Notes
1) Analytical results used to delineate the OU2 groundwater plumes are a combination of wells sampled during the November 2016 event.

Figure 2-3
Groundwater VOC Plumes Extent (November 2016)
Approximate Scale in Feet

Figure 3-1
Groundwater Elevation Map
(October 2016)

Yermo Annex
Marine Corps Logistics Base
Barstow, California

Legend
- Paved Road
- Dirt Road
- Railroad Tracks
- Fence Line
- Base Boundary
- Groundwater Elevation Contour, 1-foot Interval
  (Dashed Where Approximate)
- Groundwater Flow Direction
  (With Approximate Gradient in ft/ft)
- Groundwater Elevation (ft above mean sea level)
- Groundwater Monitoring Well
- Base Groundwater Supply Well
- Groundwater Extraction Well (Active)
- Groundwater Extraction Well (Inactive)
- Combination Well
- Residential Well

Notes
1) Groundwater elevation contours were drawn using only monitoring wells with water levels within the screened interval. For nested wells that the shallow screen was “Dry”, the elevation in the deep screen was used (noted with an *).
2) GEW-7, 16, & 17 were online during gauging.
3) ft/ft = feet per foot
Figure 3-2
Hydrographs for Select Monitoring Wells, Yermo Annex (2016)

Legend
- Y9-1*
- Y9-2
- Y15-1*
- Y15-2
- Y15-3
- YS26-1*
- YS26-2
- YS26-3
- YS35-2*
- YS35-3
- YS35-4
- YS23-12
- YS23-13
- YS23-18
- YS23-19
- YS23-7*

* = Well has been abandoned and replaced with a deeper nested well set.

Yermo Annex
Marine Corps Logistics Base
Barstow, California

Date: March 20, 2017
File: Barstow_Hgraphs.dwg
Figure 3-3
Nebo Main Base
Groundwater Elevation Map
(November 2016)

Legend
- Paved Road
- Dirt Road
- Railroad Tracks
- Fence Line
- Base Boundary
- Groundwater Elevation Contour
  (5-feet and 1-foot intervals)
- Groundwater Flow Direction
  (With Approximate Gradient in ft/ft)
- Groundwater Elevation (ft above mean sea level)
- NEP-2
- NPZ-8
- NDW-6
- Piezometer
- Base Groundwater Supply Well
- Groundwater Monitoring Well
- Fault Traces
  (strike-slip)

Notes
1) Groundwater elevation contours were drawn using only monitoring wells with water levels within the screened interval.
2) ft/ft = feet per foot

Approximate Scale in Feet
0 800 1600

Barstow_5yrRev - 2017.dwg
Plotted By: Adam Goldenberg
June 19, 2017

Marine Corps Logistics Base
Barstow, California
Figure 5-1
OU 1 (CAOC 37) Groundwater Plumes and Remediation Systems

Notes:
1) Analytical results shown in ug/L (micrograms per liter) for the wells sampled during the 2016 Annual Groundwater Monitoring Event.

2) TCE = Trichloroethylene
PCE = Tetrachloroethylene
DCE = 1,1-Dichloroethene
CAOC = CERCLA Area of Concern
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
OU = Operable Unit

Legend
- Paved Road
- Dirt Road
- Railroad Tracks
- Fence Line
- Base Boundary
- Operable Unit 3 (CAOC #6)
- Operable Unit 5 (CAOC #8)
- Groundwater Monitoring Well
- Piezometer
- Base Groundwater Supply Well
- Groundwater Extraction Well (Active)
- Groundwater Extraction Well (Inactive)
- Vapor Extraction Well
- Air Sparge Wall
- Combination Well
- Residential Well
- Routes
- Approximate TCE Isoconcentration Contour (ug/L)
- Approximate PCE Isoconcentration Contour (ug/L)
- Groundwater Flow Direction

Approximate Scale in Feet

Plotted By: Geoff Brink
An Oneida Nation Company
Figure 5-2
OU 5/OU 1 CAOC 16 AS/SVE System

Legend
Operable Unit 5
(PAOCs #)
Paved Road
Dirt Road
Fence Line
Railroad Tracks
Remediation Line
Approximate TCE Isoconcentration Contour (ug/L)
Approximate PCE Isoconcentration Contour (ug/L)

Yermo Annex
Marine Corps Logistics Base
Barstow, California

Notes
1) Analytical results shown in ug/L (micrograms per liter) for the wells sampled during the 2016 annual groundwater monitoring event.
2) CAOC = CERCLA Area of Concern
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
TCE = Trichloroethene
PCE = Tetrachloroethene
NFA = no further action

Approximate Scale in Feet
July 26, 2017
Barstow_Sy5rev - 2017.dwg
Plotter: Geoff Brink
An Oneida Nation Company
Figure 5-3
OU 3 CAOCs 20 and 23

Yermo Annex
Marine Corps Logistics Base
Barstow, California

Legend
- Paved Road
- Dirt Road
- Railroad Tracks
- Fence Line
- Remediation Line
- Operable Unit 3 (CAOC #6)
- Groundwater Monitoring Well
- Air Sparge Well
- Groundwater Extraction Well (Inactive)
- Base Boundary
- Concrete Cap
- Groundwater Flow Direction

Notes
1) CAOC - CERCLA Area of Concern
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
LUCs = land use controls
NFA = no further action

Stratum 1 Cap
Zone 1 Cap
Stratum 1
(Limited Soil Removal, NFA)

Stratum 2
(Boil Cover)

Stratum 3
(NFA)

Stratum 4
(NFA)

Stratum 5A
(LUCs Only)

Stratum 5
(LUCs Only)

Stratum 1
(Limited Soil Removal, NFA)

Approximate Scale in Feet
0 600

Date: July 26, 2017
Barstow_SyRef - 2017.dwg
Plotted By: Geoff Brink
1) CAOC Zone 1 comprises the eastern portion of Stratum 1, with a remedy of a soil and gravel cap, plus land use controls (LUCs). Strata 1 (eastern portion) and 2 were closed with no further action (NFA).

