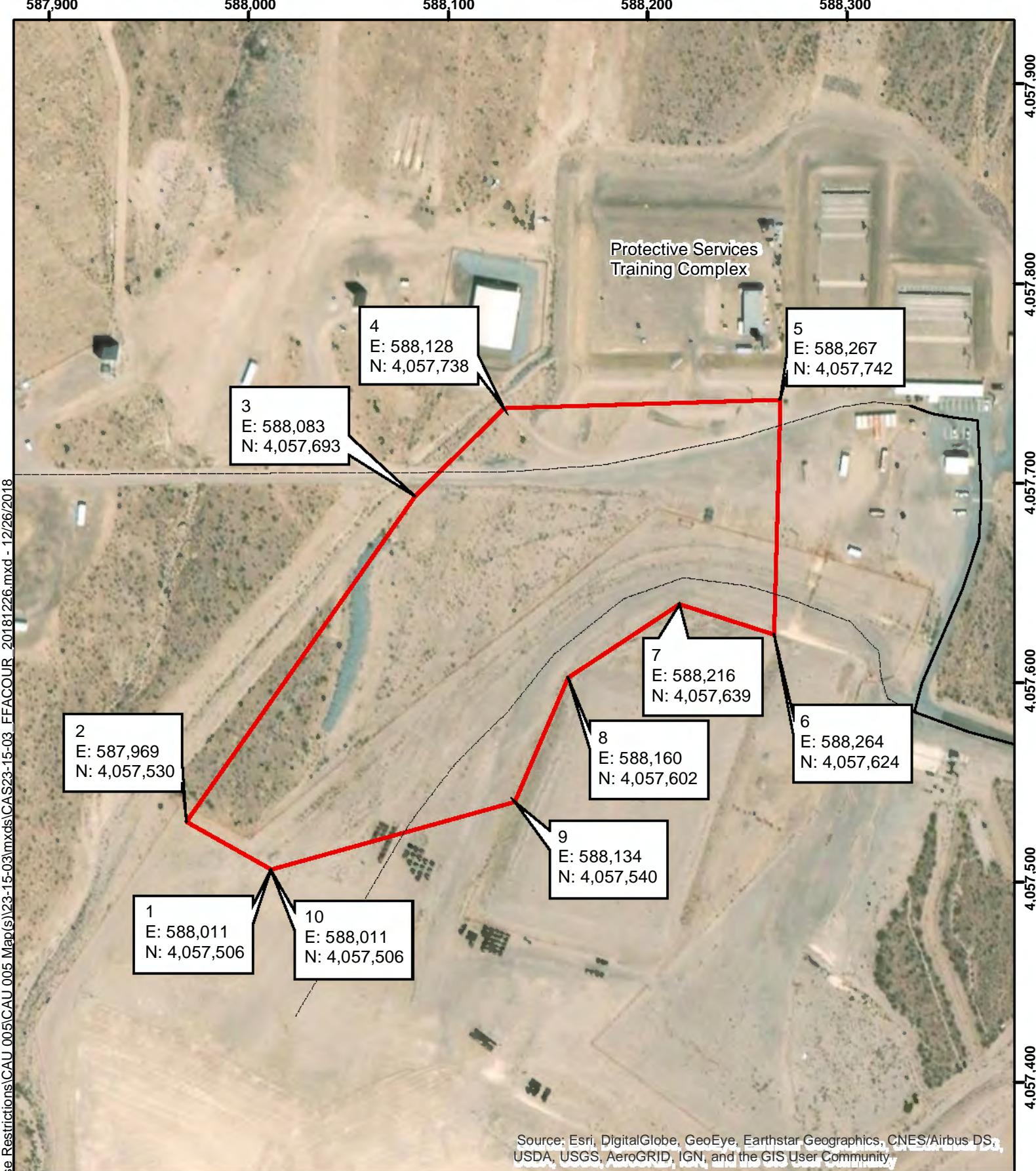
/s/ Tiffany Gamero

  
Tiffany Gamero

Date:

2/7/2019

Activity Lead  
EM Nevada Program



#### Explanation

- FFACO UR
- Local Road
- Vehicular Trail

0 20 40 80 Meters

0 60 120 240 Feet

NOTE: Size and location of features are approximated.  
 Coordinate System: NAD 1983 UTM Zone 11N, Meter



## **Supplemental Information Figure**

The attached supplemental information figure contains additional information on site features. This information was derived from readily available existing sources and has not been verified. Therefore, site features may not be accurately represented.

