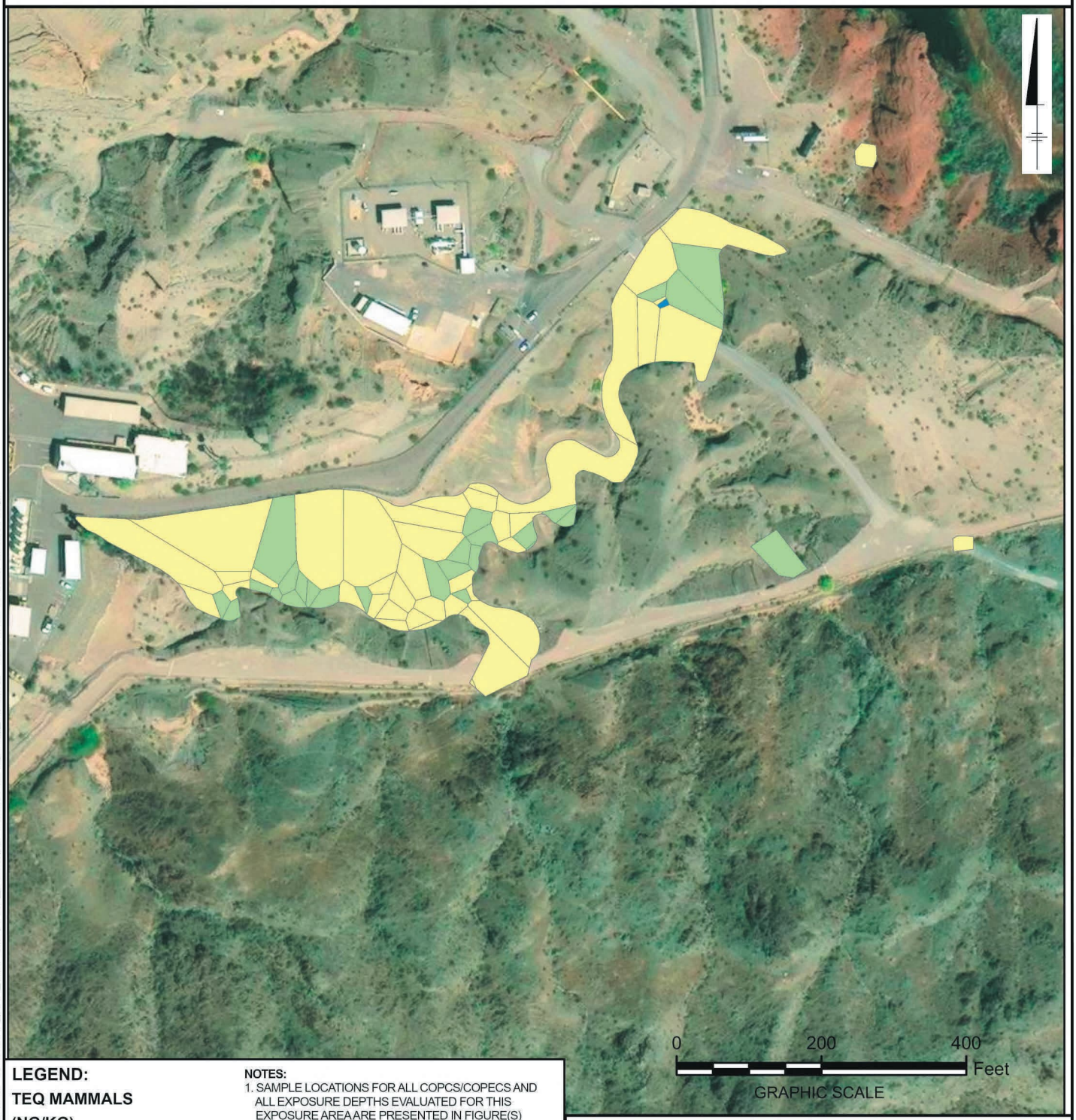
ATTACHMENT A

Dataset and Exposure Point Concentration Calculations for the AOC 10 HHERA

AOC 10
0 - 0.5 FEET BELOW GROUND SURFACE
TEQ MAMMALS



LEGEND:

TEQ MAMMALS (NG/KG)

- 0 - 5.58
- >5.58 - 100
- >100 - 190
- >190

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. NG/KG = NANOGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL

TEQ Mammals	Units	Value	Basis
Background	ng/kg	5.58	Site-specific Soil Background Value
Human Health RBRG	ng/kg	100	Soil Removal Action Goal (Hiker at 10-6 excess risk)
Ecological RBRG	ng/kg	190	Soil Removal Action Goal (Desert shrew)
Human Health RBRG	ng/kg	1000	Hiker at 10-5 excess risk

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

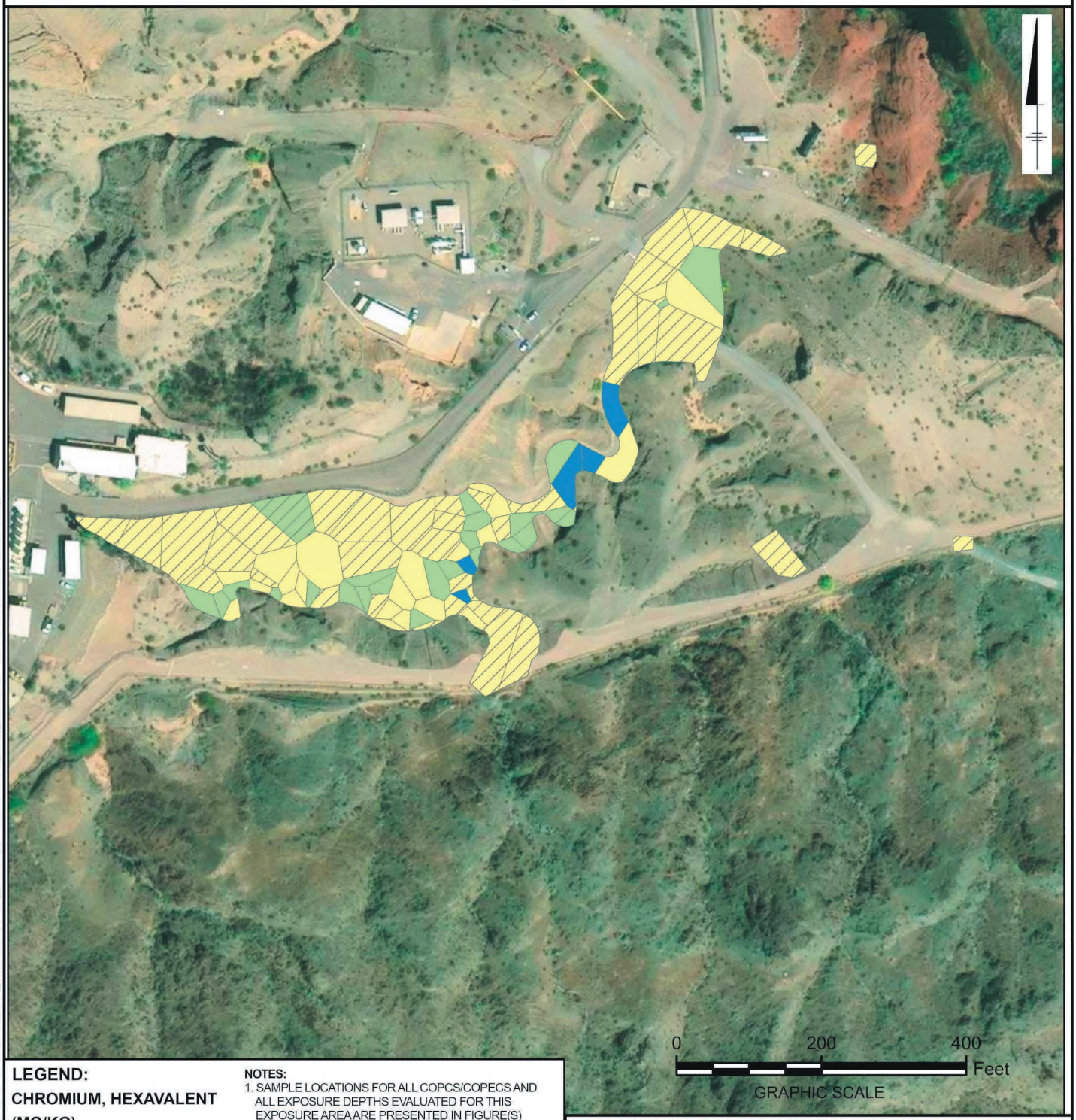
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.1

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
0 - 0.5 FEET BELOW GROUND SURFACE
CHROMIUM, HEXAVALENT



LEGEND:

CHROMIUM, HEXAVALENT (MG/KG)

- 0 - 0.83
- >0.83 - 3.1
- >3.1 - 31
- >31
- NOT DETECTED

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL
6. THIESSEN POLYGONS WITH A NON-DETECT CONCENTRATION ARE REPRESENTED BY THE REPORTING LIMIT.

Chromium, hexavalent	Units	Value	Basis
Background	mg/kg	0.83	Site-specific Soil Background Value
Human Health RBRG	mg/kg	3.1	Soil Removal Action Goal (Off-highway vehicle rider at 10-6 excess risk)
Human Health RBRG	mg/kg	31	Soil Removal Action Goal (Off-highway vehicle rider at 10-5 excess risk)

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NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

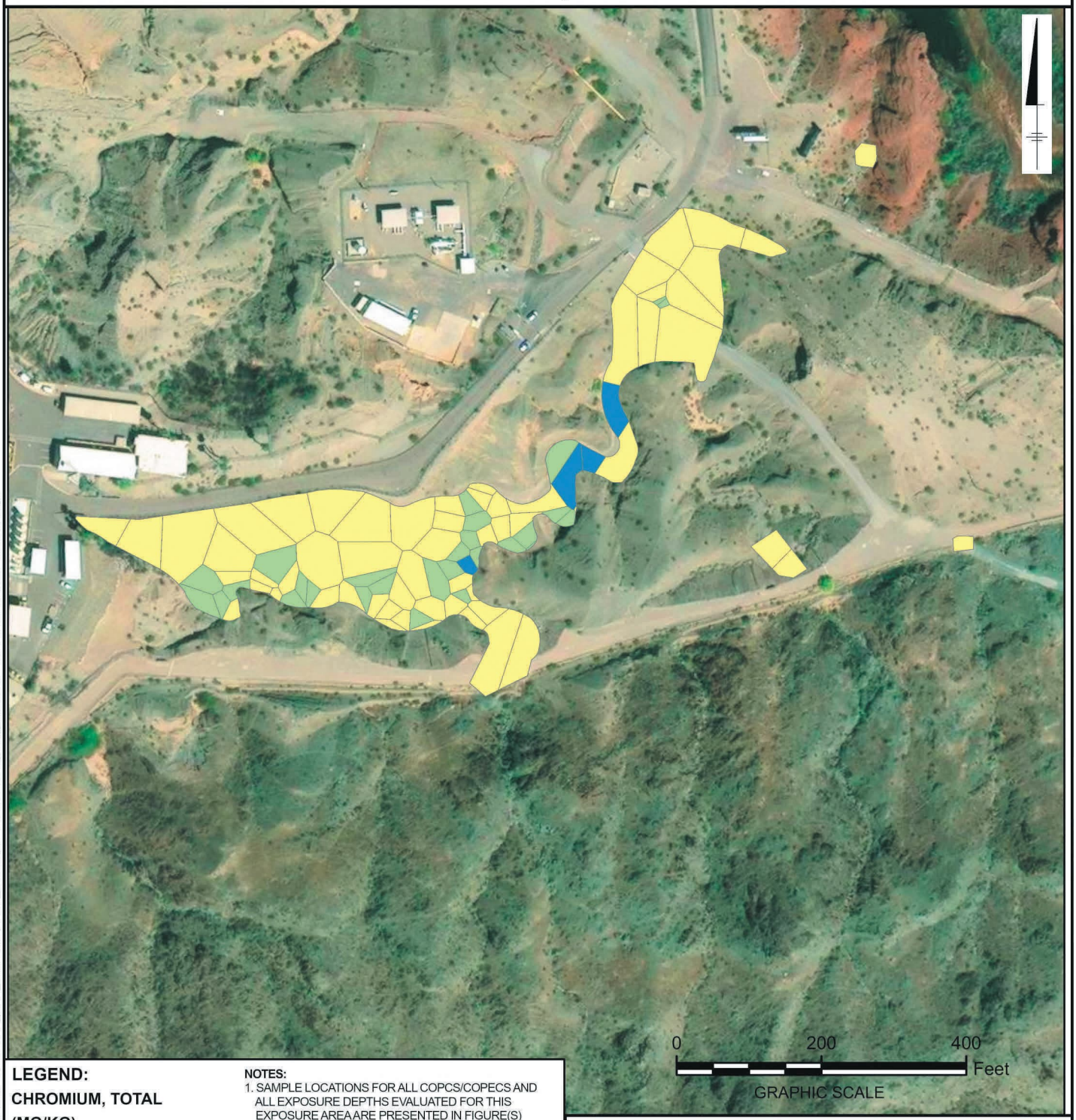
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.2

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
0 - 0.5 FEET BELOW GROUND SURFACE
CHROMIUM, TOTAL



LEGEND:

CHROMIUM, TOTAL (MG/KG)

- 0 - 39.8
- >39.8 - 145
- >145

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL

Chromium, total	Units	Value	Basis
Background	mg/kg	39.8	Site-specific Soil Background Value
Ecological RBRG	mg/kg	145	Soil Removal Action Goal (Desert shrew)

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NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

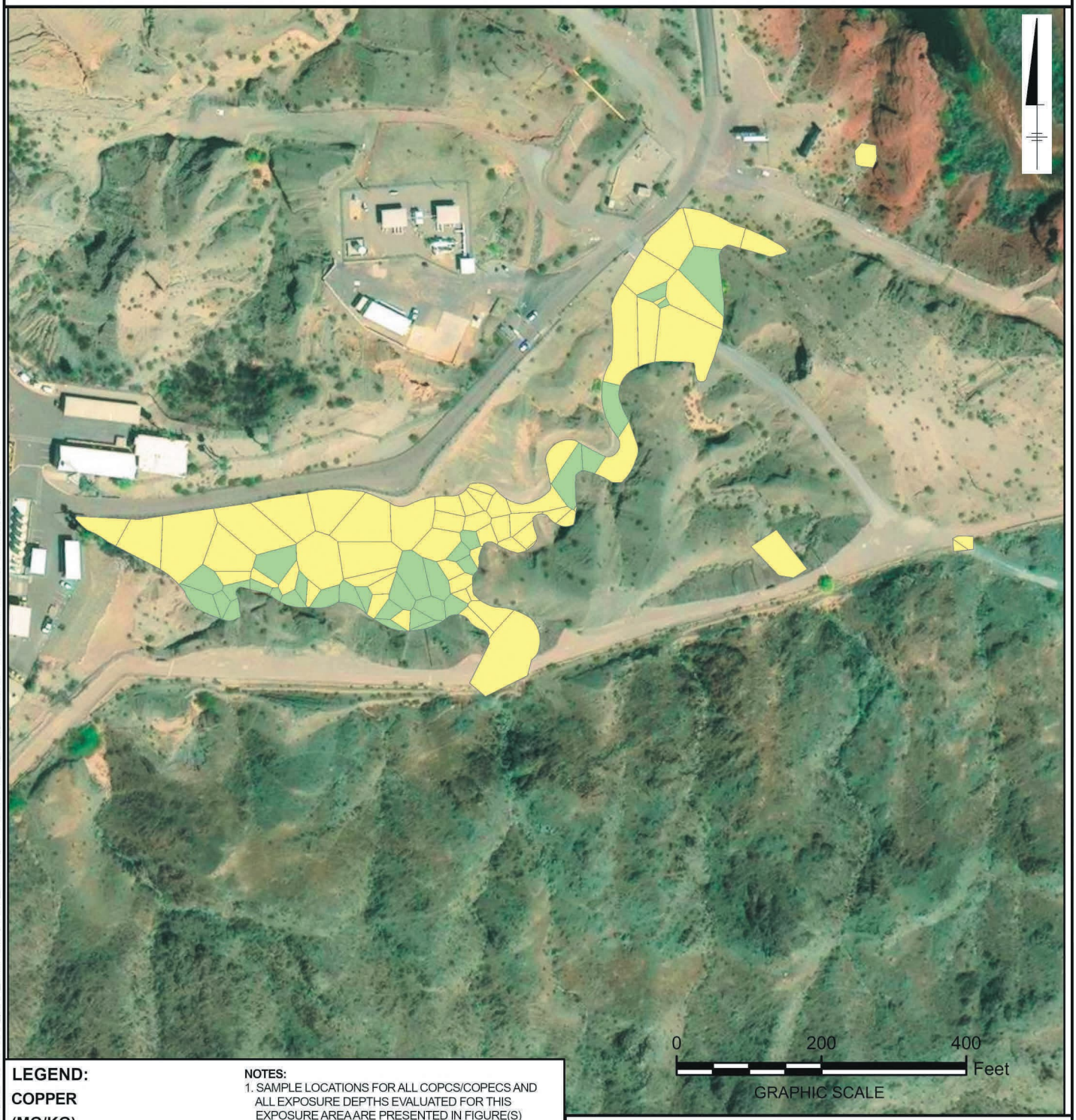
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.3

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
0 - 0.5 FEET BELOW GROUND SURFACE
COPPER



LEGEND:
COPPER
(MG/KG)

- 0 - 16.8
- >16.8 - 145
- >145

NOTES:
1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL

Copper	Units	Value	Basis
Background	mg/kg	16.8	Site-specific Soil Background Value
Ecological RBRG	mg/kg	145	Soil Removal Action Goal (Desert shrew)

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

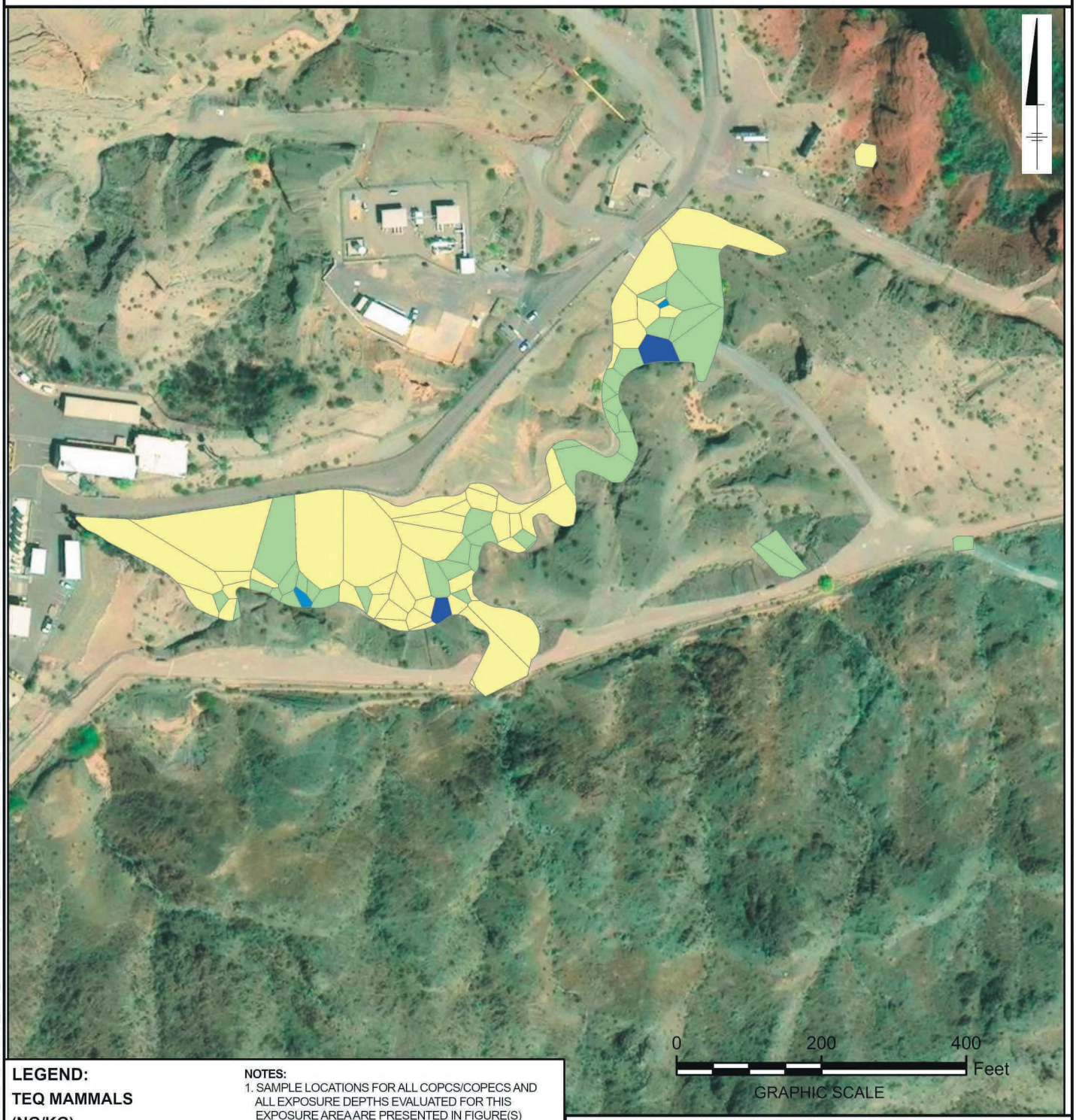
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.4

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
0 - 3 FEET BELOW GROUND SURFACE
TEQ MAMMALS



LEGEND:

TEQ MAMMALS (NG/KG)

- 0 - 5.58
- >5.58 - 100
- >100 - 190
- >190

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. NG/KG = NANOGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL

TEQ Mammals	Units	Value	Basis
Background	ng/kg	5.58	Site-specific Soil Background Value
Human Health RBRG	ng/kg	100	Soil Removal Action Goal (Hiker at 10-6 excess risk)
Ecological RBRG	ng/kg	190	Soil Removal Action Goal (Desert shrew)
Human Health RBRG	ng/kg	1000	Hiker at 10-5 excess risk

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

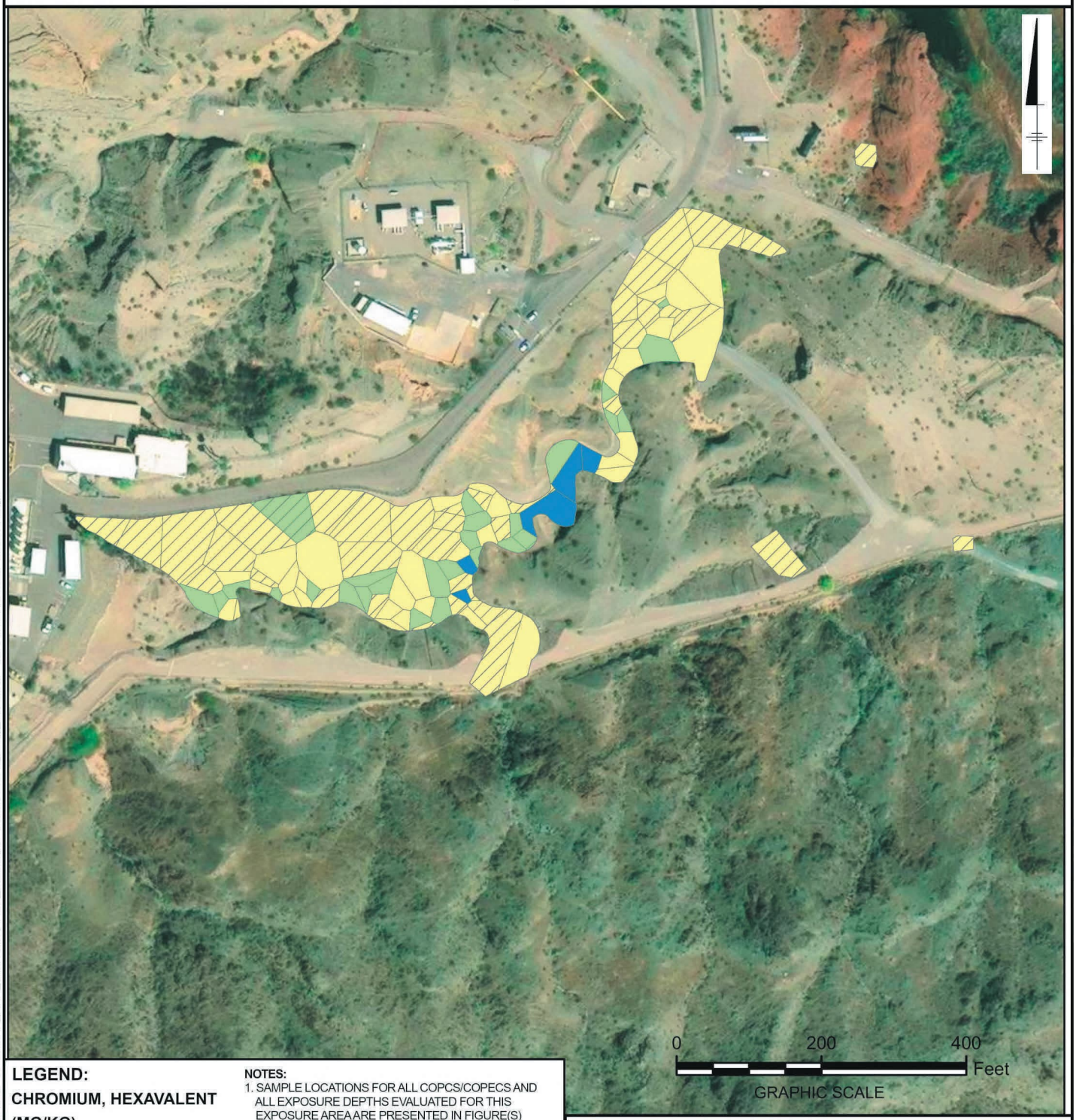
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.5

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
0 - 3 FEET BELOW GROUND SURFACE
CHROMIUM, HEXAVALENT



LEGEND:

CHROMIUM, HEXAVALENT (MG/KG)

- 0 - 0.83
- >0.83 - 3.1
- >3.1 - 31
- >31
- NOT DETECTED

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL
6. THIESSEN POLYGONS WITH A NON-DETECT CONCENTRATION ARE REPRESENTED BY THE REPORTING LIMIT.