2) CAOC - CERCLA Area of Concern
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
Figure 5-5
CAOCs 15/17, 18, 21, 23, 26, 32, 34, 9.60, and 9.68: LUCs Only Sites

Notes
1) CAOC = CERCLA Area of Concern
   CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
   LUCs = Land Use Controls
2) CAOCs 9.60 and 9.68 are under OU 7

Legend
- Paved Road
- Dirt Road
- Railroad Tracks
- Base Boundary
- Operable Unit 3 (CAOC #6)
- Operable Unit 5 (CAOC #8)
- Solar Arrays
- Stratum 5
- Stratum 5A

Approximate Scale in Feet

Yermo Annex
Marine Corps Logistics Base
Barstow, California

Plotted By: Geoff Brink
1) Analytical results shown in ug/L (micrograms per liter) are from wells sampled during the November 2016 event.
2) TCE = Trichloroethene
    PCE = Tetrachloroethene
    DCE = 1,1-Dichloroethene
    CAOC - CERCLA Area of Concern
    CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
    OU = Operable Unit.

OU 2 Nebo North
Groundwater Plume

OU 2 Nebo South
Groundwater Plumes

OU 7 NPZ-14
Groundwater Plume

OU 7 CAOC 7 Stratum 1
Groundwater Plume
Nebo Main Base
Marine Corps Logistics Base
Barstow, California

Figure 6-2
OU 2 Nebo North Source Area and Groundwater Plume (November 2016)

Legend
- Paved Road
- Dirt Road
- Railroad Tracks
- Fence Line
- Base Boundary
- Fault Traces
- Groundwater Monitoring Well
- Piezometer
- Base Groundwater Supply Well
- Groundwater Extraction Well (Inactive)
- Vapor Extraction Well
- Combination Well
- Approximate PCE Isoconcentration Contour (ug/L)
- Approximate PCE Isoconcentration Contour (ug/L)

Notes
1) Analytical results shown in ug/L (micrograms per liter) for the wells sampled during the 2016 Annual Groundwater Monitoring Event.
2) The highest detection is reported when a duplicate sample is collected.
3) TCE = Trichloroethene
PCE = Tetrachloroethene
MCL = Maximum Contaminant Level
ft bgs = feet below ground surface

Approximate Scale in Feet

Fault Traces
(strike-slip)

An Oneida Nation Company
March 27, 2017
Figure 6-3

OU 2 Nebo South AS/SVE System and 2016 TCE Plumes

Nebo Main Base
Marine Corps Logistics Base
Barstow, California

Notes
1) Analytical results shown in ug/L (micrograms per liter) for the wells sampled during the 2016 Annual Groundwater Monitoring Event.
2) The highest detection is reported when a field duplicate is collected.
3) AS/SVE = Air Sparge / Soil Vapor Extraction

TCE = Trichloroethene
CACOC = CERCLA Area of Concern
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

Legend
- Paved Road
- Dirt Road
- Fence Line
- Base Boundary
- Nebo South Land Use Control Boundary
- Groundwater Monitoring Well
- Vapor Extraction Well
- Air Sparge Wall
- Air Sparge/Vapor Extraction Well
- Residential Well
- Approximate TCE Isconcentration Contour (ug/L)
- Fault Traces (strike-slip)
**Legend**

- Paved Road
- Dirt Road
- Fence Line
- Base Boundary
- CAOC 7 Boundary
- NSP-3
- Groundwater Monitoring Well
- NS7-V1
- Vapor Extraction Well
- Groundwater Flow Direction

**Notes**

1) CAOC - CERCLA Area of Concern
   CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

**Figure 6-4**

OU 6 CAOC 7 Strata 1 - 4

Nebo Main Base
Marine Corps Logistics Base
Barstow, California

Date: June 19, 2017

Plotted By: Adam Goldenberg

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Approximate Scale in Feet

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Title: Barstow_5yrRev - 2017.dwg

Plot by: Adam Goldenberg
Figure 6-5
OU 7, CAOC 7 Groundwater TCE Plume (2016)

Nebo Main Base
Marine Corps Logistics Base
Barstow, California

Legend

- Paved Road
- Dirt Road
- Fence Line
- Base Boundary
- Operable Unit 6 (CAOC 7)
- Groundwater Monitoring Well
- Vapor Extraction Well
- Approximate TCE Isoconcentration Contour (ug/L)
- Approximate TCE Isoconcentration Contour (ug/L)
- Stratum 1 Armored Cap Boundary

Acronyms

COC = contaminant of concern
TCE = Trichloroethene
ft bgs = feet below ground surface
U = Not Detected (value indicates detection limit)
OU = operable unit
CAOC - CERCLA Area of Concern
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

Date: May 5, 2017
File: Barstow_A16.dwg

Plotted By: Geoff Brink
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