This information is not required by the FFACO UR and does not imply any additional regulatory requirements. It is solely intended to benefit site users.

588,000

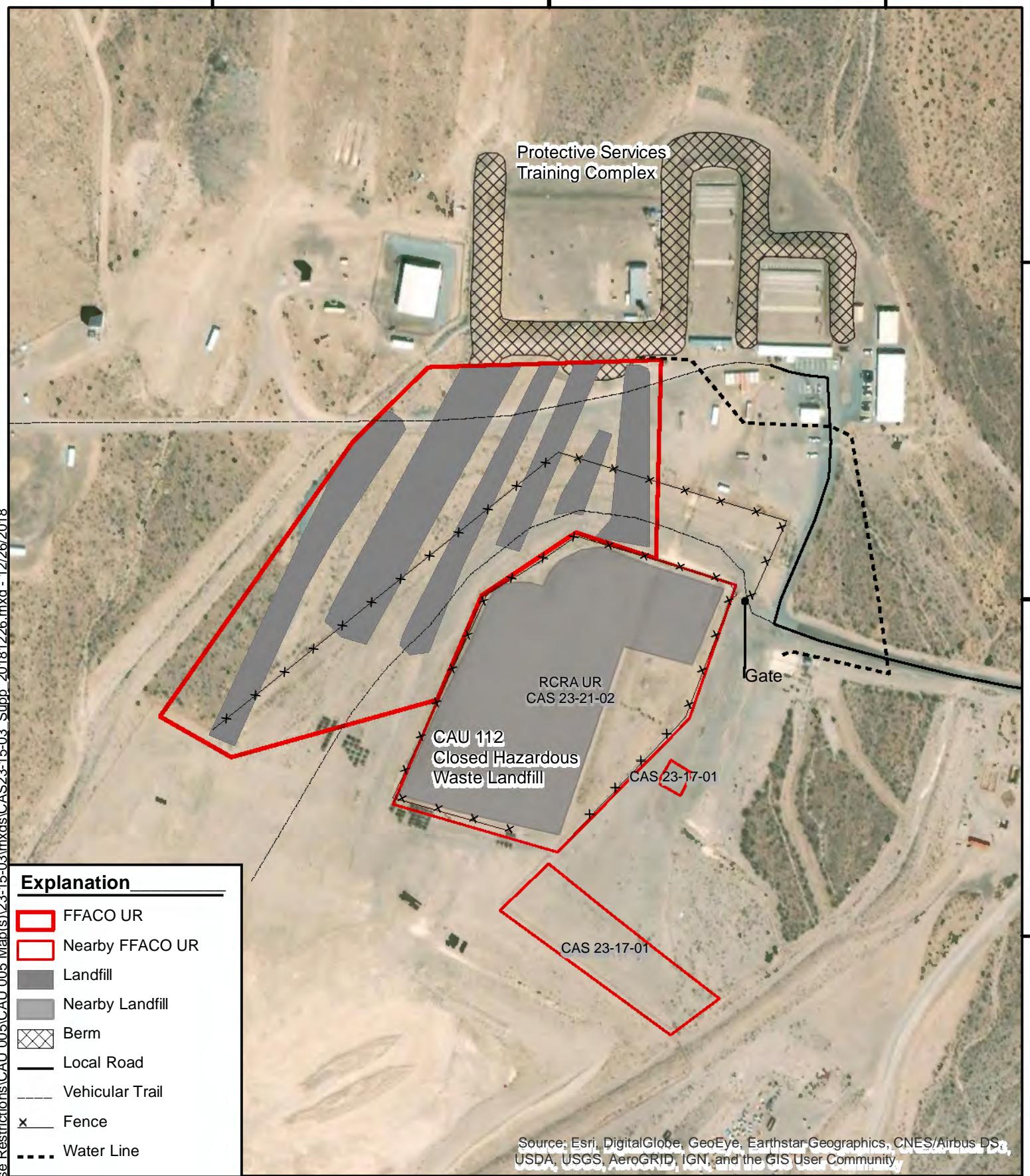
588,200

588,400

4,057,800

4,057,600

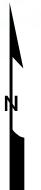
4,057,400



**CAU 5, CAS 23-15-03  
Disposal Site  
Supplemental Information  
General Location of Site Features**

0 20 40 80 Meters

0 60 120 240 Feet



Source: Navarro GIS, 2018

NOTE: Size and location of features are approximated.  
Coordinate System: NAD 1983 UTM Zone 11N, Meter