Chromium, hexavalent	Units	Value	Basis
Background	mg/kg	0.83	Site-specific Soil Background Value
Human Health RBRG	mg/kg	3.1	Soil Removal Action Goal (Off-highway vehicle rider at 10-6 excess risk)
Human Health RBRG	mg/kg	31	Soil Removal Action Goal (Off-highway vehicle rider at 10-5 excess risk)

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NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

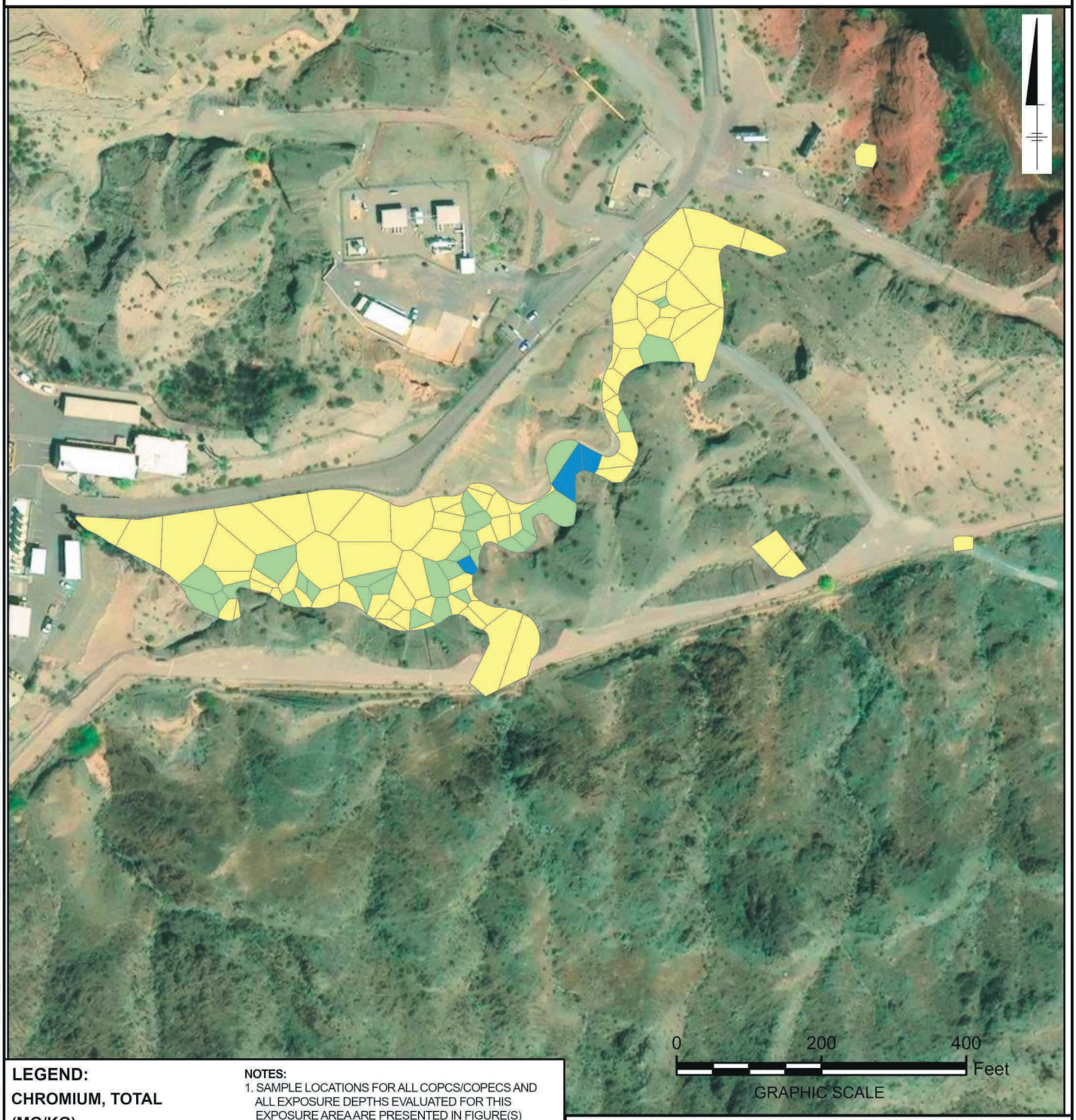
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.6

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
0 - 3 FEET BELOW GROUND SURFACE
CHROMIUM, TOTAL



LEGEND:

CHROMIUM, TOTAL (MG/KG)

- 0 - 39.8
- >39.8 - 145
- >145

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL

Chromium, total	Units	Value	Basis
Background	mg/kg	39.8	Site-specific Soil Background Value
Ecological RBRG	mg/kg	145	Soil Removal Action Goal (Desert shrew)

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NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

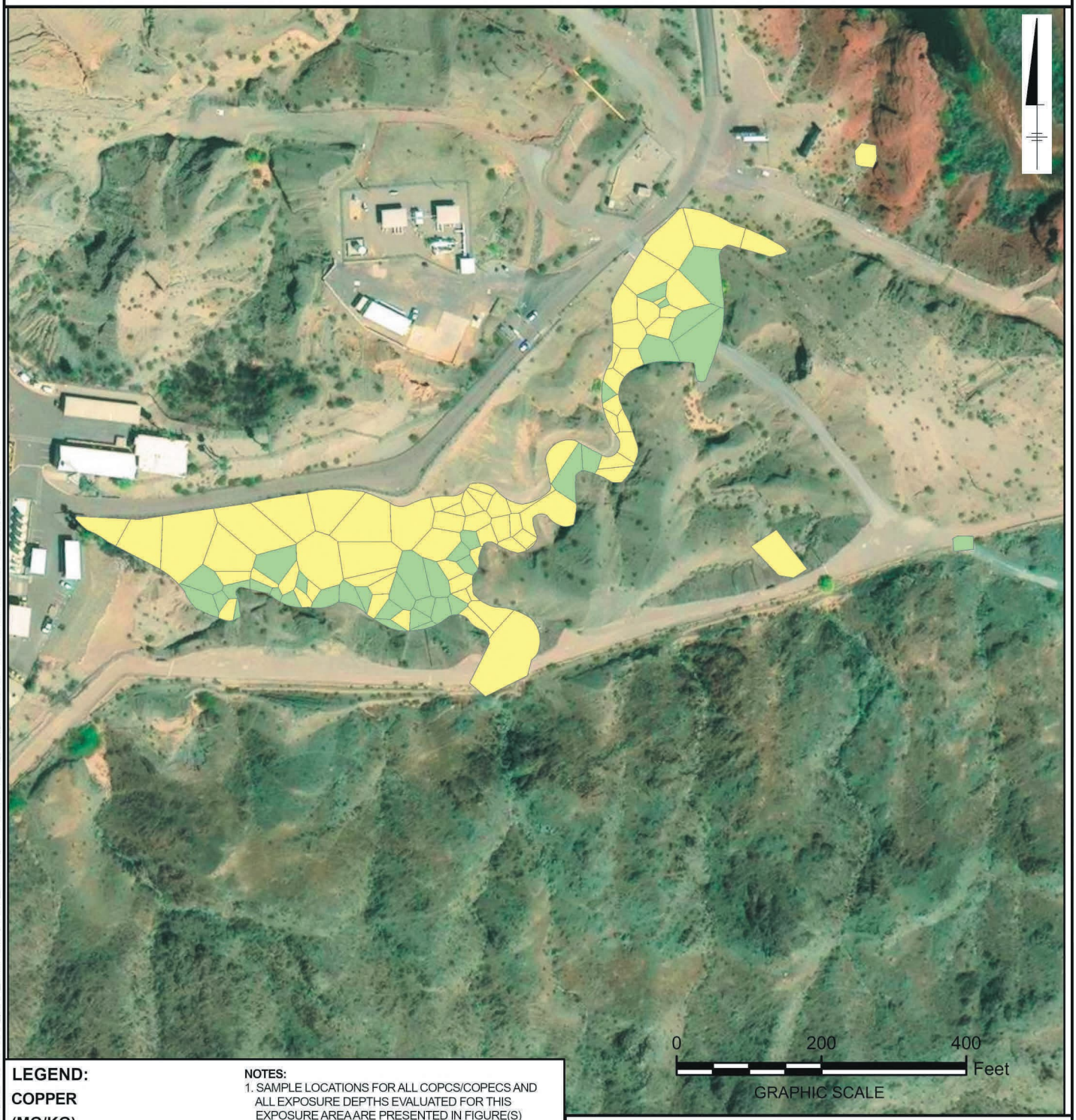
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.7

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
0 - 3 FEET BELOW GROUND SURFACE
COPPER



LEGEND:

COPPER (MG/KG)

- 0 - 16.8
- >16.8 - 145
- >145

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL

Copper	Units	Value	Basis
Background	mg/kg	16.8	Site-specific Soil Background Value
Ecological RBRG	mg/kg	145	Soil Removal Action Goal (Desert shrew)

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

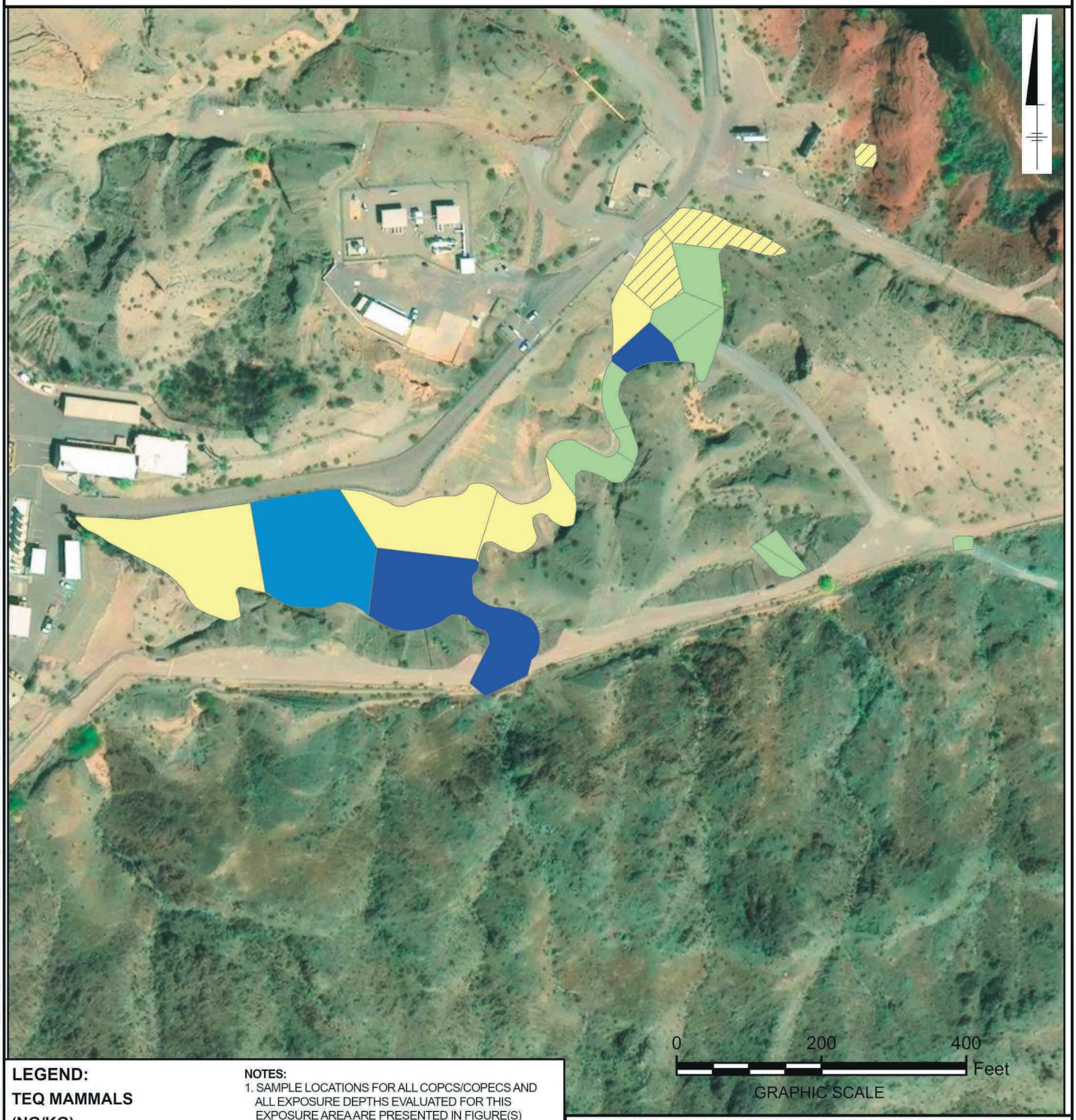
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.8

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
SCOURING 2 - 3 FEET BELOW GROUND SURFACE
TEQ MAMMALS



LEGEND:

TEQ MAMMALS (NG/KG)

- 0 - 5.58
- >5.58 - 100
- >100 - 190
- >190
- NOT DETECTED

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. NG/KG = NANOGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL
6. THIESSEN POLYGONS WITH A NON-DETECT CONCENTRATION ARE REPRESENTED BY THE REPORTING LIMIT.

TEQ Mammals	Units	Value	Basis
Background	ng/kg	5.58	Site-specific Soil Background Value
Human Health RBRG	ng/kg	100	Soil Removal Action Goal (Hiker at 10-6 excess risk)
Ecological RBRG	ng/kg	190	Soil Removal Action Goal (Desert shrew)
Human Health RBRG	ng/kg	1000	Hiker at 10-5 excess risk

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NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

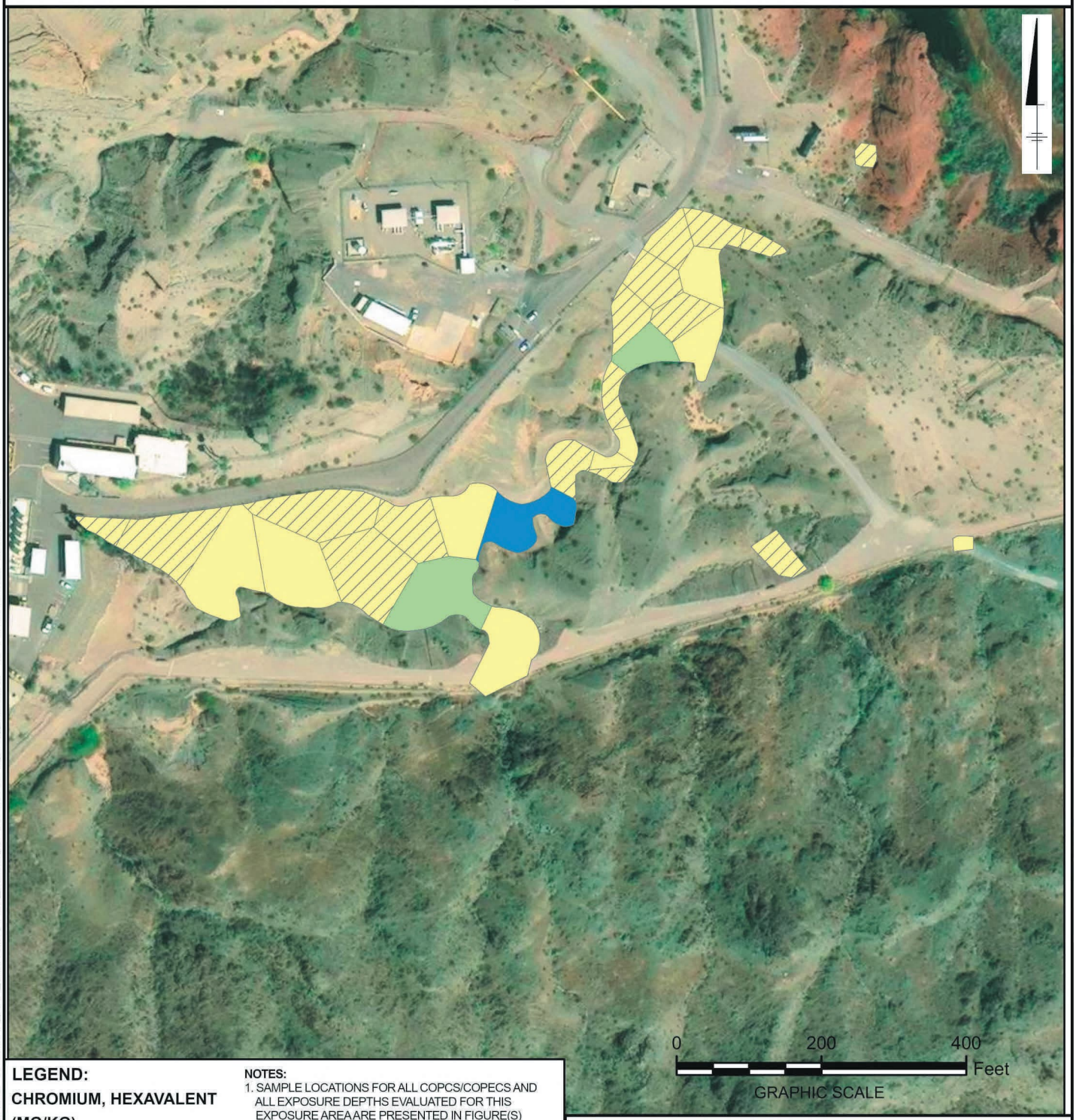
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.9

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
SCOURING 2 - 3 FEET BELOW GROUND SURFACE
CHROMIUM, HEXAVALENT



LEGEND:

CHROMIUM, HEXAVALENT (MG/KG)

- 0 - 0.83
- >0.83 - 3.1
- >3.1 - 31
- >31
- NOT DETECTED

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL
6. THIESSEN POLYGONS WITH A NON-DETECT CONCENTRATION ARE REPRESENTED BY THE REPORTING LIMIT.

Chromium, hexavalent	Units	Value	Basis
Background	mg/kg	0.83	Site-specific Soil Background Value
Human Health RBRG	mg/kg	3.1	Soil Removal Action Goal (Off-highway vehicle rider at 10-6 excess risk)
Human Health RBRG	mg/kg	31	Soil Removal Action Goal (Off-highway vehicle rider at 10-5 excess risk)

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

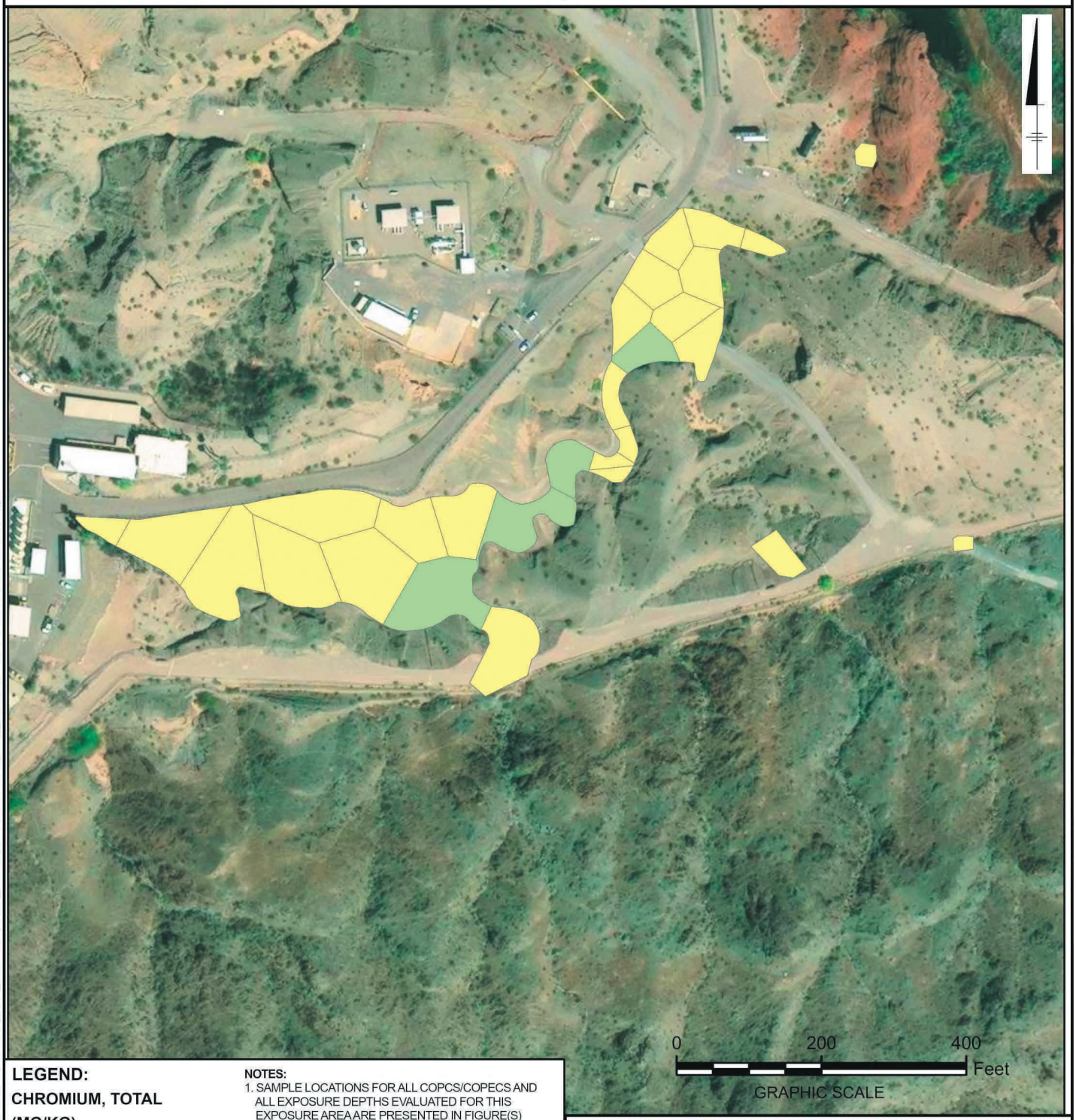
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.10

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
SCOURING 2 - 3 FEET BELOW GROUND SURFACE
CHROMIUM, TOTAL



LEGEND:

CHROMIUM, TOTAL (MG/KG)

- 0 - 39.8
- >39.8 - 145
- >145

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL

Chromium, total	Units	Value	Basis
Background	mg/kg	39.8	Site-specific Soil Background Value
Ecological RBRG	mg/kg	145	Soil Removal Action Goal (Desert shrew)

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

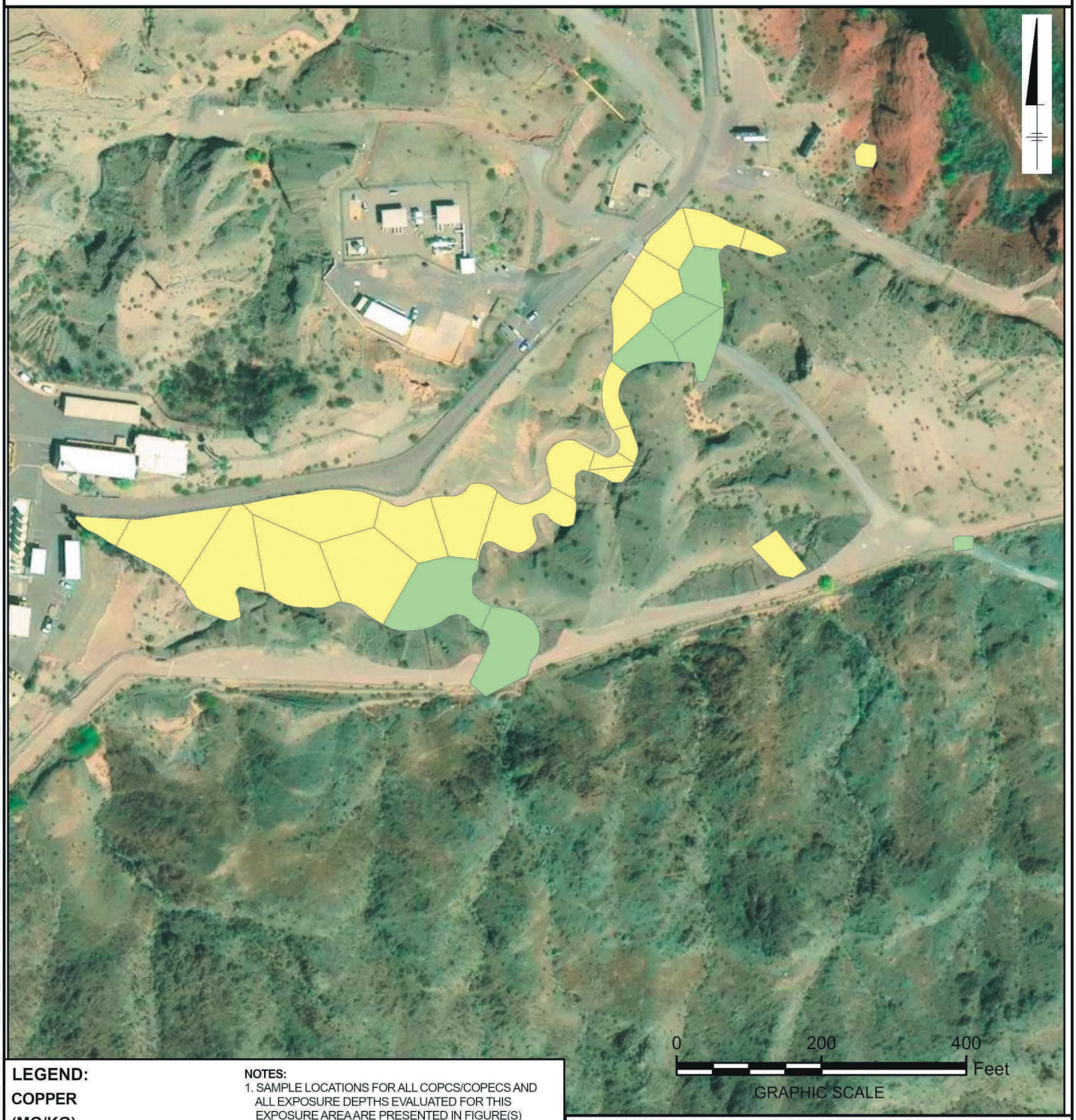
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.11

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
SCOURING 2 - 3 FEET BELOW GROUND SURFACE
COPPER



LEGEND:

COPPER (MG/KG)

- 0 - 16.8
- >16.8 - 145
- >145

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL

Copper	Units	Value	Basis
Background	mg/kg	16.8	Site-specific Soil Background Value
Ecological RBRG	mg/kg	145	Soil Removal Action Goal (Desert shrew)

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

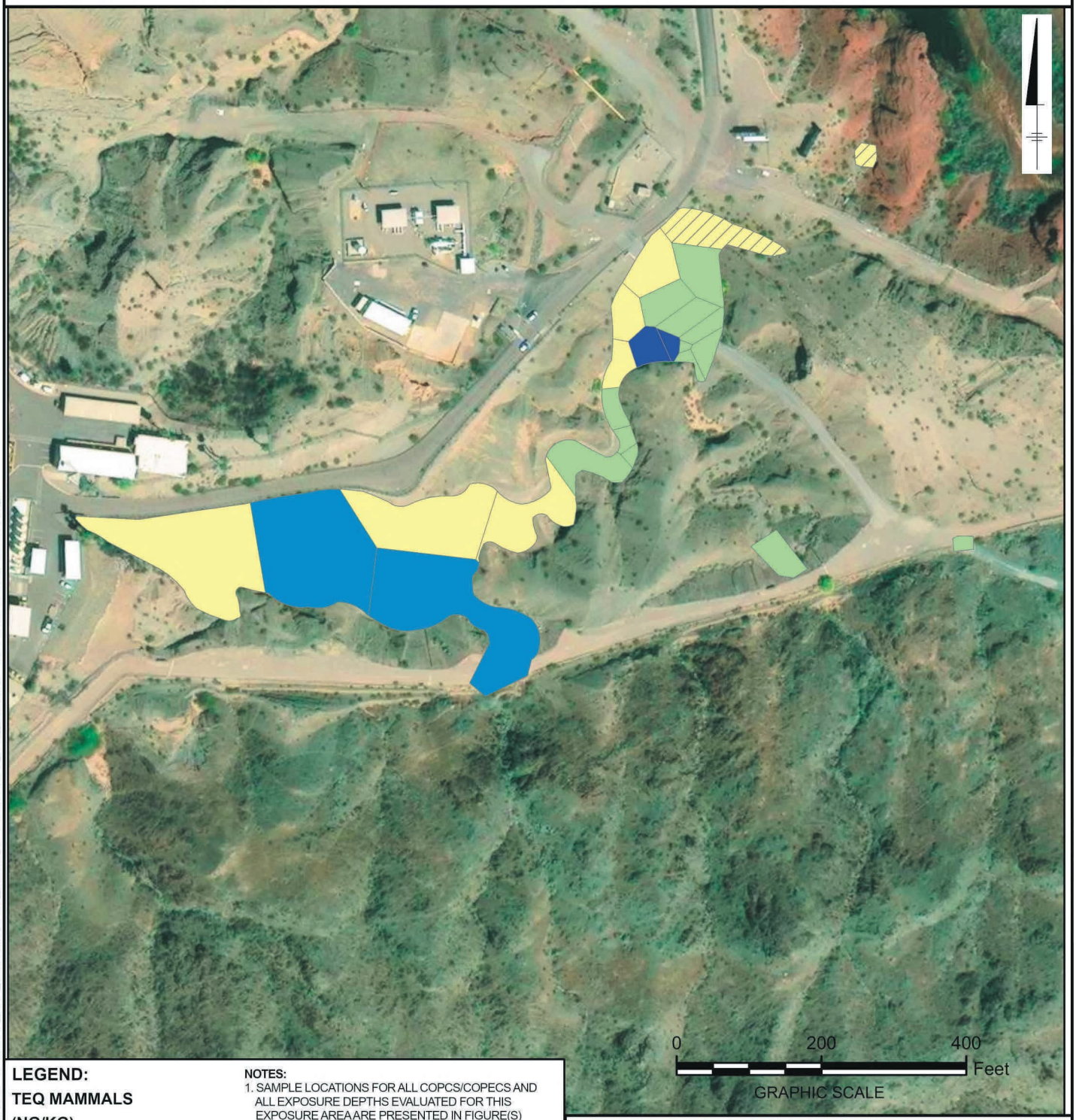
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.12

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
SCOURING 2 - 6 FEET BELOW GROUND SURFACE
TEQ MAMMALS



LEGEND:

TEQ MAMMALS (NG/KG)

- 0 - 5.58
- >5.58 - 100
- >100 - 190
- >190
- NOT DETECTED

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. NG/KG = NANOGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL
6. THIESSEN POLYGONS WITH A NON-DETECT CONCENTRATION ARE REPRESENTED BY THE REPORTING LIMIT.

TEQ Mammals	Units	Value	Basis
Background	ng/kg	5.58	Site-specific Soil Background Value
Human Health RBRG	ng/kg	100	Soil Removal Action Goal (Hiker at 10-6 excess risk)
Ecological RBRG	ng/kg	190	Soil Removal Action Goal (Desert shrew)
Human Health RBRG	ng/kg	1000	Hiker at 10-5 excess risk

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

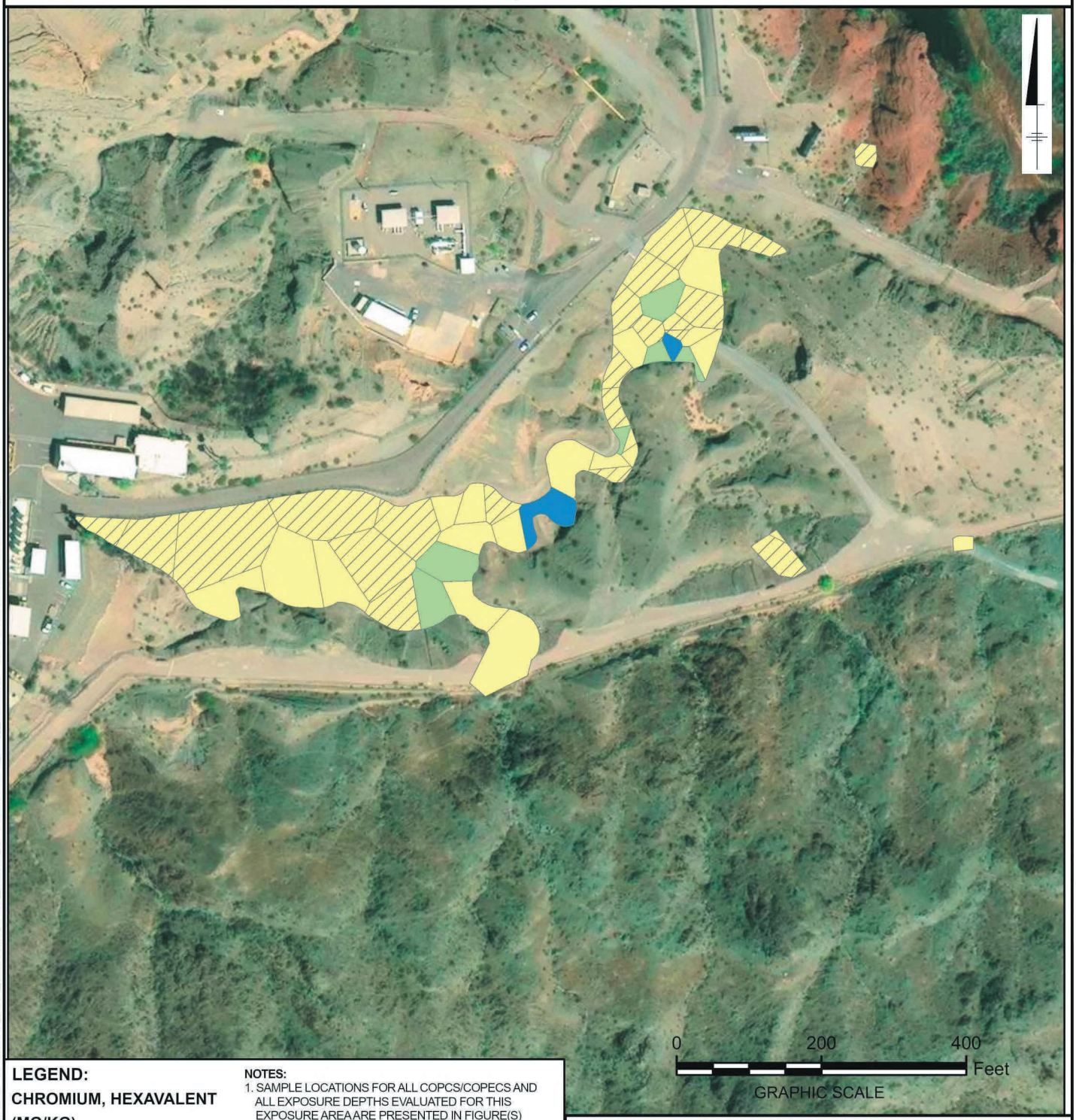
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.13

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
SCOURING 2 - 6 FEET BELOW GROUND SURFACE
CHROMIUM, HEXAVALENT



LEGEND:

CHROMIUM, HEXAVALENT (MG/KG)

- 0 - 0.83
- >0.83 - 3.1
- >3.1 - 31
- >31
- NOT DETECTED

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL
6. THIESSEN POLYGONS WITH A NON-DETECT CONCENTRATION ARE REPRESENTED BY THE REPORTING LIMIT.

Chromium, hexavalent	Units	Value	Basis
Background	mg/kg	0.83	Site-specific Soil Background Value
Human Health RBRG	mg/kg	3.1	Soil Removal Action Goal (Off-highway vehicle rider at 10-6 excess risk)
Human Health RBRG	mg/kg	31	Soil Removal Action Goal (Off-highway vehicle rider at 10-5 excess risk)

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

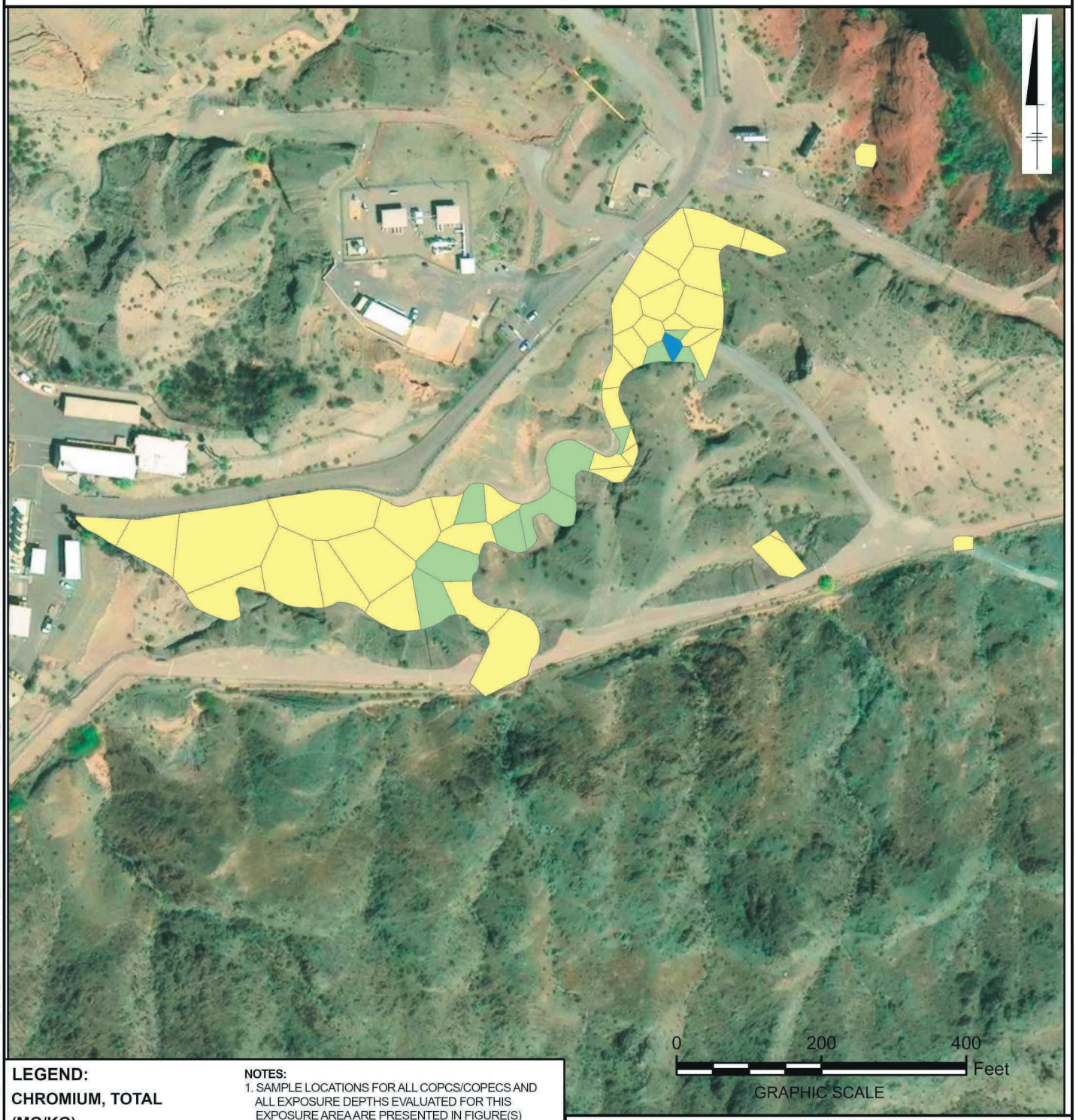
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.14

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
SCOURING 2 - 6 FEET BELOW GROUND SURFACE
CHROMIUM, TOTAL



LEGEND:

CHROMIUM, TOTAL (MG/KG)

- 0 - 39.8
- >39.8 - 145
- >145

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL

Chromium, total	Units	Value	Basis
Background	mg/kg	39.8	Site-specific Soil Background Value
Ecological RBRG	mg/kg	145	Soil Removal Action Goal (Desert shrew)

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

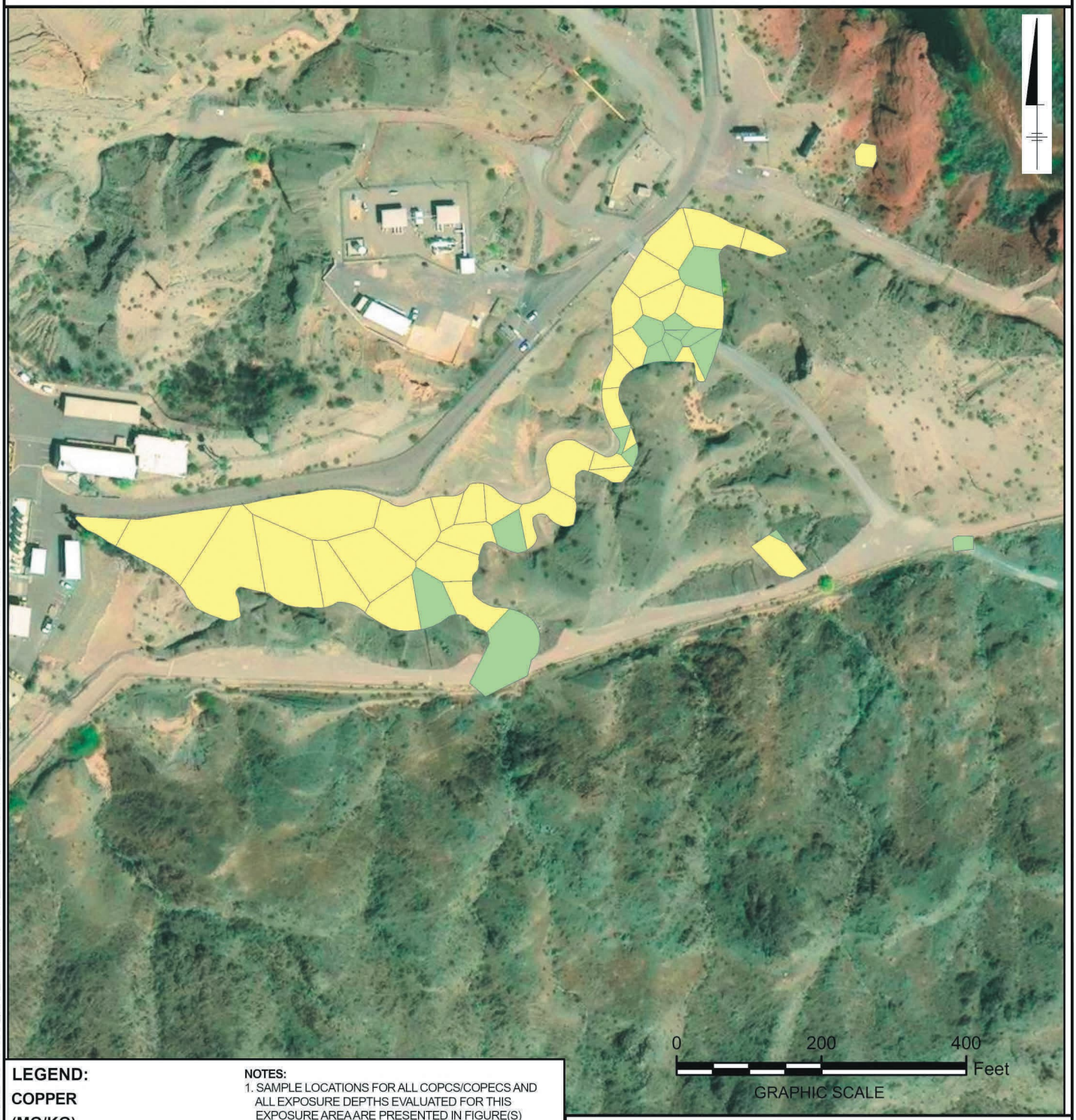
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.15

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
SCOURING 2 - 6 FEET BELOW GROUND SURFACE
COPPER



LEGEND:

COPPER

(MG/KG)

- 0 - 16.8
- >16.8 - 145
- >145

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL

Copper	Units	Value	Basis
Background	mg/kg	16.8	Site-specific Soil Background Value
Ecological RBRG	mg/kg	145	Soil Removal Action Goal (Desert shrew)

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

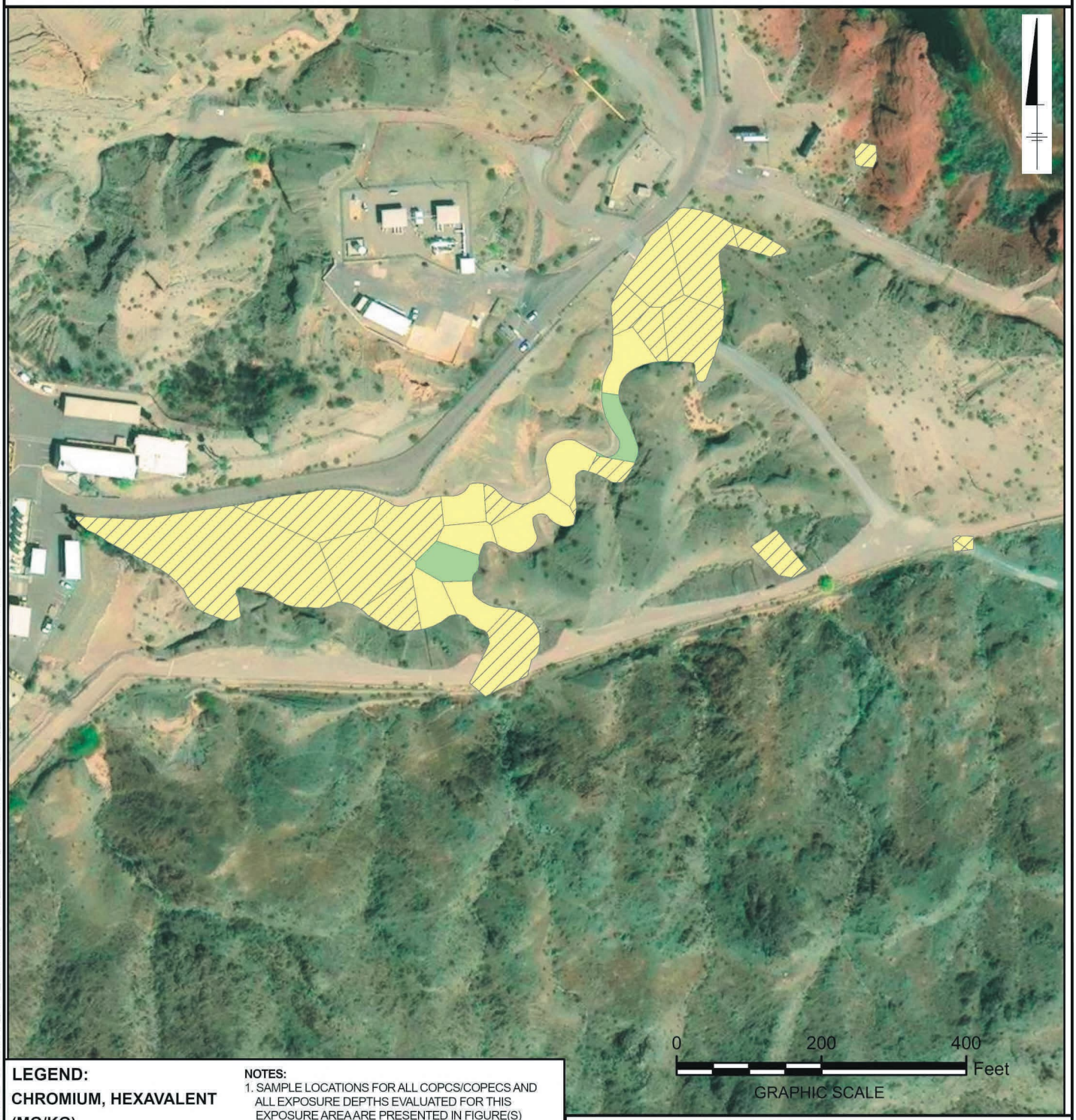
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.16

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
SCOURING 5 - 6 FEET BELOW GROUND SURFACE
CHROMIUM, HEXAVALENT



LEGEND:

CHROMIUM, HEXAVALENT (MG/KG)

- 0 - 0.83
- >0.83 - 3.1
- >3.1 - 31
- >31
- NOT DETECTED

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL
6. THIESSEN POLYGONS WITH A NON-DETECT CONCENTRATION ARE REPRESENTED BY THE REPORTING LIMIT.

Chromium, hexavalent	Units	Value	Basis
Background	mg/kg	0.83	Site-specific Soil Background Value
Human Health RBRG	mg/kg	3.1	Soil Removal Action Goal (Off-highway vehicle rider at 10-6 excess risk)
Human Health RBRG	mg/kg	31	Soil Removal Action Goal (Off-highway vehicle rider at 10-5 excess risk)

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

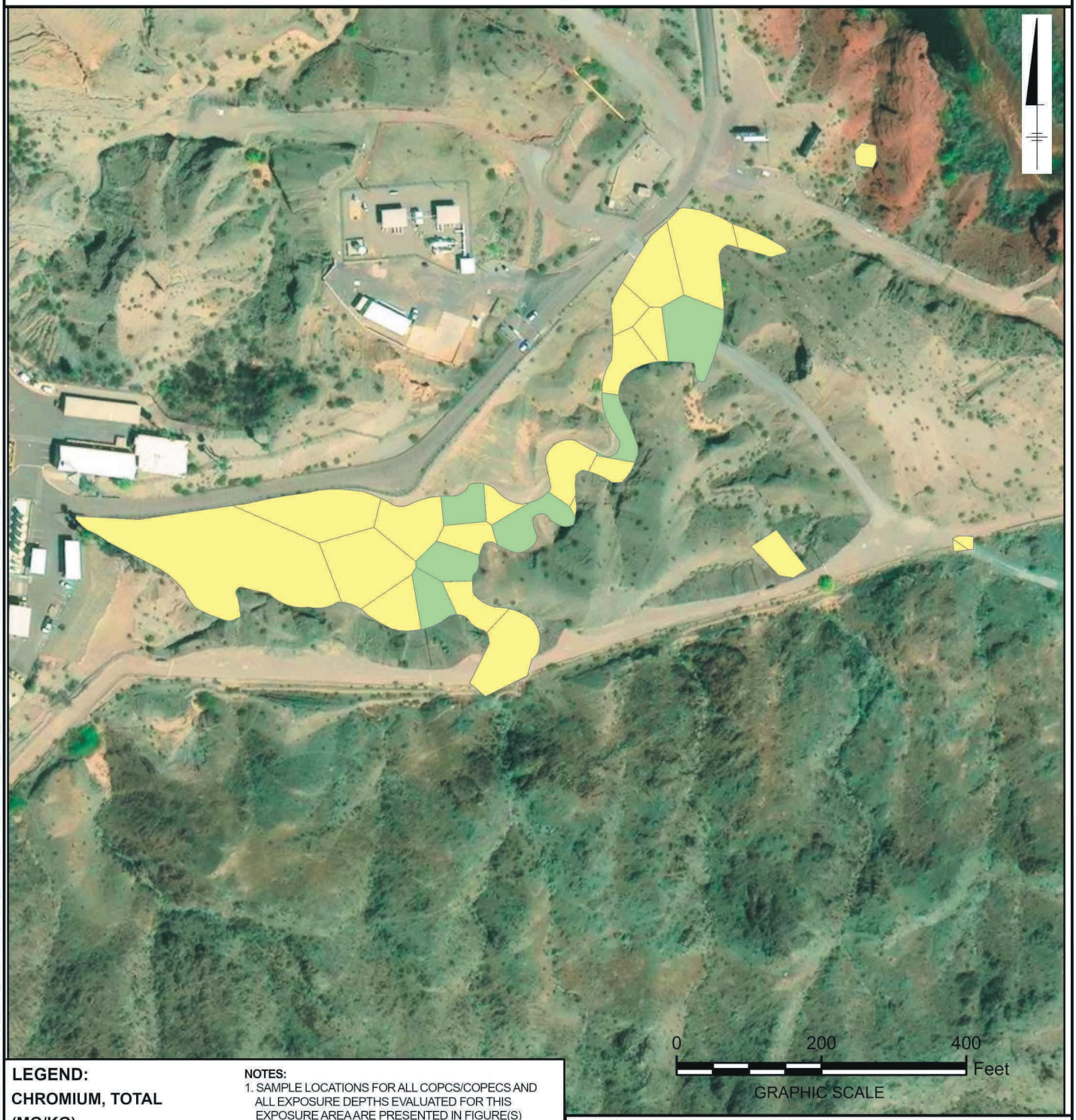
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.17

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
SCOURING 5 - 6 FEET BELOW GROUND SURFACE
CHROMIUM, TOTAL



LEGEND:

CHROMIUM, TOTAL (MG/KG)

- 0 - 39.8
- >39.8 - 145
- >145

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL

Chromium, total	Units	Value	Basis
Background	mg/kg	39.8	Site-specific Soil Background Value
Ecological RBRG	mg/kg	145	Soil Removal Action Goal (Desert shrew)

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

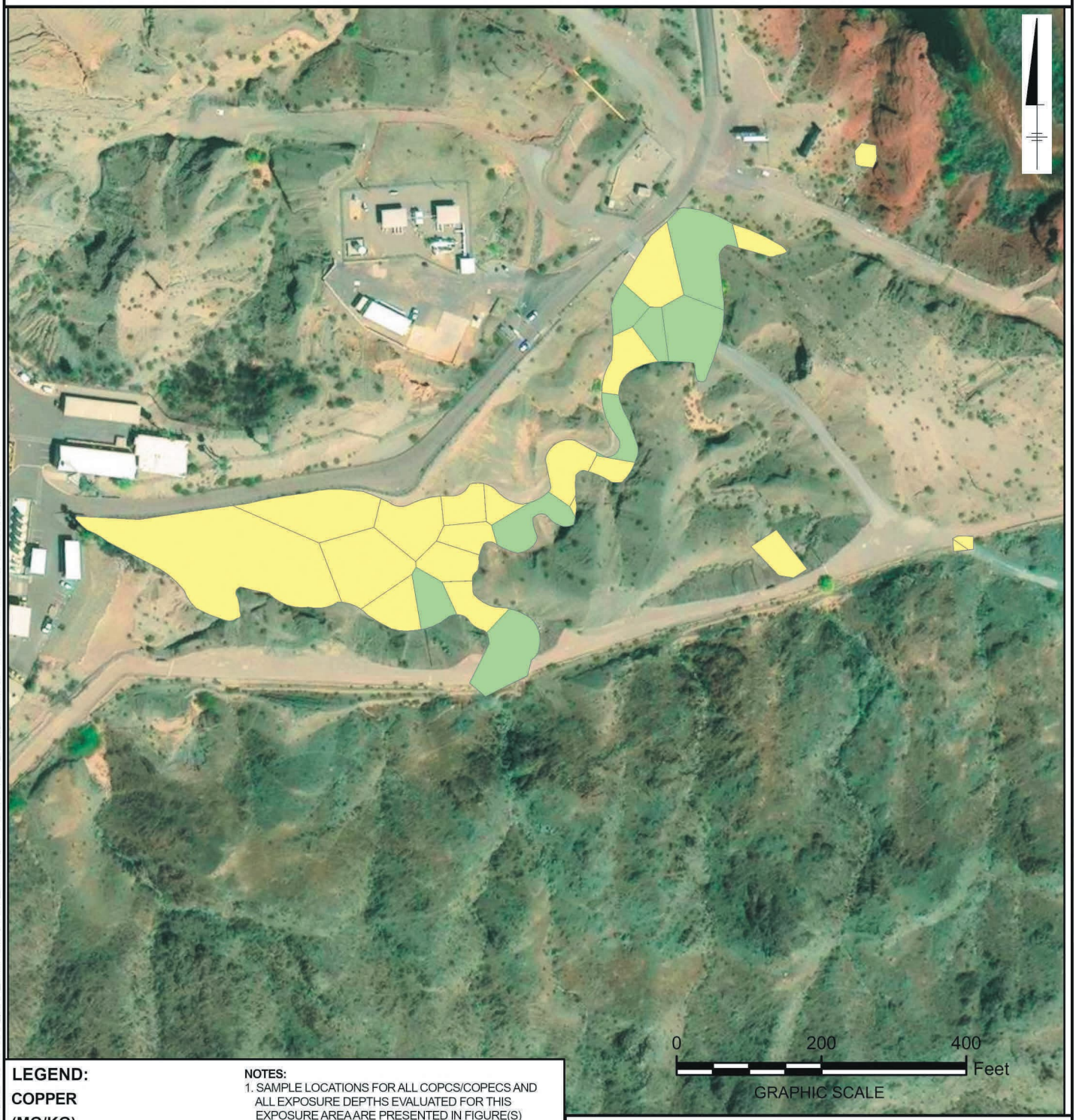
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.18

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
SCOURING 5 - 6 FEET BELOW GROUND SURFACE
COPPER



LEGEND:

COPPER

(MG/KG)

- 0 - 16.8
- >16.8 - 145
- >145

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL

Copper	Units	Value	Basis
Background	mg/kg	16.8	Site-specific Soil Background Value
Ecological RBRG	mg/kg	145	Soil Removal Action Goal (Desert shrew)

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

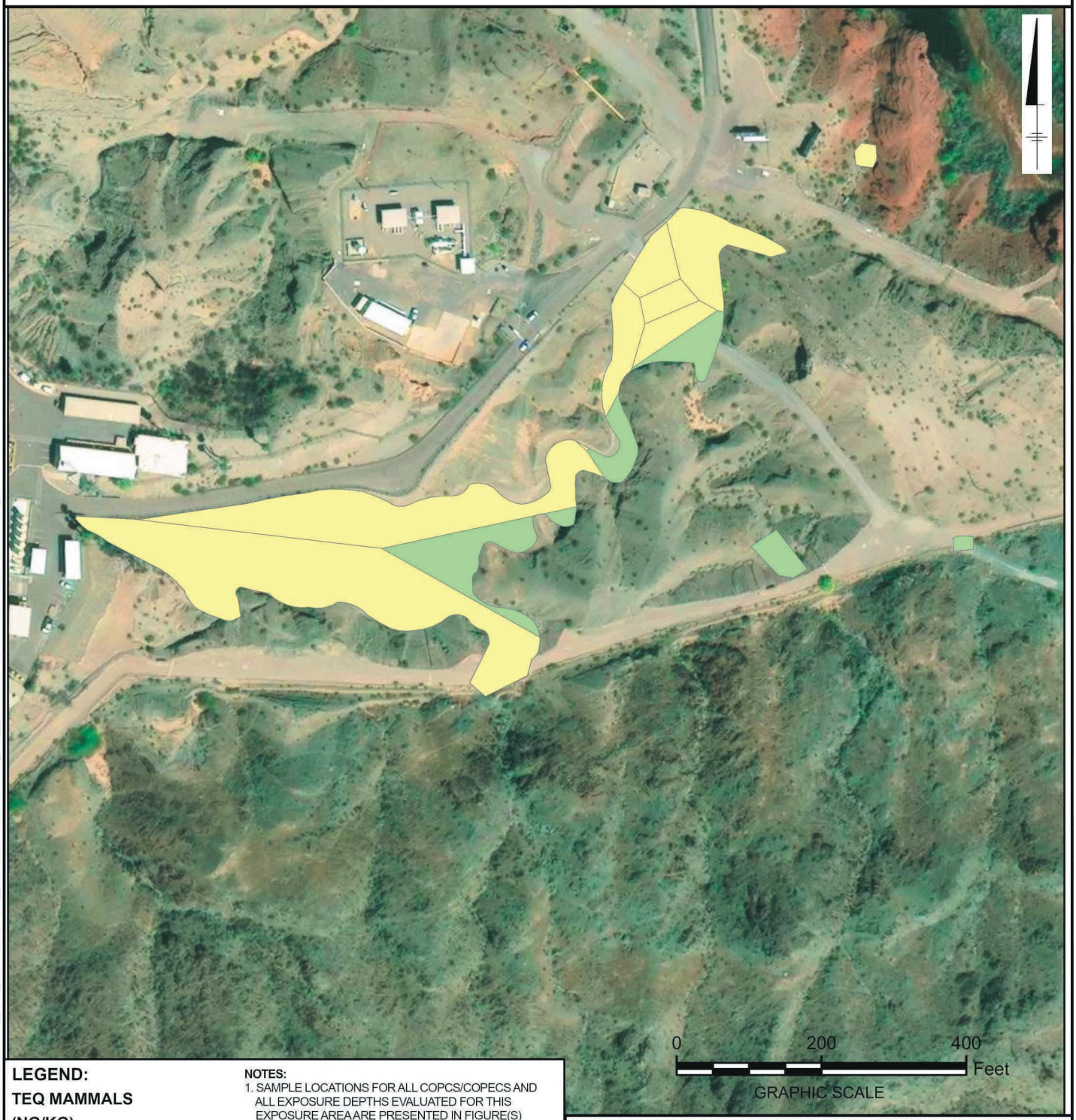
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.19

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
SCOURING 5 - 10 FEET BELOW GROUND SURFACE
TEQ MAMMALS



LEGEND:

TEQ MAMMALS (NG/KG)

- 0 - 5.58
- >5.58 - 100
- >100 - 190
- >190

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. NG/KG = NANOGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL

TEQ Mammals	Units	Value	Basis
Background	ng/kg	5.58	Site-specific Soil Background Value
Human Health RBRG	ng/kg	100	Soil Removal Action Goal (Hiker at 10-6 excess risk)
Ecological RBRG	ng/kg	190	Soil Removal Action Goal (Desert shrew)
Human Health RBRG	ng/kg	1000	Hiker at 10-5 excess risk

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

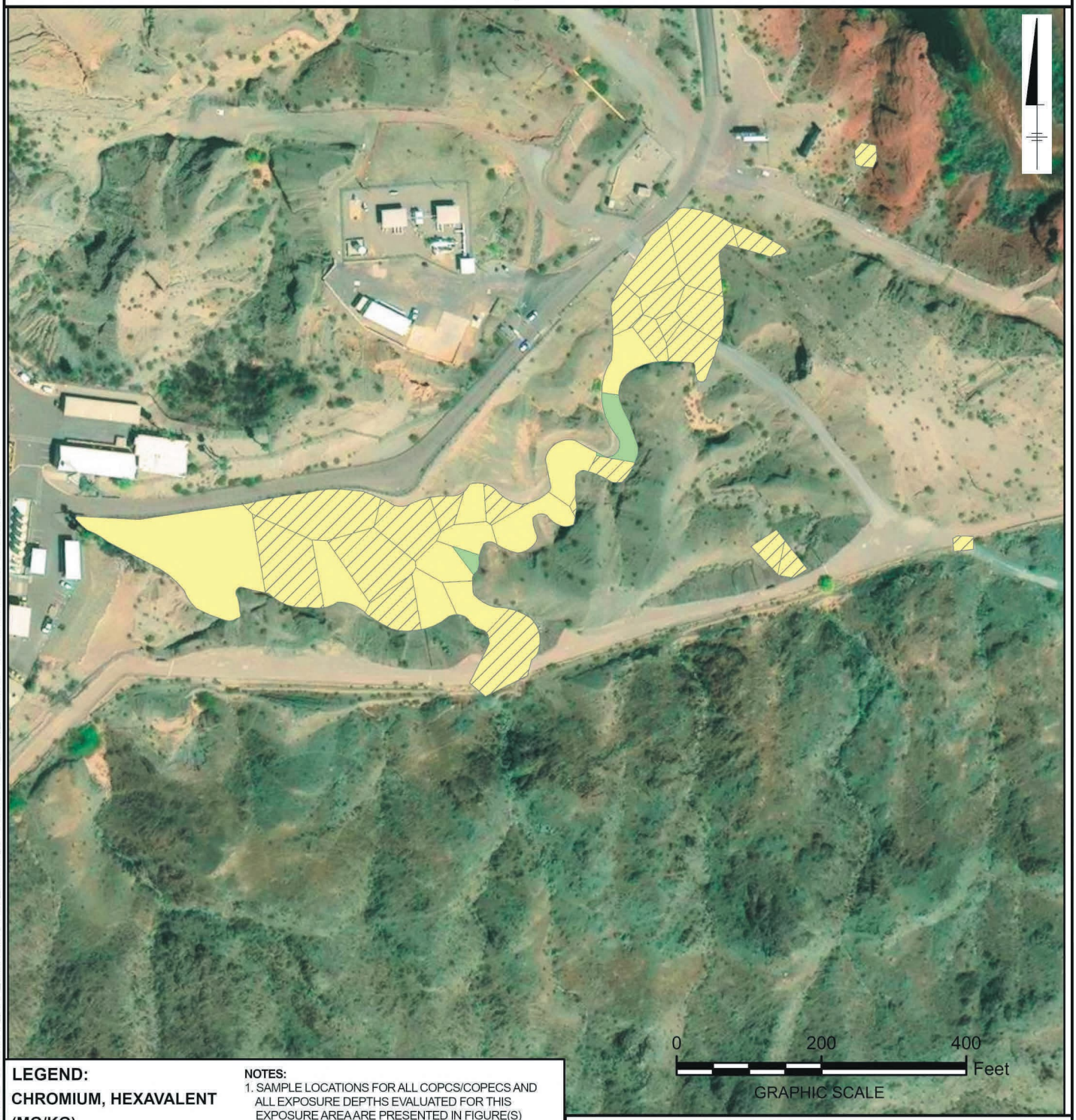
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.20

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
SCOURING 5 - 10 FEET BELOW GROUND SURFACE
CHROMIUM, HEXAVALENT



LEGEND:

CHROMIUM, HEXAVALENT (MG/KG)

- 0 - 0.83
- >0.83 - 3.1
- >3.1 - 31
- >31
- NOT DETECTED

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL
6. THIESSEN POLYGONS WITH A NON-DETECT CONCENTRATION ARE REPRESENTED BY THE REPORTING LIMIT.

Chromium, hexavalent	Units	Value	Basis
Background	mg/kg	0.83	Site-specific Soil Background Value
Human Health RBRG	mg/kg	3.1	Soil Removal Action Goal (Off-highway vehicle rider at 10-6 excess risk)
Human Health RBRG	mg/kg	31	Soil Removal Action Goal (Off-highway vehicle rider at 10-5 excess risk)

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

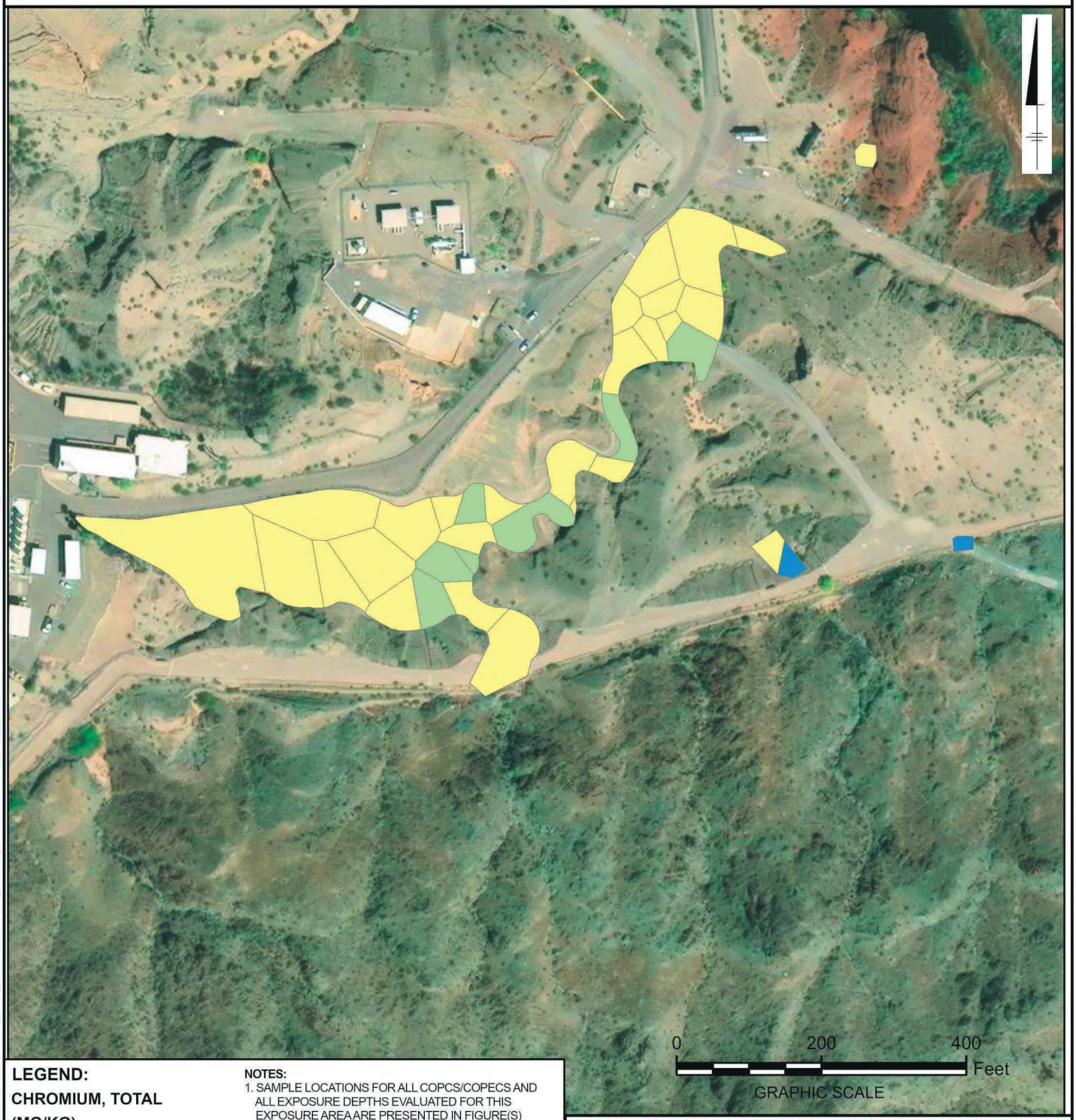
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.21

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
SCOURING 5 - 10 FEET BELOW GROUND SURFACE
CHROMIUM, TOTAL



LEGEND:

CHROMIUM, TOTAL (MG/KG)

- 0 - 39.8
- >39.8 - 145
- >145

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL

Chromium, total	Units	Value	Basis
Background	mg/kg	39.8	Site-specific Soil Background Value
Ecological RBRG	mg/kg	145	Soil Removal Action Goal (Desert shrew)

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

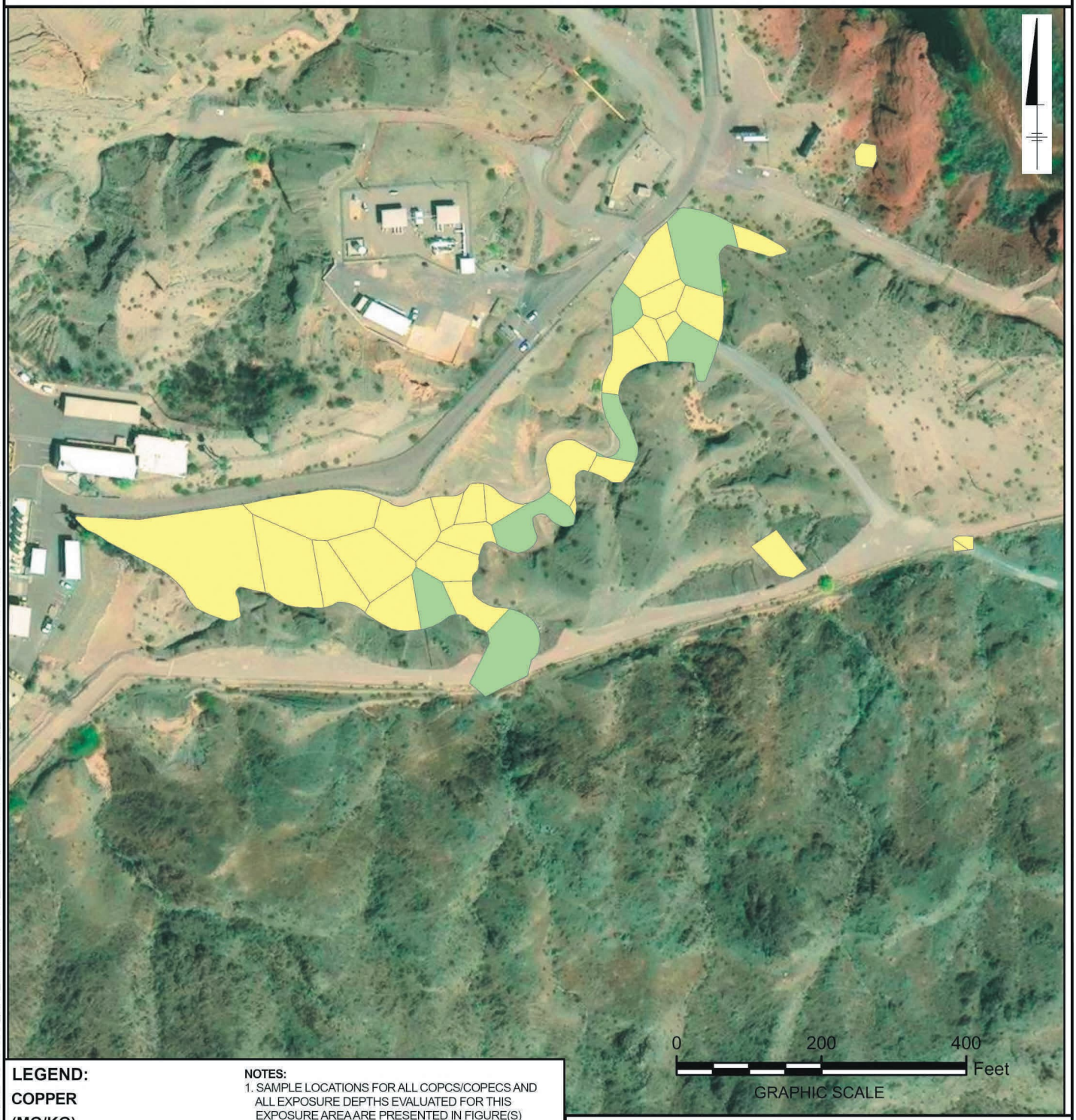
THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.22

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

AOC 10
SCOURING 5 - 10 FEET BELOW GROUND SURFACE
COPPER



LEGEND:

COPPER (MG/KG)

- 0 - 16.8
- >16.8 - 145
- >145

NOTES:

1. SAMPLE LOCATIONS FOR ALL COPCS/COPECS AND ALL EXPOSURE DEPTHS EVALUATED FOR THIS EXPOSURE AREA ARE PRESENTED IN FIGURE(S) AOC10-1.2.
2. DEPTH-WEIGHTED CONCENTRATIONS ARE DISPLAYED FOR EACH LOCATION.
3. SOIL REMOVAL ACTION GOALS AS SELECTED IN THE SOIL ENGINEERING EVALUATION/COST ANALYSIS (JACOBS 2021).
4. MG/KG = MILLIGRAMS PER KILOGRAM
5. RBRG = RISK-BASED REMEDIAL GOAL

Copper	Units	Value	Basis
Background	mg/kg	16.8	Site-specific Soil Background Value
Ecological RBRG	mg/kg	145	Soil Removal Action Goal (Desert shrew)

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

POST-NTCRA HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

THIESSEN POLYGONS FOR AREA WEIGHTING

ARCADIS

FIGURE
AOC10-A3.23

T:_ENV\PGE_Topock\ArcPro\PostNTCRA_EcoRisk\PostNTCRA_ERA_ThiessMapbook_2025.aprx ThiessenWeighting_2025Nov Saved: 12/11/2025 ksinsabaugh

ATTACHMENT B

Dose, Exposure Concentration, Risk, and Hazard Calculations for Human Health Receptors at AOC 10 Using Depth-Weighted EPCs and Area-Weighted EPCs

For additional help with the information provided in Attachment B, please contact Susan Shiu, Haley and Aldrich Associate Risk Assessor, at 1-510-879-4549.

Table AOC10-B1.1a
Baseline Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics								
Antimony	ND	NV	ND	ND	NC	NV	NC	NC
Arsenic	3.5E-11	NV	1.9E-08	1.9E-07	3.4E-11	NV	1.8E-08	1.8E-07
Chromium, Hexavalent	1.8E-11	NV	NA	1.6E-07	1.8E-11	NV	NA	1.7E-07
Chromium, total	NC	NV	NC	NC	NC	NV	NC	NC
Copper	NC	NV	NC	NC	NC	NV	NC	NC
Cyanide	NC	NV	NC	NC	NC	NV	NC	NC
Lead	na	na	na	na	na	na	na	na
Manganese	NC	NV	NC	NC	NC	NV	NC	NC
Mercury (inorganic)	ND	NC	ND	ND	NC	NC	NC	NC
Thallium	ND	NV	ND	ND	NC	NV	NC	NC
Zinc	NC	NV	NC	NC	NC	NV	NC	NC
Polycyclic Aromatic Hydrocarbons								
1-Methyl naphthalene	4.8E-13	2.2E-09	1.3E-09	2.7E-09	3.3E-13	2.2E-09	8.9E-10	1.8E-09
2-Methyl naphthalene	NC	NV	NC	NC	NC	NV	NC	NC
Anthracene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (a) anthracene	NA	6.8E-11	NA	NA	NA	6.8E-11	NA	NA
Benzo (a) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (b) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (ghi) perylene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (k) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Chrysene	NA	NV	NA	NA	NA	NV	NA	NA
Dibenzo (a,h) anthracene	NA	NV	NA	NA	NA	NV	NA	NA
Fluoranthene	NC	NV	NC	NC	NC	NV	NC	NC
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Naphthalene	1.1E-13	7.8E-10	2.9E-10	5.9E-10	7.7E-14	7.8E-10	2.0E-10	4.2E-10
Phenanthrene	NC	NV	NC	NC	NC	NV	NC	NC
Pyrene	NC	NV	NC	NC	NC	NV	NC	NC
B(a)P Equivalent	1.2E-12	NV	4.8E-09	1.0E-08	1.1E-12	NV	4.6E-09	1.0E-08
Polychlorinated Biphenyls								
Total PCBs	2.3E-12	2.6E-09	6.0E-09	1.2E-08	2.1E-12	2.6E-09	5.6E-09	1.2E-08
Total Petroleum Hydrocarbons								
TPH as diesel	NC	NC	NC	NC	NC	NC	NC	NC
TPH as motor oil	NC	NC	NC	NC	NC	NC	NC	NC

Table AOC10-B1.1a
Baseline Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Dioxins/Furans								
TEQ Human	9.5E-17	5.3E-13	5.0E-14	5.2E-13	1.5E-16	5.3E-13	8.2E-14	8.5E-13

Notes:
[a] EPCs for exposure to subsurface II soil (0 to 10 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
ND = Not detected.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.1b
Baseline Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics								
Antimony	ND	NV	ND	ND	NC	NV	NC	NC
Arsenic	7.1E-11	NV	3.8E-08	3.9E-07	6.7E-11	NV	3.6E-08	3.7E-07
Chromium, Hexavalent	3.6E-11	NV	NA	3.2E-07	3.7E-11	NV	NA	3.3E-07
Chromium, total	NC	NV	NC	NC	NC	NV	NC	NC
Copper	NC	NV	NC	NC	NC	NV	NC	NC
Cyanide	NC	NV	NC	NC	NC	NV	NC	NC
Lead	na	na	na	na	na	na	na	na
Manganese	NC	NV	NC	NC	NC	NV	NC	NC
Mercury (inorganic)	ND	NC	ND	ND	NC	NC	NC	NC
Thallium	ND	NV	ND	ND	NC	NV	NC	NC
Zinc	NC	NV	NC	NC	NC	NV	NC	NC
Polycyclic Aromatic Hydrocarbons								
1-Methyl naphthalene	9.7E-13	4.3E-09	2.6E-09	5.3E-09	6.7E-13	4.3E-09	1.8E-09	3.7E-09
2-Methyl naphthalene	NC	NV	NC	NC	NC	NV	NC	NC
Anthracene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (a) anthracene	NA	1.4E-10	NA	NA	NA	1.4E-10	NA	NA
Benzo (a) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (b) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (ghi) perylene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (k) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Chrysene	NA	NV	NA	NA	NA	NV	NA	NA
Dibenzo (a,h) anthracene	NA	NV	NA	NA	NA	NV	NA	NA
Fluoranthene	NC	NV	NC	NC	NC	NV	NC	NC
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Naphthalene	2.2E-13	1.6E-09	5.7E-10	1.2E-09	1.5E-13	1.6E-09	4.1E-10	8.5E-10
Phenanthrene	NC	NV	NC	NC	NC	NV	NC	NC
Pyrene	NC	NV	NC	NC	NC	NV	NC	NC
B(a)P Equivalent	2.3E-12	NV	9.5E-09	2.1E-08	2.2E-12	NV	9.2E-09	2.0E-08
Polychlorinated Biphenyls								
Total PCBs	4.5E-12	5.2E-09	1.2E-08	2.5E-08	4.2E-12	5.2E-09	1.1E-08	2.3E-08
Total Petroleum Hydrocarbons								
TPH as diesel	NC	NC	NC	NC	NC	NC	NC	NC
TPH as motor oil	NC	NC	NC	NC	NC	NC	NC	NC

Table AOC10-B1.1b
Baseline Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Dioxins/Furans								
TEQ Human	1.9E-16	1.1E-12	1.0E-13	1.0E-12	3.1E-16	1.1E-12	1.6E-13	1.7E-12

Notes:
[a] EPCs for exposure to subsurface ll soil (0 to 10 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
ND = Not detected.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.1c
Baseline Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment
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C O P C	Age-Adjusted Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics								
Antimony	ND	NV	ND	ND	NC	NV	NC	NC
Arsenic	7.1E-09	NV	1.8E-07	5.0E-08	6.7E-09	NV	1.7E-07	4.7E-08
Chromium, Hexavalent	2.3E-09	NV	NA	1.9E-08	2.4E-09	NV	NA	1.9E-08
Chromium, total	NC	NV	NC	NC	NC	NV	NC	NC
Copper	NC	NV	NC	NC	NC	NV	NC	NC
Cyanide	NC	NV	NC	NC	NC	NV	NC	NC
Lead	na	na	na	na	na	na	na	na
Manganese	NC	NV	NC	NC	NC	NV	NC	NC
Mercury (inorganic)	ND	NC	ND	ND	NC	NC	NC	NC
Thallium	ND	NV	ND	ND	NC	NV	NC	NC
Zinc	NC	NV	NC	NC	NC	NV	NC	NC
Polycyclic Aromatic Hydrocarbons								
1-Methyl naphthalene	9.7E-11	2.7E-10	1.2E-08	6.8E-10	6.7E-11	2.7E-10	8.5E-09	4.7E-10
2-Methyl naphthalene	NC	NV	NC	NC	NC	NV	NC	NC
Anthracene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (a) anthracene	NA	5.4E-12	NA	NA	NA	5.4E-12	NA	NA
Benzo (a) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (b) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (ghi) perylene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (k) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Chrysene	NA	NV	NA	NA	NA	NV	NA	NA
Dibenzo (a,h) anthracene	NA	NV	NA	NA	NA	NV	NA	NA
Fluoranthene	NC	NV	NC	NC	NC	NV	NC	NC
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Naphthalene	2.2E-11	9.7E-11	2.8E-09	1.5E-10	1.5E-11	9.7E-11	2.0E-09	1.1E-10
Phenanthrene	NC	NV	NC	NC	NC	NV	NC	NC
Pyrene	NC	NV	NC	NC	NC	NV	NC	NC
B(a)P Equivalent	1.5E-10	NV	1.9E-08	1.2E-09	1.4E-10	NV	1.9E-08	1.2E-09
Polychlorinated Biphenyls								
Total PCBs	4.6E-10	3.3E-10	5.8E-08	3.2E-09	4.2E-10	3.3E-10	5.4E-08	2.9E-09
Total Petroleum Hydrocarbons								
TPH as diesel	NC	NC	NC	NC	NC	NC	NC	NC
TPH as motor oil	NC	NC	NC	NC	NC	NC	NC	NC

Table AOC10-B1.1c
Baseline Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment
PG&E Topock Compressor Station
Needles, California

C O P C	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Dioxins/Furans								
TEQ Human	1.9E-14	6.6E-14	4.9E-13	1.3E-13	3.1E-14	6.6E-14	7.9E-13	2.2E-13

Notes:
[a] EPCs for exposure to subsurface II soil (0 to 10 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
ND = Not detected.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.2a
Baseline Scenario Exposure Concentration and Dose Calculations for Noncarcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Child Camper (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Camper (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Camper (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Camper (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics																
Antimony	ND	NV	ND	ND	ND	NV	ND	ND	5.6E-11	NV	3.0E-08	1.0E-06	5.6E-11	NV	4.0E-09	9.6E-08
Arsenic	9.6E-11	NV	1.5E-07	1.7E-06	9.6E-11	NV	2.1E-08	1.6E-07	9.0E-11	NV	1.4E-07	1.6E-06	9.0E-11	NV	1.9E-08	1.5E-07
Chromium, Hexavalent	1.7E-11	NV	NA	3.2E-07	1.7E-11	NV	NA	3.0E-08	1.8E-11	NV	NA	3.2E-07	1.8E-11	NV	NA	3.0E-08
Chromium, total	8.1E-10	NV	4.2E-07	1.5E-05	8.1E-10	NV	5.8E-08	1.4E-06	7.7E-10	NV	4.1E-07	1.4E-05	7.7E-10	NV	5.5E-08	1.3E-06
Copper	3.2E-10	NV	1.7E-07	5.7E-06	3.2E-10	NV	2.3E-08	5.4E-07	3.0E-10	NV	1.6E-07	5.5E-06	3.0E-10	NV	2.2E-08	5.2E-07
Cyanide	3.5E-12	NV	1.9E-09	6.4E-08	3.5E-12	NV	2.5E-10	6.0E-09	3.5E-12	NV	1.9E-09	6.4E-08	3.5E-12	NV	2.5E-10	6.0E-09
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Manganese	1.0E-08	NV	5.3E-06	1.8E-04	1.0E-08	NV	7.2E-07	1.7E-05	1.0E-08	NV	5.3E-06	1.8E-04	1.0E-08	NV	7.2E-07	1.7E-05
Mercury (inorganic)	ND	NV	ND	ND	ND	NV	ND	ND	5.3E-12	NV	2.8E-09	9.6E-08	5.3E-12	NV	3.8E-10	9.0E-09
Thallium	ND	NV	ND	ND	ND	NV	ND	ND	9.8E-11	NV	5.2E-08	1.8E-06	9.8E-11	NV	7.1E-09	1.7E-07
Zinc	1.4E-09	NV	7.3E-07	2.5E-05	1.4E-09	NV	1.0E-07	2.4E-06	1.7E-09	NV	8.8E-07	3.0E-05	1.7E-09	NV	1.2E-07	2.8E-06
Polycyclic Aromatic Hydrocarbons																
1-Methyl naphthalene	1.3E-12	5.8E-09	1.0E-08	2.4E-08	1.3E-12	5.8E-09	1.4E-09	2.2E-09	9.0E-13	5.8E-09	7.1E-09	1.6E-08	9.0E-13	5.8E-09	9.7E-10	1.5E-09
2-Methyl naphthalene	1.5E-12	6.3E-09	1.2E-08	2.7E-08	1.5E-12	6.3E-09	1.6E-09	2.5E-09	1.0E-12	6.3E-09	8.0E-09	1.8E-08	1.0E-12	6.3E-09	1.1E-09	1.7E-09
Anthracene	1.3E-13	9.8E-11	1.0E-09	2.3E-09	1.3E-13	9.8E-11	1.4E-10	2.2E-10	5.1E-14	9.8E-11	4.0E-10	9.3E-10	5.1E-14	9.8E-11	5.5E-11	8.7E-11
Benzo (a) anthracene	5.2E-13	6.6E-11	4.1E-09	9.5E-09	5.2E-13	6.6E-11	5.6E-10	8.9E-10	5.4E-13	6.6E-11	4.2E-09	9.7E-09	5.4E-13	6.6E-11	5.8E-10	9.1E-10
Benzo (a) pyrene	7.5E-13	NV	5.9E-09	1.4E-08	7.5E-13	NV	8.1E-10	1.3E-09	7.2E-13	NV	5.7E-09	1.3E-08	7.2E-13	NV	7.7E-10	1.2E-09
Benzo (b) fluoranthene	1.2E-12	NV	9.1E-09	2.1E-08	1.2E-12	NV	1.2E-09	2.0E-09	1.0E-12	NV	8.0E-09	1.8E-08	1.0E-12	NV	1.1E-09	1.7E-09
Benzo (ghi) perylene	5.8E-13	NV	4.6E-09	1.0E-08	5.8E-13	NV	6.2E-10	9.8E-10	5.0E-13	NV	3.9E-09	9.0E-09	5.0E-13	NV	5.4E-10	8.5E-10
Benzo (k) fluoranthene	6.2E-13	NV	4.9E-09	1.1E-08	6.2E-13	NV	6.7E-10	1.1E-09	6.5E-13	NV	5.1E-09	1.2E-08	6.5E-13	NV	7.0E-10	1.1E-09
Chrysene	9.2E-13	NV	7.3E-09	1.7E-08	9.2E-13	NV	9.9E-10	1.6E-09	9.2E-13	NV	7.3E-09	1.7E-08	9.2E-13	NV	9.9E-10	1.6E-09
Dibenzo (a,h) anthracene	1.4E-13	NV	1.1E-09	2.6E-09	1.4E-13	NV	1.5E-10	2.4E-10	1.4E-13	NV	1.1E-09	2.6E-09	1.4E-13	NV	1.5E-10	2.4E-10
Fluoranthene	1.4E-12	NV	1.1E-08	2.6E-08	1.4E-12	NV	1.6E-09	2.5E-09	1.4E-12	NV	1.1E-08	2.5E-08	1.4E-12	NV	1.5E-09	2.4E-09
Indeno (1,2,3-cd) pyrene	4.9E-13	NV	3.9E-09	8.9E-09	4.9E-13	NV	5.3E-10	8.4E-10	5.0E-13	NV	3.9E-09	9.1E-09	5.0E-13	NV	5.4E-10	8.5E-10
Naphthalene	2.9E-13	2.1E-09	2.3E-09	5.3E-09	2.9E-13	2.1E-09	3.1E-10	4.9E-10	2.1E-13	2.1E-09	1.6E-09	3.8E-09	2.1E-13	2.1E-09	2.2E-10	3.5E-10
Phenanthrene	5.1E-13	NV	4.1E-09	9.3E-09	5.1E-13	NV	5.5E-10	8.7E-10	4.9E-13	NV	3.9E-09	8.9E-09	4.9E-13	NV	5.3E-10	8.3E-10
Pyrene	1.3E-12	3.5E-10	1.0E-08	2.4E-08	1.3E-12	3.5E-10	1.4E-09	2.2E-09	1.3E-12	3.5E-10	1.0E-08	2.3E-08	1.3E-12	3.5E-10	1.4E-09	2.2E-09
B(a)P Equivalent	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA
Polychlorinated Biphenyls																
Total PCBs	6.1E-12	7.0E-09	4.8E-08	1.1E-07	6.1E-12	7.0E-09	6.6E-09	1.0E-08	5.7E-12	7.0E-09	4.5E-08	1.0E-07	5.7E-12	7.0E-09	6.1E-09	9.6E-09
Total Petroleum Hydrocarbons																
TPH as diesel	2.1E-10	8.9E-05	1.1E-06	3.8E-06	2.1E-10	8.9E-05	1.5E-07	3.6E-07	3.3E-10	8.9E-05	1.7E-06	6.0E-06	3.3E-10	8.9E-05	2.4E-07	5.6E-07
TPH as motor oil	4.7E-10	NV	2.5E-06	8.5E-06	4.7E-10	NV	3.4E-07	8.0E-07	5.2E-10	NV	2.7E-06	9.5E-06	5.2E-10	NV	3.7E-07	8.9E-07

Table AOC10-B1.2a
Baseline Scenario Exposure Concentration and Dose Calculations for Noncarcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Camper

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PG&E Topock Compressor Station
Needles, California

C O P C	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Child Camper (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Camper (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Camper (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Camper (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Dioxins/Furans																
TEQ Human	2.6E-16	1.4E-12	4.0E-13	4.6E-12	2.6E-16	1.4E-12	5.5E-14	4.4E-13	4.2E-16	1.4E-12	6.6E-13	7.5E-12	4.2E-16	1.4E-12	9.0E-14	7.1E-13

Notes:
[a] EPCs for exposure to subsurface II soil (0 to 10 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
ND = Not detected.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.2b
Baseline Scenario Exposure Concentration and Dose Calculations for Noncarcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics																
Antimony	ND	NV	ND	ND	ND	NV	ND	ND	1.1E-10	NV	5.9E-08	2.0E-06	1.1E-10	NV	8.1E-09	1.9E-07
Arsenic	1.9E-10	NV	3.0E-07	3.5E-06	1.9E-10	NV	4.1E-08	3.2E-07	1.8E-10	NV	2.8E-07	3.3E-06	1.8E-10	NV	3.9E-08	3.1E-07
Chromium, Hexavalent	3.5E-11	NV	NA	6.3E-07	3.5E-11	NV	NA	5.9E-08	3.6E-11	NV	NA	6.5E-07	3.6E-11	NV	NA	6.1E-08
Chromium, total	1.6E-09	NV	8.5E-07	2.9E-05	1.6E-09	NV	1.2E-07	2.7E-06	1.5E-09	NV	8.1E-07	2.8E-05	1.5E-09	NV	1.1E-07	2.6E-06
Copper	6.3E-10	NV	3.3E-07	1.1E-05	6.3E-10	NV	4.5E-08	1.1E-06	6.1E-10	NV	3.2E-07	1.1E-05	6.1E-10	NV	4.4E-08	1.0E-06
Cyanide	7.1E-12	NV	3.7E-09	1.3E-07	7.1E-12	NV	5.1E-10	1.2E-08	7.1E-12	NV	3.7E-09	1.3E-07	7.1E-12	NV	5.1E-10	1.2E-08
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Manganese	2.0E-08	NV	1.1E-05	3.7E-04	2.0E-08	NV	1.4E-06	3.4E-05	2.0E-08	NV	1.1E-05	3.7E-04	2.0E-08	NV	1.4E-06	3.4E-05
Mercury (inorganic)	ND	NV	ND	ND	ND	NV	ND	ND	1.1E-11	NV	5.6E-09	1.9E-07	1.1E-11	NV	7.6E-10	1.8E-08
Thallium	ND	NV	ND	ND	ND	NV	ND	ND	2.0E-10	NV	1.0E-07	3.6E-06	2.0E-10	NV	1.4E-08	3.3E-07
Zinc	2.8E-09	NV	1.5E-06	5.1E-05	2.8E-09	NV	2.0E-07	4.7E-06	3.4E-09	NV	1.8E-06	6.1E-05	3.4E-09	NV	2.4E-07	5.7E-06
Polycyclic Aromatic Hydrocarbons																
1-Methyl naphthalene	2.6E-12	1.2E-08	2.1E-08	4.7E-08	2.6E-12	1.2E-08	2.8E-09	4.4E-09	1.8E-12	1.2E-08	1.4E-08	3.3E-08	1.8E-12	1.2E-08	1.9E-09	3.1E-09
2-Methyl naphthalene	2.9E-12	1.3E-08	2.3E-08	5.3E-08	2.9E-12	1.3E-08	3.2E-09	5.0E-09	2.0E-12	1.3E-08	1.6E-08	3.7E-08	2.0E-12	1.3E-08	2.2E-09	3.4E-09
Anthracene	2.5E-13	2.0E-10	2.0E-09	4.6E-09	2.5E-13	2.0E-10	2.7E-10	4.3E-10	1.0E-13	2.0E-10	8.1E-10	1.9E-09	1.0E-13	2.0E-10	1.1E-10	1.7E-10
Benzo (a) anthracene	1.0E-12	1.3E-10	8.3E-09	1.9E-08	1.0E-12	1.3E-10	1.1E-09	1.8E-09	1.1E-12	1.3E-10	8.5E-09	1.9E-08	1.1E-12	1.3E-10	1.2E-09	1.8E-09
Benzo (a) pyrene	1.5E-12	NV	1.2E-08	2.7E-08	1.5E-12	NV	1.6E-09	2.5E-09	1.4E-12	NV	1.1E-08	2.6E-08	1.4E-12	NV	1.5E-09	2.4E-09
Benzo (b) fluoranthene	2.3E-12	NV	1.8E-08	4.2E-08	2.3E-12	NV	2.5E-09	3.9E-09	2.0E-12	NV	1.6E-08	3.7E-08	2.0E-12	NV	2.2E-09	3.5E-09
Benzo (ghi) perylene	1.2E-12	NV	9.1E-09	2.1E-08	1.2E-12	NV	1.2E-09	2.0E-09	1.0E-12	NV	7.9E-09	1.8E-08	1.0E-12	NV	1.1E-09	1.7E-09
Benzo (k) fluoranthene	1.2E-12	NV	9.8E-09	2.3E-08	1.2E-12	NV	1.3E-09	2.1E-09	1.3E-12	NV	1.0E-08	2.4E-08	1.3E-12	NV	1.4E-09	2.2E-09
Chrysene	1.8E-12	NV	1.5E-08	3.3E-08	1.8E-12	NV	2.0E-09	3.1E-09	1.8E-12	NV	1.5E-08	3.3E-08	1.8E-12	NV	2.0E-09	3.1E-09
Dibenzo (a,h) anthracene	2.8E-13	NV	2.2E-09	5.1E-09	2.8E-13	NV	3.1E-10	4.8E-10	2.8E-13	NV	2.2E-09	5.2E-09	2.8E-13	NV	3.1E-10	4.8E-10
Fluoranthene	2.9E-12	NV	2.3E-08	5.2E-08	2.9E-12	NV	3.1E-09	4.9E-09	2.8E-12	NV	2.2E-08	5.0E-08	2.8E-12	NV	3.0E-09	4.7E-09
Indeno (1,2,3-cd) pyrene	9.9E-13	NV	7.8E-09	1.8E-08	9.9E-13	NV	1.1E-09	1.7E-09	1.0E-12	NV	7.9E-09	1.8E-08	1.0E-12	NV	1.1E-09	1.7E-09
Naphthalene	5.8E-13	4.2E-09	4.6E-09	1.1E-08	5.8E-13	4.2E-09	6.2E-10	9.9E-10	4.2E-13	4.2E-09	3.3E-09	7.5E-09	4.2E-13	4.2E-09	4.5E-10	7.1E-10
Phenanthrene	1.0E-12	NV	8.1E-09	1.9E-08	1.0E-12	NV	1.1E-09	1.7E-09	9.8E-13	NV	7.7E-09	1.8E-08	9.8E-13	NV	1.1E-09	1.7E-09
Pyrene	2.6E-12	7.1E-10	2.1E-08	4.8E-08	2.6E-12	7.1E-10	2.8E-09	4.5E-09	2.6E-12	7.1E-10	2.0E-08	4.6E-08	2.6E-12	7.1E-10	2.8E-09	4.4E-09
B(a)P Equivalent	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA
Polychlorinated Biphenyls																
Total PCBs	1.2E-11	1.4E-08	9.6E-08	2.2E-07	1.2E-11	1.4E-08	1.3E-08	2.1E-08	1.1E-11	1.4E-08	8.9E-08	2.1E-07	1.1E-11	1.4E-08	1.2E-08	1.9E-08
Total Petroleum Hydrocarbons																
TPH as diesel	4.2E-10	1.8E-04	2.2E-06	7.6E-06	4.2E-10	1.8E-04	3.0E-07	7.1E-07	6.6E-10	1.8E-04	3.5E-06	1.2E-05	6.6E-10	1.8E-04	4.8E-07	1.1E-06
TPH as motor oil	9.4E-10	NV	4.9E-06	1.7E-05	9.4E-10	NV	6.7E-07	1.6E-06	1.0E-09	NV	5.5E-06	1.9E-05	1.0E-09	NV	7.5E-07	1.8E-06

Table AOC10-B1.2b
Baseline Scenario Exposure Concentration and Dose Calculations for Noncarcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Dioxins/Furans																
TEQ Human	5.1E-16	2.8E-12	8.1E-13	9.3E-12	5.1E-16	2.8E-12	1.1E-13	8.7E-13	8.3E-16	2.8E-12	1.3E-12	1.5E-11	8.3E-16	2.8E-12	1.8E-13	1.4E-12

Notes:
[a] EPCs for exposure to subsurface II soil (0 to 10 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
ND = Not detected.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.2c
Baseline Scenario Exposure Concentration and Dose Calculations for Noncarcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs:
Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics																
Antimony	ND	NV	ND	ND	ND	NV	ND	ND	1.1E-08	NV	1.1E-07	1.4E-07	1.1E-08	NV	9.3E-08	5.9E-08
Arsenic	1.9E-08	NV	5.5E-07	2.4E-07	1.9E-08	NV	4.7E-07	1.0E-07	1.8E-08	NV	5.2E-07	2.3E-07	1.8E-08	NV	4.4E-07	9.5E-08
Chromium, Hexavalent	3.5E-09	NV	NA	4.4E-08	3.5E-09	NV	NA	1.8E-08	3.6E-09	NV	NA	4.6E-08	3.6E-09	NV	NA	1.9E-08
Chromium, total	1.6E-07	NV	1.5E-06	2.1E-06	1.6E-07	NV	1.3E-06	8.5E-07	1.5E-07	NV	1.5E-06	2.0E-06	1.5E-07	NV	1.3E-06	8.1E-07
Copper	6.3E-08	NV	6.0E-07	8.1E-07	6.3E-08	NV	5.2E-07	3.3E-07	6.1E-08	NV	5.8E-07	7.8E-07	6.1E-08	NV	5.0E-07	3.2E-07
Cyanide	7.1E-10	NV	6.8E-09	9.0E-09	7.1E-10	NV	5.8E-09	3.7E-09	7.1E-10	NV	6.8E-09	9.0E-09	7.1E-10	NV	5.8E-09	3.7E-09
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Manganese	2.0E-06	NV	1.9E-05	2.6E-05	2.0E-06	NV	1.7E-05	1.1E-05	2.0E-06	NV	1.9E-05	2.6E-05	2.0E-06	NV	1.7E-05	1.1E-05
Mercury (inorganic)	ND	NV	ND	ND	ND	NV	ND	ND	1.1E-09	NV	1.0E-08	1.4E-08	1.1E-09	NV	8.7E-09	5.6E-09
Thallium	ND	NV	ND	ND	ND	NV	ND	ND	2.0E-08	NV	1.9E-07	2.5E-07	2.0E-08	NV	1.6E-07	1.0E-07
Zinc	2.8E-07	NV	2.7E-06	3.6E-06	2.8E-07	NV	2.3E-06	1.5E-06	3.4E-07	NV	3.2E-06	4.3E-06	3.4E-07	NV	2.7E-06	1.8E-06
Polycyclic Aromatic Hydrocarbons																
1-Methyl naphthalene	2.6E-10	7.3E-10	3.7E-08	3.3E-09	2.6E-10	7.3E-10	3.2E-08	1.4E-09	1.8E-10	7.3E-10	2.6E-08	2.3E-09	1.8E-10	7.3E-10	2.2E-08	9.5E-10
2-Methyl naphthalene	2.9E-10	7.9E-10	4.2E-08	3.7E-09	2.9E-10	7.9E-10	3.6E-08	1.5E-09	2.0E-10	7.9E-10	2.9E-08	2.6E-09	2.0E-10	7.9E-10	2.5E-08	1.1E-09
Anthracene	2.6E-11	1.2E-11	3.7E-09	3.2E-10	2.6E-11	1.2E-11	3.1E-09	1.3E-10	1.0E-11	1.2E-11	1.5E-09	1.3E-10	1.0E-11	1.2E-11	1.3E-09	5.4E-11
Benzo (a) anthracene	1.1E-10	8.2E-12	1.5E-08	1.3E-09	1.1E-10	8.2E-12	1.3E-08	5.5E-10	1.1E-10	8.2E-12	1.5E-08	1.4E-09	1.1E-10	8.2E-12	1.3E-08	5.6E-10
Benzo (a) pyrene	1.5E-10	NV	2.1E-08	1.9E-09	1.5E-10	NV	1.8E-08	7.9E-10	1.4E-10	NV	2.1E-08	1.8E-09	1.4E-10	NV	1.8E-08	7.6E-10
Benzo (b) fluoranthene	2.3E-10	NV	3.3E-08	2.9E-09	2.3E-10	NV	2.8E-08	1.2E-09	2.0E-10	NV	2.9E-08	2.6E-09	2.0E-10	NV	2.5E-08	1.1E-09
Benzo (ghi) perylene	1.2E-10	NV	1.7E-08	1.5E-09	1.2E-10	NV	1.4E-08	6.1E-10	1.0E-10	NV	1.4E-08	1.3E-09	1.0E-10	NV	1.2E-08	5.2E-10
Benzo (k) fluoranthene	1.3E-10	NV	1.8E-08	1.6E-09	1.3E-10	NV	1.5E-08	6.6E-10	1.3E-10	NV	1.9E-08	1.7E-09	1.3E-10	NV	1.6E-08	6.9E-10
Chrysene	1.9E-10	NV	2.6E-08	2.4E-09	1.9E-10	NV	2.3E-08	9.7E-10	1.8E-10	NV	2.6E-08	2.3E-09	1.8E-10	NV	2.3E-08	9.7E-10
Dibenzo (a,h) anthracene	2.8E-11	NV	4.1E-09	3.6E-10	2.8E-11	NV	3.5E-09	1.5E-10	2.9E-11	NV	4.1E-09	3.6E-10	2.9E-11	NV	3.5E-09	1.5E-10
Fluoranthene	2.9E-10	NV	4.1E-08	3.7E-09	2.9E-10	NV	3.5E-08	1.5E-09	2.8E-10	NV	4.0E-08	3.6E-09	2.8E-10	NV	3.4E-08	1.5E-09
Indeno (1,2,3-cd) pyrene	9.9E-11	NV	1.4E-08	1.3E-09	9.9E-11	NV	1.2E-08	5.2E-10	1.0E-10	NV	1.4E-08	1.3E-09	1.0E-10	NV	1.2E-08	5.3E-10
Naphthalene	5.8E-11	2.6E-10	8.3E-09	7.4E-10	5.8E-11	2.6E-10	7.1E-09	3.1E-10	4.2E-11	2.6E-10	6.0E-09	5.3E-10	4.2E-11	2.6E-10	5.1E-09	2.2E-10
Phenanthrene	1.0E-10	NV	1.5E-08	1.3E-09	1.0E-10	NV	1.3E-08	5.4E-10	9.8E-11	NV	1.4E-08	1.2E-09	9.8E-11	NV	1.2E-08	5.1E-10
Pyrene	2.7E-10	4.4E-11	3.8E-08	3.4E-09	2.7E-10	4.4E-11	3.3E-08	1.4E-09	2.6E-10	4.4E-11	3.7E-08	3.3E-09	2.6E-10	4.4E-11	3.1E-08	1.3E-09
B(a)P Equivalent	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA
Polychlorinated Biphenyls																
Total PCBs	1.2E-09	8.8E-10	1.8E-07	1.6E-08	1.2E-09	8.8E-10	1.5E-07	6.4E-09	1.1E-09	8.8E-10	1.6E-07	1.4E-08	1.1E-09	8.8E-10	1.4E-07	6.0E-09
Total Petroleum Hydrocarbons																
TPH as diesel	4.2E-08	1.1E-05	4.0E-06	5.3E-07	4.2E-08	1.1E-05	3.4E-06	2.2E-07	6.7E-08	1.1E-05	6.3E-06	8.5E-07	6.7E-08	1.1E-05	5.4E-06	3.5E-07
TPH as motor oil	9.4E-08	NV	9.0E-06	1.2E-06	9.4E-08	NV	7.7E-06	4.9E-07	1.0E-07	NV	1.0E-05	1.3E-06	1.0E-07	NV	8.6E-06	5.5E-07

Table AOC10-B1.2c
Baseline Scenario Exposure Concentration and Dose Calculations for Noncarcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs:
Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Dioxins/Furans																
TEQ Human	5.1E-14	1.8E-13	1.5E-12	6.5E-13	5.1E-14	1.8E-13	1.3E-12	2.7E-13	8.4E-14	1.8E-13	2.4E-12	1.1E-12	8.4E-14	1.8E-13	2.0E-12	4.4E-13

Notes:
[a] EPCs for exposure to subsurface II soil (0 to 10 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
ND = Not detected.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.3a
Baseline Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User- Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk
Inorganics										
Antimony	ND	NC	ND	ND	–	NC	NC	NC	NC	–
Arsenic	1.5E-10	NV	1.8E-07	1.9E-06	2.0E-06	1.4E-10	NV	1.7E-07	1.7E-06	1.9E-06
Chromium, Hexavalent	2.7E-09	NV	NA	8.1E-08	8.3E-08	2.8E-09	NV	NA	8.3E-08	8.5E-08
Chromium, total	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Copper	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Cyanide	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Lead	na	na	na	na	na	na	na	na	na	na
Manganese	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Mercury (inorganic)	ND	NC	ND	ND	–	NC	NC	NC	NC	–
Thallium	ND	NC	ND	ND	–	NC	NC	NC	NC	–
Zinc	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Polycyclic Aromatic Hydrocarbons										
1-Methyl naphthalene	6.2E-15	2.8E-11	6.5E-11	1.4E-10	2.3E-10	4.3E-15	2.8E-11	4.5E-11	9.4E-11	1.7E-10
2-Methyl naphthalene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Anthracene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Benzo (a) anthracene	NA	7.4E-12	NA	NA	7.4E-12	NA	7.4E-12	NA	NA	7.4E-12
Benzo (a) pyrene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Benzo (b) fluoranthene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Benzo (ghi) perylene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Benzo (k) fluoranthene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Chrysene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Dibenzo (a,h) anthracene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Fluoranthene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Naphthalene	3.7E-15	2.6E-11	3.4E-11	7.1E-11	1.3E-10	2.6E-15	2.6E-11	2.5E-11	5.1E-11	1.0E-10
Phenanthrene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Pyrene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
B(a)P Equivalent	1.3E-12	NV	4.8E-09	1.0E-08	1.5E-08	1.2E-12	NV	4.6E-09	1.0E-08	1.5E-08
Polychlorinated Biphenyls										
Total PCBs	2.3E-13	2.6E-10	1.2E-08	2.5E-08	3.7E-08	2.1E-13	2.6E-10	1.1E-08	2.3E-08	3.5E-08
Total Petroleum Hydrocarbons										
TPH as diesel	NC	NC	NC	NC	–	NC	NC	NC	NC	–
TPH as motor oil	NC	NC	NC	NC	–	NC	NC	NC	NC	–

Table AOC10-B1.3a
Baseline Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User- Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk
Dioxins/Furans										
TEQ Human	3.6E-12	2.0E-08	6.5E-09	6.8E-08	9.4E-08	5.9E-12	2.0E-08	1.1E-08	1.1E-07	1.4E-07
Cumulative ILCR	**3E-09**	**2E-08**	**2E-07**	**2E-06**	**2E-06**	**3E-09**	**2E-08**	**2E-07**	**2E-06**	**2E-06**

Notes:
[a] EPCs for exposure to subsurface ll soil (0 to 10 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
ILCR = Incremental Lifetime Cancer Risk.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
ND = Not detected.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.3b
Baseline Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk
Inorganics										
Antimony	ND	NC	ND	ND	–	NC	NC	NC	NC	–
Arsenic	3.1E-10	NV	3.6E-07	3.7E-06	4.1E-06	2.9E-10	NV	3.4E-07	3.5E-06	3.8E-06
Chromium, Hexavalent	5.4E-09	NV	NA	1.6E-07	1.7E-07	5.5E-09	NV	NA	1.7E-07	1.7E-07
Chromium, total	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Copper	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Cyanide	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Lead	na	na	na	na	na	na	na	na	na	na
Manganese	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Mercury (inorganic)	ND	NC	ND	ND	–	NC	NC	NC	NC	–
Thallium	ND	NC	ND	ND	–	NC	NC	NC	NC	–
Zinc	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Polycyclic Aromatic Hydrocarbons										
1-Methyl naphthalene	1.2E-14	5.5E-11	1.3E-10	2.7E-10	4.6E-10	8.5E-15	5.5E-11	9.0E-11	1.9E-10	3.3E-10
2-Methyl naphthalene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Anthracene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Benzo (a) anthracene	NA	1.5E-11	NA	NA	1.5E-11	NA	1.5E-11	NA	NA	1.5E-11
Benzo (a) pyrene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Benzo (b) fluoranthene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Benzo (ghi) perylene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Benzo (k) fluoranthene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Chrysene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Dibenzo (a,h) anthracene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Fluoranthene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Naphthalene	7.3E-15	5.3E-11	6.8E-11	1.4E-10	2.6E-10	5.3E-15	5.3E-11	4.9E-11	1.0E-10	2.0E-10
Phenanthrene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Pyrene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
B(a)P Equivalent	2.6E-12	NV	9.5E-09	2.1E-08	3.0E-08	2.5E-12	NV	9.2E-09	2.0E-08	2.9E-08
Polychlorinated Biphenyls										
Total PCBs	4.5E-13	5.2E-10	2.4E-08	5.0E-08	7.4E-08	4.2E-13	5.2E-10	2.2E-08	4.6E-08	6.9E-08
Total Petroleum Hydrocarbons										
TPH as diesel	NC	NC	NC	NC	–	NC	NC	NC	NC	–
TPH as motor oil	NC	NC	NC	NC	–	NC	NC	NC	NC	–

Table AOC10-B1.3b
Baseline Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk
Dioxins/Furans										
TEQ Human	7.2E-12	4.0E-08	1.3E-08	1.4E-07	1.9E-07	1.2E-11	4.0E-08	2.1E-08	2.2E-07	2.8E-07
Cumulative ILCR	**6E-09**	**4E-08**	**4E-07**	**4E-06**	**5E-06**	**6E-09**	**4E-08**	**4E-07**	**4E-06**	**4E-06**

Notes:
[a] EPCs for exposure to subsurface ll soil (0 to 10 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
ILCR = Incremental Lifetime Cancer Risk.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
ND = Not detected.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.3c
Baseline Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk
Inorganics										
Antimony	ND	NC	ND	ND	–	NC	NC	NC	NC	–
Arsenic	3.1E-08	NV	1.7E-06	4.7E-07	2.2E-06	2.9E-08	NV	1.6E-06	4.5E-07	2.1E-06
Chromium, Hexavalent	3.4E-07	NV	NA	9.4E-09	3.5E-07	3.5E-07	NV	NA	9.6E-09	3.6E-07
Chromium, total	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Copper	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Cyanide	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Lead	na	na	na	na	na	na	na	na	na	na
Manganese	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Mercury (inorganic)	ND	NC	ND	ND	–	NC	NC	NC	NC	–
Thallium	ND	NC	ND	ND	–	NC	NC	NC	NC	–
Zinc	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Polycyclic Aromatic Hydrocarbons										
1-Methyl naphthalene	1.2E-12	3.5E-12	6.3E-10	3.5E-11	6.7E-10	8.6E-13	3.5E-12	4.4E-10	2.4E-11	4.6E-10
2-Methyl naphthalene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Anthracene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Benzo (a) anthracene	NA	5.9E-13	NA	NA	5.9E-13	NA	5.9E-13	NA	NA	5.9E-13
Benzo (a) pyrene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Benzo (b) fluoranthene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Benzo (ghi) perylene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Benzo (k) fluoranthene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Chrysene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Dibenzo (a,h) anthracene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Fluoranthene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	–	NA	NV	NA	NA	–
Naphthalene	7.4E-13	3.3E-12	3.3E-10	1.8E-11	3.5E-10	5.3E-13	3.3E-12	2.4E-10	1.3E-11	2.5E-10
Phenanthrene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
Pyrene	NC	NC	NC	NC	–	NC	NC	NC	NC	–
B(a)P Equivalent	1.6E-10	NV	1.9E-08	1.2E-09	2.1E-08	1.6E-10	NV	1.9E-08	1.2E-09	2.0E-08
Polychlorinated Biphenyls										
Total PCBs	4.6E-11	3.3E-11	1.2E-07	6.3E-09	1.2E-07	4.2E-11	3.3E-11	1.1E-07	5.9E-09	1.1E-07
Total Petroleum Hydrocarbons										
TPH as diesel	NC	NC	NC	NC	–	NC	NC	NC	NC	–
TPH as motor oil	NC	NC	NC	NC	–	NC	NC	NC	NC	–

Table AOC10-B1.3c
Baseline Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk
Dioxins/Furans										
TEQ Human	7.2E-10	2.5E-09	6.3E-08	1.7E-08	8.4E-08	1.2E-09	2.5E-09	1.0E-07	2.8E-08	1.3E-07
Cumulative ILCR	**4E-07**	**3E-09**	**2E-06**	**5E-07**	**3E-06**	**4E-07**	**3E-09**	**2E-06**	**5E-07**	**3E-06**

Notes:
[a] EPCs for exposure to subsurface ll soil (0 to 10 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
ILCR = Incremental Lifetime Cancer Risk.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
ND = Not detected.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.4a
Baseline Scenario HIs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway Total Hazard Index	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Total Hazard Index	Child Camper (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Camper (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Camper (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Child Camper (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Child Camper (0 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Total Hazard Index
Inorganics																				
Antimony	ND	NV	ND	ND	--	ND	NV	ND	ND	--	1.9E-07	NV	7.4E-05	2.6E-03	2.6E-03	1.9E-07	NV	1.0E-05	2.4E-04	2.5E-04
Arsenic	6.4E-06	NV	4.3E-02	5.0E-01	5.4E-01	6.4E-06	NV	5.9E-03	4.6E-02	5.2E-02	6.0E-06	NV	4.1E-02	4.7E-01	5.1E-01	6.0E-06	NV	5.6E-03	4.4E-02	4.9E-02
Chromium, Hexavalent	1.7E-07	NV	NA	1.1E-04	1.1E-04	1.7E-07	NV	NA	9.9E-06	1.0E-05	1.8E-07	NV	NA	1.1E-04	1.1E-04	1.8E-07	NV	NA	1.0E-05	1.0E-05
Chromium, total	1.3E-05	NV	2.8E-07	9.7E-06	2.3E-05	1.3E-05	NV	3.9E-08	9.1E-07	1.4E-05	1.3E-05	NV	2.7E-07	9.3E-06	2.2E-05	1.3E-05	NV	3.7E-08	8.7E-07	1.4E-05
Copper	2.0E-09	NV	4.2E-06	1.4E-04	1.5E-04	2.0E-09	NV	5.7E-07	1.3E-05	1.4E-05	1.9E-09	NV	4.0E-06	1.4E-04	1.4E-04	1.9E-09	NV	5.5E-07	1.3E-05	1.4E-05
Cyanide	4.4E-09	NV	3.0E-06	1.0E-04	1.1E-04	4.4E-09	NV	4.0E-07	9.6E-06	1.0E-05	4.4E-09	NV	3.0E-06	1.0E-04	1.1E-04	4.4E-09	NV	4.0E-07	9.6E-06	1.0E-05
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Manganese	2.0E-04	NV	2.2E-04	7.6E-03	8.0E-03	2.0E-04	NV	3.0E-05	7.1E-04	9.5E-04	2.0E-04	NV	2.2E-04	7.6E-03	8.0E-03	2.0E-04	NV	3.0E-05	7.1E-04	9.5E-04
Mercury (inorganic)	ND	NV	ND	ND	--	ND	NV	ND	ND	--	1.8E-07	NV	1.7E-05	6.0E-04	6.2E-04	1.8E-07	NV	2.4E-06	5.7E-05	5.9E-05
Thallium	ND	NV	ND	ND	--	ND	NV	ND	ND	--	2.5E-06	NV	5.2E-03	1.8E-01	1.8E-01	2.5E-06	NV	7.1E-04	1.7E-02	1.7E-02
Zinc	1.2E-09	NV	2.4E-06	8.4E-05	8.7E-05	1.2E-09	NV	3.3E-07	7.9E-06	8.2E-06	1.4E-09	NV	2.9E-06	1.0E-04	1.0E-04	1.4E-09	NV	4.0E-07	9.5E-06	9.9E-06
Polycyclic Aromatic Hydrocarbons																				
1-Methyl naphthalene	4.7E-12	2.1E-08	1.5E-07	3.4E-07	5.1E-07	4.7E-12	2.1E-08	2.0E-08	3.2E-08	7.3E-08	3.2E-12	2.1E-08	1.0E-07	2.3E-07	3.6E-07	3.2E-12	2.1E-08	1.4E-08	2.2E-08	5.7E-08
2-Methyl naphthalene	9.2E-11	3.9E-07	2.9E-06	6.6E-06	9.9E-06	9.2E-11	3.9E-07	3.9E-07	6.2E-07	1.4E-06	6.3E-11	3.9E-07	2.0E-06	4.6E-06	7.0E-06	6.3E-11	3.9E-07	2.7E-07	4.3E-07	1.1E-06
Anthracene	1.1E-13	8.2E-11	3.3E-09	7.7E-09	1.1E-08	1.1E-13	8.2E-11	4.6E-10	7.2E-10	1.3E-09	4.3E-14	8.2E-11	1.3E-09	3.1E-09	4.5E-09	4.3E-14	8.2E-11	1.8E-10	2.9E-10	5.5E-10
Benzo (a) anthracene	4.4E-12	5.5E-10	1.4E-07	3.2E-07	4.5E-07	4.4E-12	5.5E-10	1.9E-08	3.0E-08	4.9E-08	4.5E-12	5.5E-10	1.4E-07	3.2E-07	4.7E-07	4.5E-12	5.5E-10	1.9E-08	3.0E-08	5.0E-08
Benzo (a) pyrene	3.7E-07	NV	2.0E-05	4.5E-05	6.5E-05	3.7E-07	NV	2.7E-06	4.2E-06	7.3E-06	3.6E-07	NV	1.9E-05	4.3E-05	6.3E-05	3.6E-07	NV	2.6E-06	4.1E-06	7.0E-06
Benzo (b) fluoranthene	9.6E-12	NV	3.0E-07	7.0E-07	1.0E-06	9.6E-12	NV	4.1E-08	6.5E-08	1.1E-07	8.5E-12	NV	2.7E-07	6.2E-07	8.8E-07	8.5E-12	NV	3.7E-08	5.8E-08	9.4E-08
Benzo (ghi) perylene	4.8E-12	NV	1.5E-07	3.5E-07	5.0E-07	4.8E-12	NV	2.1E-08	3.3E-08	5.3E-08	4.1E-12	NV	1.3E-07	3.0E-07	4.3E-07	4.1E-12	NV	1.8E-08	2.8E-08	4.6E-08
Benzo (k) fluoranthene	5.2E-12	NV	1.6E-07	3.8E-07	5.4E-07	5.2E-12	NV	2.2E-08	3.5E-08	5.8E-08	5.4E-12	NV	1.7E-07	3.9E-07	5.7E-07	5.4E-12	NV	2.3E-08	3.7E-08	6.0E-08
Chrysene	7.7E-12	NV	2.4E-07	5.6E-07	8.0E-07	7.7E-12	NV	3.3E-08	5.2E-08	8.5E-08	7.7E-12	NV	2.4E-07	5.6E-07	8.0E-07	7.7E-12	NV	3.3E-08	5.2E-08	8.5E-08
Dibenzo (a,h) anthracene	7.1E-08	NV	3.7E-06	8.6E-06	1.2E-05	7.1E-08	NV	5.1E-07	8.0E-07	1.4E-06	7.1E-08	NV	3.7E-06	8.6E-06	1.2E-05	7.1E-08	NV	5.1E-07	8.1E-07	1.4E-06
Fluoranthene	9.0E-12	NV	2.8E-07	6.5E-07	9.4E-07	9.0E-12	NV	3.9E-08	6.1E-08	1.0E-07	8.7E-12	NV	2.7E-07	6.3E-07	9.1E-07	8.7E-12	NV	3.7E-08	5.9E-08	9.7E-08
Indeno (1,2,3-cd) pyrene	4.1E-12	NV	1.3E-07	3.0E-07	4.3E-07	4.1E-12	NV	1.8E-08	2.8E-08	4.6E-08	4.2E-12	NV	1.3E-07	3.0E-07	4.3E-07	4.2E-12	NV	1.8E-08	2.8E-08	4.6E-08
Naphthalene	9.7E-11	7.0E-07	1.1E-07	2.6E-07	1.1E-06	9.7E-11	7.0E-07	1.6E-08	2.5E-08	7.4E-07	6.9E-11	7.0E-07	8.2E-08	1.9E-07	9.7E-07	6.9E-11	7.0E-07	1.1E-08	1.8E-08	7.3E-07
Phenanthrene	4.3E-13	NV	1.4E-08	3.1E-08	4.5E-08	4.3E-13	NV	1.8E-09	2.9E-09	4.8E-09	4.1E-13	NV	1.3E-08	3.0E-08	4.2E-08	4.1E-13	NV	1.8E-09	2.8E-09	4.5E-09
Pyrene	1.1E-11	2.9E-09	3.5E-07	8.0E-07	1.2E-06	1.1E-11	2.9E-09	4.7E-08	7.5E-08	1.3E-07	1.1E-11	2.9E-09	3.4E-07	7.7E-07	1.1E-06	1.1E-11	2.9E-09	4.6E-08	7.3E-08	1.2E-07
B(a)P Equivalent	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Polychlorinated Biphenyls																				
Total PCBs	7.6E-08	8.8E-05	2.4E-03	5.5E-03	8.0E-03	7.6E-08	8.8E-05	3.3E-04	5.2E-04	9.4E-04	7.1E-08	8.8E-05	2.2E-03	5.1E-03	7.5E-03	7.1E-08	8.8E-05	3.1E-04	4.8E-04	8.8E-04
Total Petroleum Hydrocarbons																				
TPH as diesel	8.1E-10	3.4E-04	5.8E-05	2.0E-04	6.0E-04	8.1E-10	3.4E-04	7.9E-06	1.9E-05	3.7E-04	1.3E-09	3.4E-04	9.2E-05	3.2E-04	7.5E-04	1.3E-09	3.4E-04	1.3E-05	3.0E-05	3.9E-04
TPH as motor oil	7.8E-10	NV	1.6E-05	5.7E-05	7.3E-05	7.8E-10	NV	2.2E-06	5.3E-06	7.6E-06	8.7E-10	NV	1.8E-05	6.3E-05	8.1E-05	8.7E-10	NV	2.5E-06	5.9E-06	8.4E-06

Table AOC10-B1.4a
Baseline Scenario HIs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Child Camper (0 to 0.5 foot bgs)[a] Soil Pathway Total Hazard Index	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Adult Camper (0 to 0.5 foot bgs)[a] Soil Pathway Total Hazard Index	Child Camper (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Camper (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Camper (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Child Camper (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Child Camper (0 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Adult Camper (0 to 3 feet bgs)[a] Soil Pathway Total Hazard Index
Dioxins/Furans																				
TEQ Human	6.4E-09	3.5E-05	5.8E-04	6.6E-03	7.2E-03	6.4E-09	3.5E-05	7.9E-05	6.2E-04	7.4E-04	1.0E-08	3.5E-05	9.4E-04	1.1E-02	1.2E-02	1.0E-08	3.5E-05	1.3E-04	1.0E-03	1.2E-03
Total Hazard Index	**2E-04**	**5E-04**	**5E-02**	**5E-01**	**6E-01**	**2E-04**	**5E-04**	**6E-03**	**5E-02**	**6E-02**	**2E-04**	**5E-04**	**5E-02**	**7E-01**	**7E-01**	**2E-04**	**5E-04**	**7E-03**	**6E-02**	**7E-02**

Notes:
[a] EPCs for exposure to subsurface soil (0 to 10 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
H I = Hazard Index
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
ND = Not detected.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.4b
Baseline Scenario HIs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

COPC	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Total Hazard Index	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Total Hazard Index	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Total Hazard Index
Inorganics																				
Antimony	ND	NV	ND	ND	--	ND	NV	ND	ND	--	3.8E-07	NV	1.5E-04	5.1E-03	5.3E-03	3.8E-07	NV	2.0E-05	4.8E-04	5.0E-04
Arsenic	1.3E-05	NV	8.6E-02	9.9E-01	1.1E+00	1.3E-05	NV	1.2E-02	9.3E-02	1.0E-01	1.2E-05	NV	8.1E-02	9.4E-01	1.0E+00	1.2E-05	NV	1.1E-02	8.8E-02	9.9E-02
Chromium, Hexavalent	3.5E-07	NV	NA	2.1E-04	2.1E-04	3.5E-07	NV	NA	2.0E-05	2.0E-05	3.6E-07	NV	NA	2.2E-04	2.2E-04	3.6E-07	NV	NA	2.0E-05	2.1E-05
Chromium, total	2.7E-05	NV	5.7E-07	1.9E-05	4.7E-05	2.7E-05	NV	7.7E-08	1.8E-06	2.9E-05	2.6E-05	NV	5.4E-07	1.9E-05	4.5E-05	2.6E-05	NV	7.4E-08	1.7E-06	2.8E-05
Copper	3.9E-09	NV	8.3E-06	2.9E-04	2.9E-04	3.9E-09	NV	1.1E-06	2.7E-05	2.8E-05	3.8E-09	NV	8.0E-06	2.8E-04	2.8E-04	3.8E-09	NV	1.1E-06	2.6E-05	2.7E-05
Cyanide	8.9E-09	NV	5.9E-06	2.0E-04	2.1E-04	8.9E-09	NV	8.1E-07	1.9E-05	2.0E-05	8.9E-09	NV	5.9E-06	2.0E-04	2.1E-04	8.9E-09	NV	8.1E-07	1.9E-05	2.0E-05
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Manganese	4.0E-04	NV	4.4E-04	1.5E-02	1.6E-02	4.0E-04	NV	6.0E-05	1.4E-03	1.9E-03	4.0E-04	NV	4.4E-04	1.5E-02	1.6E-02	4.0E-04	NV	6.0E-05	1.4E-03	1.9E-03
Mercury (inorganic)	ND	NV	ND	ND	--	ND	NV	ND	ND	--	3.5E-07	NV	3.5E-05	1.2E-03	1.2E-03	3.5E-07	NV	4.8E-06	1.1E-04	1.2E-04
Thallium	ND	NV	ND	ND	--	ND	NV	ND	ND	--	4.9E-06	NV	1.0E-02	3.6E-01	3.7E-01	4.9E-06	NV	1.4E-03	3.3E-02	3.5E-02
Zinc	2.3E-09	NV	4.9E-06	1.7E-04	1.7E-04	2.3E-09	NV	6.7E-07	1.6E-05	1.6E-05	2.8E-09	NV	5.9E-06	2.0E-04	2.1E-04	2.8E-09	NV	8.0E-07	1.9E-05	2.0E-05
Polycyclic Aromatic Hydrocarbons																				
1-Methyl naphthalene	9.3E-12	4.2E-08	2.9E-07	6.8E-07	1.0E-06	9.3E-12	4.2E-08	4.0E-08	6.3E-08	1.5E-07	6.4E-12	4.2E-08	2.0E-07	4.7E-07	7.1E-07	6.4E-12	4.2E-08	2.8E-08	4.4E-08	1.1E-07
2-Methyl naphthalene	1.8E-10	7.9E-07	5.8E-06	1.3E-05	2.0E-05	1.8E-10	7.9E-07	7.9E-07	1.2E-06	2.8E-06	1.3E-10	7.9E-07	4.0E-06	9.2E-06	1.4E-05	1.3E-10	7.9E-07	5.5E-07	8.6E-07	2.2E-06
Anthracene	2.1E-13	1.6E-10	6.7E-09	1.5E-08	2.2E-08	2.1E-13	1.6E-10	9.1E-10	1.4E-09	2.5E-09	8.5E-14	1.6E-10	2.7E-09	6.2E-09	9.0E-09	8.5E-14	1.6E-10	3.7E-10	5.8E-10	1.1E-09
Benzo (a) anthracene	8.7E-12	1.1E-09	2.8E-07	6.3E-07	9.1E-07	8.7E-12	1.1E-09	3.8E-08	5.9E-08	9.8E-08	8.9E-12	1.1E-09	2.8E-07	6.5E-07	9.3E-07	8.9E-12	1.1E-09	3.9E-08	6.1E-08	1.0E-07
Benzo (a) pyrene	7.5E-07	NV	3.9E-05	9.0E-05	1.3E-04	7.5E-07	NV	5.4E-06	8.5E-06	1.5E-05	7.2E-07	NV	3.8E-05	8.7E-05	1.3E-04	7.2E-07	NV	5.2E-06	8.1E-06	1.4E-05
Benzo (b) fluoranthene	1.9E-11	NV	6.1E-07	1.4E-06	2.0E-06	1.9E-11	NV	8.3E-08	1.3E-07	2.1E-07	1.7E-11	NV	5.4E-07	1.2E-06	1.8E-06	1.7E-11	NV	7.3E-08	1.2E-07	1.9E-07
Benzo (ghi) perylene	9.6E-12	NV	3.0E-07	7.0E-07	1.0E-06	9.6E-12	NV	4.1E-08	6.5E-08	1.1E-07	8.3E-12	NV	2.6E-07	6.0E-07	8.6E-07	8.3E-12	NV	3.6E-08	5.6E-08	9.2E-08
Benzo (k) fluoranthene	1.0E-11	NV	3.3E-07	7.5E-07	1.1E-06	1.0E-11	NV	4.5E-08	7.1E-08	1.2E-07	1.1E-11	NV	3.4E-07	7.9E-07	1.1E-06	1.1E-11	NV	4.7E-08	7.4E-08	1.2E-07
Chrysene	1.5E-11	NV	4.8E-07	1.1E-06	1.6E-06	1.5E-11	NV	6.6E-08	1.0E-07	1.7E-07	1.5E-11	NV	4.8E-07	1.1E-06	1.6E-06	1.5E-11	NV	6.6E-08	1.0E-07	1.7E-07
Dibenzo (a,h) anthracene	1.4E-07	NV	7.4E-06	1.7E-05	2.5E-05	1.4E-07	NV	1.0E-06	1.6E-06	2.8E-06	1.4E-07	NV	7.5E-06	1.7E-05	2.5E-05	1.4E-07	NV	1.0E-06	1.6E-06	2.8E-06
Fluoranthene	1.8E-11	NV	5.7E-07	1.3E-06	1.9E-06	1.8E-11	NV	7.8E-08	1.2E-07	2.0E-07	1.7E-11	NV	5.5E-07	1.3E-06	1.8E-06	1.7E-11	NV	7.5E-08	1.2E-07	1.9E-07
Indeno (1,2,3-cd) pyrene	8.2E-12	NV	2.6E-07	6.0E-07	8.6E-07	8.2E-12	NV	3.5E-08	5.6E-08	9.1E-08	8.3E-12	NV	2.6E-07	6.0E-07	8.7E-07	8.3E-12	NV	3.6E-08	5.7E-08	9.2E-08
Naphthalene	1.9E-10	1.4E-06	2.3E-07	5.3E-07	2.1E-06	1.9E-10	1.4E-06	3.1E-08	4.9E-08	1.5E-06	1.4E-10	1.4E-06	1.6E-07	3.8E-07	1.9E-06	1.4E-10	1.4E-06	2.2E-08	3.5E-08	1.5E-06
Phenanthrene	8.6E-13	NV	2.7E-08	6.2E-08	8.9E-08	8.6E-13	NV	3.7E-09	5.8E-09	9.5E-09	8.1E-13	NV	2.6E-08	5.9E-08	8.5E-08	8.1E-13	NV	3.5E-09	5.5E-09	9.0E-09
Pyrene	2.2E-11	5.9E-09	7.0E-07	1.6E-06	2.3E-06	2.2E-11	5.9E-09	9.5E-08	1.5E-07	2.5E-07	2.1E-11	5.9E-09	6.7E-07	1.5E-06	2.2E-06	2.1E-11	5.9E-09	9.2E-08	1.5E-07	2.4E-07
B(a)P Equivalent	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Polychlorinated Biphenyls																				
Total PCBs	1.5E-07	1.8E-04	4.8E-03	1.1E-02	1.6E-02	1.5E-07	1.8E-04	6.6E-04	1.0E-03	1.9E-03	1.4E-07	1.8E-04	4.5E-03	1.0E-02	1.5E-02	1.4E-07	1.8E-04	6.1E-04	9.6E-04	1.8E-03
Total Petroleum Hydrocarbons																				
TPH as diesel	1.6E-09	6.9E-04	1.2E-04	4.0E-04	1.2E-03	1.6E-09	6.9E-04	1.6E-05	3.7E-05	7.4E-04	2.6E-09	6.9E-04	1.8E-04	6.3E-04	1.5E-03	2.6E-09	6.9E-04	2.5E-05	5.9E-05	7.7E-04
TPH as motor oil	1.6E-09	NV	3.3E-05	1.1E-04	1.5E-04	1.6E-09	NV	4.5E-06	1.1E-05	1.5E-05	1.7E-09	NV	3.7E-05	1.3E-04	1.6E-04	1.7E-09	NV	5.0E-06	1.2E-05	1.7E-05

Table AOC10-B1.4b
Baseline Scenario HIs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Child Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Total Hazard Index	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Adult Hiker (0 to 0.5 foot bgs)[a] Soil Pathway Total Hazard Index	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Child Hiker (0 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Adult Hiker (0 to 3 feet bgs)[a] Soil Pathway Total Hazard Index
Dioxins/Furans																				
TEQ Human	1.3E-08	7.1E-05	1.2E-03	1.3E-02	1.4E-02	1.3E-08	7.1E-05	1.6E-04	1.2E-03	1.5E-03	2.1E-08	7.1E-05	1.9E-03	2.2E-02	2.4E-02	2.1E-08	7.1E-05	2.6E-04	2.0E-03	2.3E-03
Total Hazard Index	**4E-04**	**9E-04**	**9E-02**	**1E+00**	**1E+00**	**4E-04**	**9E-04**	**1E-02**	**1E-01**	**1E-01**	**4E-04**	**9E-04**	**1E-01**	**1E+00**	**1E+00**	**4E-04**	**9E-04**	**1E-02**	**1E-01**	**1E-01**

Notes:
[a] EPCs for exposure to subsurface soil (0 to 10 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
– = not calculated.
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
H I = Hazard Index
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
ND = Not detected.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.4c
Baseline Scenario HIs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Total Hazard Index	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Total Hazard Index	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Total Hazard Index
Inorganics																				
Antimony	ND	NV	ND	ND	--	ND	NV	ND	ND	--	3.8E-05	NV	2.7E-04	3.6E-04	6.7E-04	3.8E-05	NV	2.3E-04	1.5E-04	4.2E-04
Arsenic	1.3E-03	NV	1.6E-01	7.0E-02	2.3E-01	1.3E-03	NV	1.3E-01	2.9E-02	1.6E-01	1.2E-03	NV	1.5E-01	6.6E-02	2.1E-01	1.2E-03	NV	1.3E-01	2.7E-02	1.6E-01
Chromium, Hexavalent	3.5E-05	NV	NA	1.5E-05	5.0E-05	3.5E-05	NV	NA	6.1E-06	4.1E-05	3.6E-05	NV	NA	1.5E-05	5.1E-05	3.6E-05	NV	NA	6.3E-06	4.2E-05
Chromium, total	2.7E-03	NV	1.0E-06	1.4E-06	2.7E-03	2.7E-03	NV	8.8E-07	5.7E-07	2.7E-03	2.6E-03	NV	9.8E-07	1.3E-06	2.6E-03	2.6E-03	NV	8.4E-07	5.4E-07	2.6E-03
Copper	4.0E-07	NV	1.5E-05	2.0E-05	3.6E-05	4.0E-07	NV	1.3E-05	8.3E-06	2.2E-05	3.8E-07	NV	1.5E-05	1.9E-05	3.4E-05	3.8E-07	NV	1.3E-05	8.0E-06	2.1E-05
Cyanide	8.9E-07	NV	1.1E-05	1.4E-05	2.6E-05	8.9E-07	NV	9.2E-06	5.9E-06	1.6E-05	8.9E-07	NV	1.1E-05	1.4E-05	2.6E-05	8.9E-07	NV	9.2E-06	5.9E-06	1.6E-05
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Manganese	4.0E-02	NV	8.0E-04	1.1E-03	4.2E-02	4.0E-02	NV	6.9E-04	4.4E-04	4.2E-02	4.0E-02	NV	8.0E-04	1.1E-03	4.2E-02	4.0E-02	NV	6.9E-04	4.4E-04	4.2E-02
Mercury (inorganic)	ND	NV	ND	ND	--	ND	NV	ND	ND	--	3.6E-05	NV	6.4E-05	8.5E-05	1.8E-04	3.6E-05	NV	5.5E-05	3.5E-05	1.3E-04
Thallium	ND	NV	ND	ND	--	ND	NV	ND	ND	--	4.9E-04	NV	1.9E-02	2.5E-02	4.4E-02	4.9E-04	NV	1.6E-02	1.0E-02	2.7E-02
Zinc	2.3E-07	NV	8.9E-06	1.2E-05	2.1E-05	2.3E-07	NV	7.6E-06	4.9E-06	1.3E-05	2.8E-07	NV	1.1E-05	1.4E-05	2.5E-05	2.8E-07	NV	9.2E-06	5.9E-06	1.5E-05
Polycyclic Aromatic Hydrocarbons																				
1-Methyl naphthalene	9.4E-10	2.6E-09	5.3E-07	4.8E-08	5.9E-07	9.4E-10	2.6E-09	4.6E-07	2.0E-08	4.8E-07	6.5E-10	2.6E-09	3.7E-07	3.3E-08	4.1E-07	6.5E-10	2.6E-09	3.2E-07	1.4E-08	3.3E-07
2-Methyl naphthalene	1.8E-08	4.9E-08	1.1E-05	9.3E-07	1.2E-05	1.8E-08	4.9E-08	9.0E-06	3.9E-07	9.5E-06	1.3E-08	4.9E-08	7.3E-06	6.5E-07	8.0E-06	1.3E-08	4.9E-08	6.2E-06	2.7E-07	6.6E-06
Anthracene	2.1E-11	1.0E-11	1.2E-08	1.1E-09	1.3E-08	2.1E-11	1.0E-11	1.0E-08	4.5E-10	1.1E-08	8.5E-12	1.0E-11	4.9E-09	4.3E-10	5.3E-09	8.5E-12	1.0E-11	4.2E-09	1.8E-10	4.4E-09
Benzo (a) anthracene	8.8E-10	6.9E-11	5.0E-07	4.5E-08	5.5E-07	8.8E-10	6.9E-11	4.3E-07	1.8E-08	4.5E-07	9.0E-10	6.9E-11	5.1E-07	4.6E-08	5.6E-07	9.0E-10	6.9E-11	4.4E-07	1.9E-08	4.6E-07
Benzo (a) pyrene	7.5E-05	NV	7.1E-05	6.4E-06	1.5E-04	7.5E-05	NV	6.1E-05	2.6E-06	1.4E-04	7.2E-05	NV	6.9E-05	6.1E-06	1.5E-04	7.2E-05	NV	5.9E-05	2.5E-06	1.3E-04
Benzo (b) fluoranthene	1.9E-09	NV	1.1E-06	9.8E-08	1.2E-06	1.9E-09	NV	9.4E-07	4.0E-08	9.9E-07	1.7E-09	NV	9.7E-07	8.7E-08	1.1E-06	1.7E-09	NV	8.4E-07	3.6E-08	8.7E-07
Benzo (ghi) perylene	9.6E-10	NV	5.5E-07	4.9E-08	6.0E-07	9.6E-10	NV	4.7E-07	2.0E-08	4.9E-07	8.3E-10	NV	4.8E-07	4.2E-08	5.2E-07	8.3E-10	NV	4.1E-07	1.7E-08	4.3E-07
Benzo (k) fluoranthene	1.0E-09	NV	6.0E-07	5.3E-08	6.5E-07	1.0E-09	NV	5.1E-07	2.2E-08	5.3E-07	1.1E-09	NV	6.2E-07	5.5E-08	6.8E-07	1.1E-09	NV	5.4E-07	2.3E-08	5.6E-07
Chrysene	1.5E-09	NV	8.8E-07	7.8E-08	9.6E-07	1.5E-09	NV	7.6E-07	3.2E-08	7.9E-07	1.5E-09	NV	8.8E-07	7.8E-08	9.6E-07	1.5E-09	NV	7.5E-07	3.2E-08	7.9E-07
Dibenzo (a,h) anthracene	1.4E-05	NV	1.4E-05	1.2E-06	2.9E-05	1.4E-05	NV	1.2E-05	5.0E-07	2.6E-05	1.4E-05	NV	1.4E-05	1.2E-06	2.9E-05	1.4E-05	NV	1.2E-05	5.0E-07	2.6E-05
Fluoranthene	1.8E-09	NV	1.0E-06	9.2E-08	1.1E-06	1.8E-09	NV	8.9E-07	3.8E-08	9.3E-07	1.7E-09	NV	1.0E-06	8.9E-08	1.1E-06	1.7E-09	NV	8.6E-07	3.7E-08	9.0E-07
Indeno (1,2,3-cd) pyrene	8.2E-10	NV	4.7E-07	4.2E-08	5.1E-07	8.2E-10	NV	4.0E-07	1.7E-08	4.2E-07	8.4E-10	NV	4.8E-07	4.2E-08	5.2E-07	8.4E-10	NV	4.1E-07	1.8E-08	4.3E-07
Naphthalene	1.9E-08	8.7E-08	4.2E-07	3.7E-08	5.6E-07	1.9E-08	8.7E-08	3.6E-07	1.5E-08	4.8E-07	1.4E-08	8.7E-08	3.0E-07	2.7E-08	4.3E-07	1.4E-08	8.7E-08	2.6E-07	1.1E-08	3.7E-07
Phenanthrene	8.6E-11	NV	4.9E-08	4.4E-09	5.4E-08	8.6E-11	NV	4.2E-08	1.8E-09	4.4E-08	8.2E-11	NV	4.7E-08	4.2E-09	5.1E-08	8.2E-11	NV	4.0E-08	1.7E-09	4.2E-08
Pyrene	2.2E-09	3.7E-10	1.3E-06	1.1E-07	1.4E-06	2.2E-09	3.7E-10	1.1E-06	4.6E-08	1.1E-06	2.1E-09	3.7E-10	1.2E-06	1.1E-07	1.3E-06	2.1E-09	3.7E-10	1.0E-06	4.5E-08	1.1E-06
B(a)P Equivalent	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Polychlorinated Biphenyls																				
Total PCBs	1.5E-05	1.1E-05	8.8E-03	7.8E-04	9.6E-03	1.5E-05	1.1E-05	7.5E-03	3.2E-04	7.9E-03	1.4E-05	1.1E-05	8.1E-03	7.2E-04	8.9E-03	1.4E-05	1.1E-05	7.0E-03	3.0E-04	7.3E-03
Total Petroleum Hydrocarbons																				
TPH as diesel	1.6E-07	4.3E-05	2.1E-04	2.8E-05	2.8E-04	1.6E-07	4.3E-05	1.8E-04	1.2E-05	2.4E-04	2.6E-07	4.3E-05	3.3E-04	4.5E-05	4.2E-04	2.6E-07	4.3E-05	2.9E-04	1.8E-05	3.5E-04
TPH as motor oil	1.6E-07	NV	6.0E-05	8.0E-06	6.8E-05	1.6E-07	NV	5.1E-05	3.3E-06	5.5E-05	1.7E-07	NV	6.7E-05	8.9E-06	7.6E-05	1.7E-07	NV	5.7E-05	3.7E-06	6.1E-05

Table AOC10-B1.4c
Baseline Scenario HIs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

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C O P C	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Child OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Total Hazard Index	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Particulate Inhalation	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Vapor Inhalation	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Dermal Contact	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Ingestion	Adult OHV Rider (0 to 0.5 foot bgs)[a] Soil Pathway Total Hazard Index	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Child OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Ingestion	Adult OHV Rider (0 to 3 feet bgs)[a] Soil Pathway Total Hazard Index
Dioxins/Furans																					
TEQ Human	1.3E-06	4.4E-06	2.1E-03	9.3E-04	3.0E-03	1.3E-06	4.4E-06	1.8E-03	3.8E-04	2.2E-03	2.1E-06	4.4E-06	3.4E-03	1.5E-03	4.9E-03	2.1E-06	4.4E-06	2.9E-03	6.3E-04	3.6E-03
Total Hazard Index	**4E-02**	**6E-05**	**2E-01**	**7E-02**	**3E-01**	**4E-02**	**6E-05**	**1E-01**	**3E-02**	**2E-01**	**4E-02**	**6E-05**	**2E-01**	**9E-02**	**3E-01**	**4E-02**	**6E-05**	**2E-01**	**4E-02**	**2E-01**

Notes:
[a] EPCs for exposure to subsurface soil (0 to 10 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
– = not calculated.
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
H I = Hazard Index
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
ND = Not detected.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.5a

Baseline Scenario Risk Evaluation for Lead in AOC 10 Surface Soil (0 to 0.5 foot bgs) Using Depth-Weighted EPCs: Recreational User (Camper)

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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	18.1
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.005	0.008	0.01	0.01	0.01	2159
BLOOD Pb, PICA CHILD	0.009	0.02	0.02	0.02	0.03	1084

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.25 [a]
Geometric Standard Deviation	(ug/dl)	1.6
Blood lead level of concern	(ug/dl)	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day)	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	2.1E-6	3.7E-05	1%	--	3.7E-05	0.4%
Soil Ingestion	2.5E-4	4.6E-03	99%	5.0E-4	9.1E-03	100%
Inhalation	7.0E-8	1.3E-06	0.03%	--	1.3E-06	0.01%

Notes:
[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.5b

Baseline Scenario Risk Evaluation for Lead in AOC 10 Shallow Soil (0 to 3 feet bgs) Using Depth-Weighted EPCs: Recreational User (Camper)

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INPUT MEDIUM	INPUT LEVEL
Lead in Soil/Dust (ug/g)	22.2
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.006	0.010	0.01	0.01	0.02	2159
BLOOD Pb, PICA CHILD	0.011	0.02	0.02	0.03	0.03	1084

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.25 [a]
Geometric Standard Deviation	(ug/dl)	1.6
Blood lead level of concern	(ug/dl)	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day)	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	2.1E-6	4.6E-05	1%	--	4.6E-05	0.4%
Soil Ingestion	2.5E-4	5.6E-03	99%	5.0E-4	1.1E-02	100%
Inhalation	7.0E-8	1.6E-06	0.03%	--	1.6E-06	0.01%

Notes:
[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.5c

Baseline Scenario Risk Evaluation for Lead in AOC 10 Surface Soil (0 to 0.5 foot bgs) Using Depth-Weighted EPCs: Recreational User (Hiker)

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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	18.1
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.009	0.017	0.02	0.02	0.03	1079
BLOOD Pb, PICA CHILD	0.018	0.03	0.04	0.05	0.05	542

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5 [a]
Geometric Standard Deviation	(ug/dl)	1.6
Blood lead level of concern	(ug/dl)	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day)	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	4.1E-6	7.5E-05	1%	--	7.5E-05	0.4%
Soil Ingestion	5.0E-4	9.1E-03	99%	1.0E-3	1.8E-02	100%
Inhalation	1.4E-7	2.5E-06	0.03%	--	2.5E-06	0.01%

Notes:
[a] Highlighted values are Site-specific: days per week based on the assumption of 2 days per month (2 days/4 weeks = 0.5 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.5d

Baseline Scenario Risk Evaluation for Lead in AOC 10 Shallow Soil (0 to 3 feet bgs) Using Depth-Weighted EPCs: Recreational User (Hiker)

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INPUT MEDIUM	INPUT LEVEL
Lead in Soil/Dust (ug/g)	22.2
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.011	0.021	0.02	0.03	0.03	1079
BLOOD Pb, PICA CHILD	0.022	0.04	0.05	0.06	0.07	542

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5 [a]
Geometric Standard Deviation	(ug/dl)	1.6
Blood lead level of concern	(ug/dl)	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day)	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	4.1E-6	9.2E-05	1%	--	9.2E-05	0.4%
Soil Ingestion	5.0E-4	1.1E-02	99%	1.0E-3	2.2E-02	100%
Inhalation	1.4E-7	3.1E-06	0.03%	--	3.1E-06	0.01%

Notes:
[a] Highlighted values are Site-specific: days per week based on the assumption of 2 days per month (2 days/4 weeks = 0.5 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.5e

Baseline Scenario Risk Evaluation for Lead in AOC 10 Surface Soil (0 to 0.5 foot bgs) Using Depth-Weighted EPCs: Recreational User (Off-Highway Vehicle Rider)

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INPUT MEDIUM	INPUT LEVEL
Lead in Soil/Dust (ug/g)	18.1
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.003	0.006	0.01	0.01	0.01	3180
BLOOD Pb, PICA CHILD	0.019	0.03	0.04	0.05	0.06	535

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5 [a]
Geometric Standard Deviation	(ug/dl)	1.6
Blood lead level of concern	(ug/dl)	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	800 [a]
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	31 [a]
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	0.425 [a]
Inhalation constant	(ug/dl)/(ug/day)	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	1.7E-5	3.0E-04	10%	--	3.0E-04	1.6%
Soil Ingestion	1.6E-4	2.8E-03	90%	1.0E-3	1.8E-02	98%
Inhalation	8.7E-9	1.6E-07	0.01%	--	1.6E-07	0.00%

Notes:

[a] Highlighted values are Site-specific: days per week based on the assumption of 2 days per month (2 days/4 weeks = 0.5 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.5f

Baseline Scenario Risk Evaluation for Lead in AOC 10 Shallow Soil (0 to 3 feet bgs) Using Depth-Weighted EPCs: Recreational User (Off-Highway Vehicle Rider)

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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	22.2
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.004	0.007	0.01	0.01	0.01	3180
BLOOD Pb, PICA CHILD	0.023	0.04	0.05	0.06	0.07	535

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5 [a]
Geometric Standard Deviation	(ug/dl)	1.6
Blood lead level of concern	(ug/dl)	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	800 [a]
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	31 [a]
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	0.425 [a]
Inhalation constant	(ug/dl)/(ug/day)	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	1.7E-5	3.7E-04	10%	--	3.7E-04	1.6%
Soil Ingestion	1.6E-4	3.5E-03	90%	1.0E-3	2.2E-02	98%
Inhalation	8.7E-9	1.9E-07	0.01%	--	1.9E-07	0.00%

Notes:

[a] Highlighted values are Site-specific: days per week based on the assumption of 2 days per month (2 days/4 weeks = 0.5 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.6a
2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Camper

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C O P C	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics								
Antimony	NC	NV	NC	NC	NC	NV	NC	NC
Arsenic	2.9E-11	NV	1.5E-08	1.6E-07	3.0E-11	NV	1.6E-08	1.7E-07
Chromium, Hexavalent	1.9E-11	NV	NA	1.7E-07	2.0E-11	NV	NA	1.8E-07
Chromium, total	NC	NV	NC	NC	NC	NV	NC	NC
Copper	NC	NV	NC	NC	NC	NV	NC	NC
Lead	na	na	na	na	na	na	na	na
Mercury (inorganic)	NC	NC	NC	NC	NC	NC	NC	NC
Thallium	NC	NV	NC	NC	NC	NV	NC	NC
Zinc	NC	NV	NC	NC	NC	NV	NC	NC
Polycyclic Aromatic Hydrocarbons								
1-Methyl naphthalene	3.5E-14	4.0E-10	9.2E-11	1.9E-10	3.0E-14	4.0E-10	7.9E-11	1.6E-10
2-Methyl naphthalene	NC	NV	NC	NC	NC	NV	NC	NC
Anthracene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (a) anthracene	NA	7.3E-11	NA	NA	NA	7.3E-11	NA	NA
Benzo (a) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (b) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (ghi) perylene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (k) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Chrysene	NA	NV	NA	NA	NA	NV	NA	NA
Dibenzo (a,h) anthracene	NA	NV	NA	NA	NA	NV	NA	NA
Fluoranthene	NC	NV	NC	NC	NC	NV	NC	NC
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Phenanthrene	NC	NV	NC	NC	NC	NV	NC	NC
Pyrene	NC	NV	NC	NC	NC	NV	NC	NC
B(a)P Equivalent	1.6E-12	NV	6.6E-09	1.4E-08	1.2E-12	NV	4.9E-09	1.1E-08
Polychlorinated Biphenyls								
Total PCBs	4.8E-12	4.2E-09	1.3E-08	2.6E-08	3.9E-12	4.2E-09	1.0E-08	2.2E-08
Total Petroleum Hydrocarbons								
TPH as diesel	NC	NC	NC	NC	NC	NC	NC	NC
TPH as motor oil	NC	NC	NC	NC	NC	NC	NC	NC

Table AOC10-B1.6a
2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Camper

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C O P C	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Dioxins/Furans								
TEQ Human	7.5E-16	3.5E-13	4.0E-13	4.1E-12	1.5E-15	3.5E-13	7.7E-13	8.0E-12

Notes:
[a] EPCs for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.6b
2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

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C O P C	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics								
Antimony	NC	NV	NC	NC	NC	NV	NC	NC
Arsenic	5.7E-11	NV	3.0E-08	3.1E-07	6.0E-11	NV	3.2E-08	3.3E-07
Chromium, Hexavalent	3.7E-11	NV	NA	3.4E-07	3.9E-11	NV	NA	3.5E-07
Chromium, total	NC	NV	NC	NC	NC	NV	NC	NC
Copper	NC	NV	NC	NC	NC	NV	NC	NC
Lead	na	na	na	na	na	na	na	na
Mercury (inorganic)	NC	NC	NC	NC	NC	NC	NC	NC
Thallium	NC	NV	NC	NC	NC	NV	NC	NC
Zinc	NC	NV	NC	NC	NC	NV	NC	NC
Polycyclic Aromatic Hydrocarbons								
1-Methyl naphthalene	6.9E-14	8.0E-10	1.8E-10	3.8E-10	6.0E-14	8.0E-10	1.6E-10	3.3E-10
2-Methyl naphthalene	NC	NV	NC	NC	NC	NV	NC	NC
Anthracene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (a) anthracene	NA	1.5E-10	NA	NA	NA	1.5E-10	NA	NA
Benzo (a) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (b) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (ghi) perylene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (k) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Chrysene	NA	NV	NA	NA	NA	NV	NA	NA
Dibenzo (a,h) anthracene	NA	NV	NA	NA	NA	NV	NA	NA
Fluoranthene	NC	NV	NC	NC	NC	NV	NC	NC
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Phenanthrene	NC	NV	NC	NC	NC	NV	NC	NC
Pyrene	NC	NV	NC	NC	NC	NV	NC	NC
B(a)P Equivalent	3.2E-12	NV	1.3E-08	2.9E-08	2.4E-12	NV	9.8E-09	2.1E-08
Polychlorinated Biphenyls								
Total PCBs	9.6E-12	8.5E-09	2.5E-08	5.3E-08	7.9E-12	8.5E-09	2.1E-08	4.3E-08
Total Petroleum Hydrocarbons								
TPH as diesel	NC	NC	NC	NC	NC	NC	NC	NC
TPH as motor oil	NC	NC	NC	NC	NC	NC	NC	NC

Table AOC10-B1.6b
2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

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C O P C	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Dioxins/Furans								
TEQ Human	1.5E-15	7.0E-13	8.0E-13	8.3E-12	2.9E-15	7.0E-13	1.5E-12	1.6E-11

Notes:
[a] EPCs for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.6c

2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

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C O P C	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics								
Antimony	NC	NV	NC	NC	NC	NV	NC	NC
Arsenic	5.8E-09	NV	1.5E-07	4.0E-08	6.0E-09	NV	1.5E-07	4.2E-08
Chromium, Hexavalent	2.4E-09	NV	NA	2.0E-08	2.5E-09	NV	NA	2.1E-08
Chromium, total	NC	NV	NC	NC	NC	NV	NC	NC
Copper	NC	NV	NC	NC	NC	NV	NC	NC
Lead	na	na	na	na	na	na	na	na
Mercury (inorganic)	NC	NC	NC	NC	NC	NC	NC	NC
Thallium	NC	NV	NC	NC	NC	NV	NC	NC
Zinc	NC	NV	NC	NC	NC	NV	NC	NC
Polycyclic Aromatic Hydrocarbons								
1-Methyl naphthalene	7.0E-12	5.0E-11	8.9E-10	4.9E-11	6.0E-12	5.0E-11	7.6E-10	4.2E-11
2-Methyl naphthalene	NC	NV	NC	NC	NC	NV	NC	NC
Anthracene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (a) anthracene	NA	5.8E-12	NA	NA	NA	5.8E-12	NA	NA
Benzo (a) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (b) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (ghi) perylene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (k) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Chrysene	NA	NV	NA	NA	NA	NV	NA	NA
Dibenzo (a,h) anthracene	NA	NV	NA	NA	NA	NV	NA	NA
Fluoranthene	NC	NV	NC	NC	NC	NV	NC	NC
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Phenanthrene	NC	NV	NC	NC	NC	NV	NC	NC
Pyrene	NC	NV	NC	NC	NC	NV	NC	NC
B(a)P Equivalent	2.1E-10	NV	2.7E-08	1.7E-09	1.5E-10	NV	2.0E-08	1.2E-09
Polychlorinated Biphenyls								
Total PCBs	9.6E-10	5.3E-10	1.2E-07	6.7E-09	7.9E-10	5.3E-10	1.0E-07	5.5E-09
Total Petroleum Hydrocarbons								
TPH as diesel	NC	NC	NC	NC	NC	NC	NC	NC
TPH as motor oil	NC	NC	NC	NC	NC	NC	NC	NC

Table AOC10-B1.6c

2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

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C O P C	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Dioxins/Furans								
TEQ Human	1.5E-13	4.4E-14	3.8E-12	1.1E-12	2.9E-13	4.4E-14	7.4E-12	2.0E-12

Notes:

[a] EPCs for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:

B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.7a
2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Noncarcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
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C O P C	Child Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Child Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics																
Antimony	5.6E-11	NV	3.0E-08	1.0E-06	5.6E-11	NV	4.0E-09	9.6E-08	5.6E-11	NV	3.0E-08	1.0E-06	5.6E-11	NV	4.0E-09	9.6E-08
Arsenic	7.7E-11	NV	1.2E-07	1.4E-06	7.7E-11	NV	1.7E-08	1.3E-07	8.1E-11	NV	1.3E-07	1.5E-06	8.1E-11	NV	1.7E-08	1.4E-07
Chromium, Hexavalent	1.8E-11	NV	NA	3.3E-07	1.8E-11	NV	NA	3.1E-08	1.9E-11	NV	NA	3.5E-07	1.9E-11	NV	NA	3.2E-08
Chromium, total	5.7E-10	NV	3.0E-07	1.0E-05	5.7E-10	NV	4.1E-08	9.6E-07	9.2E-10	NV	4.8E-07	1.7E-05	9.2E-10	NV	6.6E-08	1.6E-06
Copper	2.5E-10	NV	1.3E-07	4.6E-06	2.5E-10	NV	1.8E-08	4.3E-07	2.8E-10	NV	1.5E-07	5.2E-06	2.8E-10	NV	2.0E-08	4.8E-07
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	5.3E-12	NV	2.8E-09	9.6E-08	5.3E-12	NV	3.8E-10	9.0E-09	5.3E-12	NV	2.8E-09	9.6E-08	5.3E-12	NV	3.8E-10	9.0E-09
Thallium	9.8E-11	NV	5.2E-08	1.8E-06	9.8E-11	NV	7.1E-09	1.7E-07	9.8E-11	NV	5.2E-08	1.8E-06	9.8E-11	NV	7.1E-09	1.7E-07
Zinc	2.2E-09	NV	1.2E-06	4.1E-05	2.2E-09	NV	1.6E-07	3.8E-06	2.1E-09	NV	1.1E-06	3.9E-05	2.1E-09	NV	1.5E-07	3.6E-06
Polycyclic Aromatic Hydrocarbons																
1-Methyl naphthalene	9.3E-14	1.1E-09	7.4E-10	1.7E-09	9.3E-14	1.1E-09	1.0E-10	1.6E-10	8.0E-14	1.1E-09	6.3E-10	1.5E-09	8.0E-14	1.1E-09	8.7E-11	1.4E-10
2-Methyl naphthalene	1.1E-13	1.1E-09	8.6E-10	2.0E-09	1.1E-13	1.1E-09	1.2E-10	1.9E-10	9.3E-14	1.1E-09	7.3E-10	1.7E-09	9.3E-14	1.1E-09	1.0E-10	1.6E-10
Anthracene	1.6E-13	1.6E-10	1.2E-09	2.9E-09	1.6E-13	1.6E-10	1.7E-10	2.7E-10	1.3E-13	1.6E-10	1.0E-09	2.3E-09	1.3E-13	1.6E-10	1.4E-10	2.2E-10
Benzo (a) anthracene	9.1E-13	7.1E-11	7.2E-09	1.6E-08	9.1E-13	7.1E-11	9.8E-10	1.5E-09	6.6E-13	7.1E-11	5.2E-09	1.2E-08	6.6E-13	7.1E-11	7.1E-10	1.1E-09
Benzo (a) pyrene	1.0E-12	NV	8.3E-09	1.9E-08	1.0E-12	NV	1.1E-09	1.8E-09	7.7E-13	NV	6.1E-09	1.4E-08	7.7E-13	NV	8.3E-10	1.3E-09
Benzo (b) fluoranthene	1.3E-12	NV	1.0E-08	2.4E-08	1.3E-12	NV	1.4E-09	2.2E-09	9.6E-13	NV	7.6E-09	1.7E-08	9.6E-13	NV	1.0E-09	1.6E-09
Benzo (ghi) perylene	5.6E-13	NV	4.4E-09	1.0E-08	5.6E-13	NV	6.0E-10	9.5E-10	4.2E-13	NV	3.3E-09	7.7E-09	4.2E-13	NV	4.5E-10	7.2E-10
Benzo (k) fluoranthene	7.4E-13	NV	5.8E-09	1.3E-08	7.4E-13	NV	7.9E-10	1.3E-09	5.6E-13	NV	4.4E-09	1.0E-08	5.6E-13	NV	6.0E-10	9.5E-10
Chrysene	1.4E-12	NV	1.1E-08	2.5E-08	1.4E-12	NV	1.5E-09	2.3E-09	7.9E-13	NV	6.2E-09	1.4E-08	7.9E-13	NV	8.5E-10	1.3E-09
Dibenzo (a,h) anthracene	1.8E-13	NV	1.4E-09	3.3E-09	1.8E-13	NV	2.0E-10	3.1E-10	1.5E-13	NV	1.1E-09	2.6E-09	1.5E-13	NV	1.6E-10	2.5E-10
Fluoranthene	2.1E-12	NV	1.6E-08	3.7E-08	2.1E-12	NV	2.2E-09	3.5E-09	1.5E-12	NV	1.2E-08	2.8E-08	1.5E-12	NV	1.6E-09	2.6E-09
Indeno (1,2,3-cd) pyrene	7.6E-13	NV	6.0E-09	1.4E-08	7.6E-13	NV	8.2E-10	1.3E-09	5.6E-13	NV	4.4E-09	1.0E-08	5.6E-13	NV	6.0E-10	9.5E-10
Phenanthrene	5.3E-13	NV	4.2E-09	9.6E-09	5.3E-13	NV	5.7E-10	9.0E-10	4.2E-13	NV	3.3E-09	7.7E-09	4.2E-13	NV	4.5E-10	7.2E-10
Pyrene	1.9E-12	2.7E-10	1.5E-08	3.4E-08	1.9E-12	2.7E-10	2.0E-09	3.2E-09	1.4E-12	2.7E-10	1.1E-08	2.5E-08	1.4E-12	2.7E-10	1.5E-09	2.4E-09
B(a)P Equivalent	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA
Polychlorinated Biphenyls																
Total PCBs	1.3E-11	1.1E-08	1.0E-07	2.3E-07	1.3E-11	1.1E-08	1.4E-08	2.2E-08	1.1E-11	1.1E-08	8.4E-08	1.9E-07	1.1E-11	1.1E-08	1.1E-08	1.8E-08
Total Petroleum Hydrocarbons																
TPH as diesel	8.3E-10	1.0E-04	4.4E-06	1.5E-05	8.3E-10	1.0E-04	6.0E-07	1.4E-06	2.0E-10	1.0E-04	1.1E-06	3.7E-06	2.0E-10	1.0E-04	1.5E-07	3.5E-07
TPH as motor oil	7.9E-10	NV	4.2E-06	1.4E-05	7.9E-10	NV	5.7E-07	1.3E-06	6.3E-10	NV	3.3E-06	1.1E-05	6.3E-10	NV	4.5E-07	1.1E-06
Dioxins/Furans																
TEQ Human	2.0E-15	9.4E-13	3.2E-12	3.7E-11	2.0E-15	9.4E-13	4.4E-13	3.4E-12	3.9E-15	9.4E-13	6.2E-12	7.1E-11	3.9E-15	9.4E-13	8.4E-13	6.6E-12

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.

NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.7b
2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Noncarcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics																
Antimony	1.1E-10	NV	5.9E-08	2.0E-06	1.1E-10	NV	8.1E-09	1.9E-07	1.1E-10	NV	5.9E-08	2.0E-06	1.1E-10	NV	8.1E-09	1.9E-07
Arsenic	1.5E-10	NV	2.4E-07	2.8E-06	1.5E-10	NV	3.3E-08	2.6E-07	1.6E-10	NV	2.6E-07	2.9E-06	1.6E-10	NV	3.5E-08	2.8E-07
Chromium, Hexavalent	3.6E-11	NV	NA	6.6E-07	3.6E-11	NV	NA	6.2E-08	3.8E-11	NV	NA	6.9E-07	3.8E-11	NV	NA	6.5E-08
Chromium, total	1.1E-09	NV	5.9E-07	2.1E-05	1.1E-09	NV	8.1E-08	1.9E-06	1.8E-09	NV	9.7E-07	3.3E-05	1.8E-09	NV	1.3E-07	3.1E-06
Copper	5.1E-10	NV	2.7E-07	9.2E-06	5.1E-10	NV	3.7E-08	8.7E-07	5.7E-10	NV	3.0E-07	1.0E-05	5.7E-10	NV	4.1E-08	9.7E-07
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	1.1E-11	NV	5.6E-09	1.9E-07	1.1E-11	NV	7.6E-10	1.8E-08	1.1E-11	NV	5.6E-09	1.9E-07	1.1E-11	NV	7.6E-10	1.8E-08
Thallium	2.0E-10	NV	1.0E-07	3.6E-06	2.0E-10	NV	1.4E-08	3.3E-07	2.0E-10	NV	1.0E-07	3.6E-06	2.0E-10	NV	1.4E-08	3.3E-07
Zinc	4.5E-09	NV	2.4E-06	8.1E-05	4.5E-09	NV	3.2E-07	7.6E-06	4.3E-09	NV	2.3E-06	7.8E-05	4.3E-09	NV	3.1E-07	7.3E-06
Polycyclic Aromatic Hydrocarbons																
1-Methyl naphthalene	1.9E-13	2.1E-09	1.5E-09	3.4E-09	1.9E-13	2.1E-09	2.0E-10	3.2E-10	1.6E-13	2.1E-09	1.3E-09	2.9E-09	1.6E-13	2.1E-09	1.7E-10	2.7E-10
2-Methyl naphthalene	2.2E-13	2.3E-09	1.7E-09	4.0E-09	2.2E-13	2.3E-09	2.4E-10	3.7E-10	1.9E-13	2.3E-09	1.5E-09	3.4E-09	1.9E-13	2.3E-09	2.0E-10	3.1E-10
Anthracene	3.2E-13	3.2E-10	2.5E-09	5.7E-09	3.2E-13	3.2E-10	3.4E-10	5.4E-10	2.6E-13	3.2E-10	2.0E-09	4.7E-09	2.6E-13	3.2E-10	2.8E-10	4.4E-10
Benzo (a) anthracene	1.8E-12	1.4E-10	1.4E-08	3.3E-08	1.8E-12	1.4E-10	2.0E-09	3.1E-09	1.3E-12	1.4E-10	1.0E-08	2.4E-08	1.3E-12	1.4E-10	1.4E-09	2.3E-09
Benzo (a) pyrene	2.1E-12	NV	1.7E-08	3.8E-08	2.1E-12	NV	2.3E-09	3.6E-09	1.5E-12	NV	1.2E-08	2.8E-08	1.5E-12	NV	1.7E-09	2.6E-09
Benzo (b) fluoranthene	2.6E-12	NV	2.1E-08	4.7E-08	2.6E-12	NV	2.8E-09	4.4E-09	1.9E-12	NV	1.5E-08	3.5E-08	1.9E-12	NV	2.1E-09	3.3E-09
Benzo (ghi) perylene	1.1E-12	NV	8.8E-09	2.0E-08	1.1E-12	NV	1.2E-09	1.9E-09	8.4E-13	NV	6.7E-09	1.5E-08	8.4E-13	NV	9.1E-10	1.4E-09
Benzo (k) fluoranthene	1.5E-12	NV	1.2E-08	2.7E-08	1.5E-12	NV	1.6E-09	2.5E-09	1.1E-12	NV	8.8E-09	2.0E-08	1.1E-12	NV	1.2E-09	1.9E-09
Chrysene	2.7E-12	NV	2.1E-08	4.9E-08	2.7E-12	NV	2.9E-09	4.6E-09	1.6E-12	NV	1.2E-08	2.9E-08	1.6E-12	NV	1.7E-09	2.7E-09
Dibenzo (a,h) anthracene	3.6E-13	NV	2.9E-09	6.6E-09	3.6E-13	NV	3.9E-10	6.2E-10	2.9E-13	NV	2.3E-09	5.3E-09	2.9E-13	NV	3.1E-10	4.9E-10
Fluoranthene	4.1E-12	NV	3.3E-08	7.5E-08	4.1E-12	NV	4.4E-09	7.0E-09	3.0E-12	NV	2.4E-08	5.5E-08	3.0E-12	NV	3.3E-09	5.2E-09
Indeno (1,2,3-cd) pyrene	1.5E-12	NV	1.2E-08	2.8E-08	1.5E-12	NV	1.6E-09	2.6E-09	1.1E-12	NV	8.8E-09	2.0E-08	1.1E-12	NV	1.2E-09	1.9E-09
Phenanthrene	1.1E-12	NV	8.3E-09	1.9E-08	1.1E-12	NV	1.1E-09	1.8E-09	8.4E-13	NV	6.7E-09	1.5E-08	8.4E-13	NV	9.1E-10	1.4E-09
Pyrene	3.8E-12	5.5E-10	3.0E-08	6.9E-08	3.8E-12	5.5E-10	4.1E-09	6.5E-09	2.8E-12	5.5E-10	2.2E-08	5.1E-08	2.8E-12	5.5E-10	3.0E-09	4.8E-09
B(a)P Equivalent	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA
Polychlorinated Biphenyls																
Total PCBs	2.6E-11	2.3E-08	2.0E-07	4.7E-07	2.6E-11	2.3E-08	2.8E-08	4.4E-08	2.1E-11	2.3E-08	1.7E-07	3.9E-07	2.1E-11	2.3E-08	2.3E-08	3.6E-08
Total Petroleum Hydrocarbons																
TPH as diesel	1.7E-09	2.0E-04	8.8E-06	3.0E-05	1.7E-09	2.0E-04	1.2E-06	2.8E-06	4.1E-10	2.0E-04	2.1E-06	7.4E-06	4.1E-10	2.0E-04	2.9E-07	6.9E-07
TPH as motor oil	1.6E-09	NV	8.3E-06	2.9E-05	1.6E-09	NV	1.1E-06	2.7E-06	1.3E-09	NV	6.6E-06	2.3E-05	1.3E-09	NV	9.1E-07	2.1E-06
Dioxins/Furans																
TEQ Human	4.1E-15	1.9E-12	6.4E-12	7.3E-11	4.1E-15	1.9E-12	8.7E-13	6.9E-12	7.8E-15	1.9E-12	1.2E-11	1.4E-10	7.8E-15	1.9E-12	1.7E-12	1.3E-11

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.

NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.7c
2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Noncarcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs:
Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics																
Antimony	1.1E-08	NV	1.1E-07	1.4E-07	1.1E-08	NV	9.3E-08	5.9E-08	1.1E-08	NV	1.1E-07	1.4E-07	1.1E-08	NV	9.3E-08	5.9E-08
Arsenic	1.5E-08	NV	4.4E-07	2.0E-07	1.5E-08	NV	3.8E-07	8.1E-08	1.6E-08	NV	4.6E-07	2.1E-07	1.6E-08	NV	4.0E-07	8.5E-08
Chromium, Hexavalent	3.6E-09	NV	NA	4.6E-08	3.6E-09	NV	NA	1.9E-08	3.8E-09	NV	NA	4.9E-08	3.8E-09	NV	NA	2.0E-08
Chromium, total	1.1E-07	NV	1.1E-06	1.4E-06	1.1E-07	NV	9.3E-07	6.0E-07	1.8E-07	NV	1.8E-06	2.3E-06	1.8E-07	NV	1.5E-06	9.7E-07
Copper	5.1E-08	NV	4.9E-07	6.5E-07	5.1E-08	NV	4.2E-07	2.7E-07	5.7E-08	NV	5.4E-07	7.3E-07	5.7E-08	NV	4.7E-07	3.0E-07
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	1.1E-09	NV	1.0E-08	1.4E-08	1.1E-09	NV	8.7E-09	5.6E-09	1.1E-09	NV	1.0E-08	1.4E-08	1.1E-09	NV	8.7E-09	5.6E-09
Thallium	2.0E-08	NV	1.9E-07	2.5E-07	2.0E-08	NV	1.6E-07	1.0E-07	2.0E-08	NV	1.9E-07	2.5E-07	2.0E-08	NV	1.6E-07	1.0E-07
Zinc	4.5E-07	NV	4.3E-06	5.7E-06	4.5E-07	NV	3.7E-06	2.4E-06	4.3E-07	NV	4.1E-06	5.5E-06	4.3E-07	NV	3.5E-06	2.3E-06
Polycyclic Aromatic Hydrocarbons																
1-Methyl naphthalene	1.9E-11	1.3E-10	2.7E-09	2.4E-10	1.9E-11	1.3E-10	2.3E-09	9.8E-11	1.6E-11	1.3E-10	2.3E-09	2.1E-10	1.6E-11	1.3E-10	2.0E-09	8.5E-11
2-Methyl naphthalene	2.2E-11	1.4E-10	3.1E-09	2.8E-10	2.2E-11	1.4E-10	2.7E-09	1.2E-10	1.9E-11	1.4E-10	2.7E-09	2.4E-10	1.9E-11	1.4E-10	2.3E-09	9.7E-11
Anthracene	3.2E-11	2.0E-11	4.5E-09	4.0E-10	3.2E-11	2.0E-11	3.9E-09	1.7E-10	2.6E-11	2.0E-11	3.7E-09	3.3E-10	2.6E-11	2.0E-11	3.2E-09	1.4E-10
Benzo (a) anthracene	1.8E-10	8.9E-12	2.6E-08	2.3E-09	1.8E-10	8.9E-12	2.2E-08	9.5E-10	1.3E-10	8.9E-12	1.9E-08	1.7E-09	1.3E-10	8.9E-12	1.6E-08	7.0E-10
Benzo (a) pyrene	2.1E-10	NV	3.0E-08	2.7E-09	2.1E-10	NV	2.6E-08	1.1E-09	1.5E-10	NV	2.2E-08	2.0E-09	1.5E-10	NV	1.9E-08	8.1E-10
Benzo (b) fluoranthene	2.6E-10	NV	3.7E-08	3.3E-09	2.6E-10	NV	3.2E-08	1.4E-09	1.9E-10	NV	2.8E-08	2.4E-09	1.9E-10	NV	2.4E-08	1.0E-09
Benzo (ghi) perylene	1.1E-10	NV	1.6E-08	1.4E-09	1.1E-10	NV	1.4E-08	5.9E-10	8.5E-11	NV	1.2E-08	1.1E-09	8.5E-11	NV	1.0E-08	4.4E-10
Benzo (k) fluoranthene	1.5E-10	NV	2.1E-08	1.9E-09	1.5E-10	NV	1.8E-08	7.8E-10	1.1E-10	NV	1.6E-08	1.4E-09	1.1E-10	NV	1.4E-08	5.8E-10
Chrysene	2.7E-10	NV	3.9E-08	3.5E-09	2.7E-10	NV	3.4E-08	1.4E-09	1.6E-10	NV	2.3E-08	2.0E-09	1.6E-10	NV	1.9E-08	8.3E-10
Dibenzo (a,h) anthracene	3.7E-11	NV	5.2E-09	4.6E-10	3.7E-11	NV	4.5E-09	1.9E-10	2.9E-11	NV	4.2E-09	3.7E-10	2.9E-11	NV	3.6E-09	1.5E-10
Fluoranthene	4.1E-10	NV	5.9E-08	5.3E-09	4.1E-10	NV	5.1E-08	2.2E-09	3.1E-10	NV	4.4E-08	3.9E-09	3.1E-10	NV	3.7E-08	1.6E-09
Indeno (1,2,3-cd) pyrene	1.5E-10	NV	2.2E-08	1.9E-09	1.5E-10	NV	1.9E-08	8.0E-10	1.1E-10	NV	1.6E-08	1.4E-09	1.1E-10	NV	1.4E-08	5.8E-10
Phenanthrene	1.1E-10	NV	1.5E-08	1.3E-09	1.1E-10	NV	1.3E-08	5.5E-10	8.5E-11	NV	1.2E-08	1.1E-09	8.5E-11	NV	1.0E-08	4.4E-10
Pyrene	3.8E-10	3.4E-11	5.5E-08	4.8E-09	3.8E-10	3.4E-11	4.7E-08	2.0E-09	2.8E-10	3.4E-11	4.0E-08	3.6E-09	2.8E-10	3.4E-11	3.5E-08	1.5E-09
B(a)P Equivalent	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA
Polychlorinated Biphenyls																
Total PCBs	2.6E-09	1.4E-09	3.7E-07	3.3E-08	2.6E-09	1.4E-09	3.2E-07	1.4E-08	2.1E-09	1.4E-09	3.0E-07	2.7E-08	2.1E-09	1.4E-09	2.6E-07	1.1E-08
Total Petroleum Hydrocarbons																
TPH as diesel	1.7E-07	1.3E-05	1.6E-05	2.1E-06	1.7E-07	1.3E-05	1.4E-05	8.8E-07	4.1E-08	1.3E-05	3.9E-06	5.2E-07	4.1E-08	1.3E-05	3.3E-06	2.1E-07
TPH as motor oil	1.6E-07	NV	1.5E-05	2.0E-06	1.6E-07	NV	1.3E-05	8.3E-07	1.3E-07	NV	1.2E-05	1.6E-06	1.3E-07	NV	1.0E-05	6.6E-07
Dioxins/Furans																
TEQ Human	4.1E-13	1.2E-13	1.2E-11	5.2E-12	4.1E-13	1.2E-13	1.0E-11	2.1E-12	7.8E-13	1.2E-13	2.2E-11	1.0E-11	7.8E-13	1.2E-13	1.9E-11	4.1E-12

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.

NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.8a
2-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User- Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk
Inorganics										
Antimony	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Arsenic	1.2E-10	NV	1.4E-07	1.5E-06	1.6E-06	1.3E-10	NV	1.5E-07	1.6E-06	1.7E-06
Chromium, Hexavalent	2.8E-09	NV	NA	8.4E-08	8.7E-08	2.9E-09	NV	NA	8.8E-08	9.1E-08
Chromium, total	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Copper	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Lead	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Thallium	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Zinc	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Polycyclic Aromatic Hydrocarbons										
1-Methyl naphthalene	4.4E-16	5.1E-12	4.7E-12	9.7E-12	2.0E-11	3.8E-16	5.1E-12	4.0E-12	8.4E-12	1.7E-11
2-Methyl naphthalene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Anthracene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Benzo (a) anthracene	NA	8.0E-12	NA	NA	8.0E-12	NA	8.0E-12	NA	NA	8.0E-12
Benzo (a) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (b) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (ghi) perylene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Benzo (k) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Chrysene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Dibenzo (a,h) anthracene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Fluoranthene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Phenanthrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Pyrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
B(a)P Equivalent	1.8E-12	NV	6.6E-09	1.4E-08	2.1E-08	1.3E-12	NV	4.9E-09	1.1E-08	1.6E-08
Polychlorinated Biphenyls										
Total PCBs	4.8E-13	4.2E-10	2.5E-08	5.3E-08	7.8E-08	3.9E-13	4.2E-10	2.1E-08	4.3E-08	6.5E-08
Total Petroleum Hydrocarbons										
TPH as diesel	NC	NC	NC	NC	--	NC	NC	NC	NC	--
TPH as motor oil	NC	NC	NC	NC	--	NC	NC	NC	NC	--

Table AOC10-B1.8a
2-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User- Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk
Dioxins/Furans										
TEQ Human	2.9E-11	1.3E-08	5.2E-08	5.4E-07	6.0E-07	5.5E-11	1.3E-08	1.0E-07	1.0E-06	1.2E-06
Cumulative ILCR	**3E-09**	**1E-08**	**2E-07**	**2E-06**	**2E-06**	**3E-09**	**1E-08**	**3E-07**	**3E-06**	**3E-06**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
ILCR = Incremental Lifetime Cancer Risk.
mg/kg-day = milligrams per kilogram per day.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.8b
2-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk
Inorganics										
Antimony	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Arsenic	2.5E-10	NV	2.9E-07	3.0E-06	3.3E-06	2.6E-10	NV	3.0E-07	3.1E-06	3.4E-06
Chromium, Hexavalent	5.6E-09	NV	NA	1.7E-07	1.7E-07	5.9E-09	NV	NA	1.8E-07	1.8E-07
Chromium, total	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Copper	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Lead	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Thallium	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Zinc	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Polycyclic Aromatic Hydrocarbons										
1-Methyl naphthalene	8.9E-16	1.0E-11	9.4E-12	1.9E-11	3.9E-11	7.6E-16	1.0E-11	8.1E-12	1.7E-11	3.5E-11
2-Methyl naphthalene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Anthracene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Benzo (a) anthracene	NA	1.6E-11	NA	NA	1.6E-11	NA	1.6E-11	NA	NA	1.6E-11
Benzo (a) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (b) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (ghi) perylene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Benzo (k) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Chrysene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Dibenzo (a,h) anthracene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Fluoranthene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Phenanthrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Pyrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
B(a)P Equivalent	3.5E-12	NV	1.3E-08	2.9E-08	4.2E-08	2.6E-12	NV	9.8E-09	2.1E-08	3.1E-08
Polychlorinated Biphenyls										
Total PCBs	9.6E-13	8.5E-10	5.1E-08	1.1E-07	1.6E-07	7.9E-13	8.5E-10	4.2E-08	8.7E-08	1.3E-07
Total Petroleum Hydrocarbons										
TPH as diesel	NC	NC	NC	NC	--	NC	NC	NC	NC	--
TPH as motor oil	NC	NC	NC	NC	--	NC	NC	NC	NC	--

Table AOC10-B1.8b
2-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk
Dioxins/Furans										
TEQ Human	5.7E-11	2.7E-08	1.0E-07	1.1E-06	1.2E-06	1.1E-10	2.7E-08	2.0E-07	2.1E-06	2.3E-06
Cumulative ILCR	**6E-09**	**3E-08**	**5E-07**	**4E-06**	**5E-06**	**6E-09**	**3E-08**	**6E-07**	**5E-06**	**6E-06**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
ILCR = Incremental Lifetime Cancer Risk.
mg/kg-day = milligrams per kilogram per day.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.8c
2-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk
Inorganics										
Antimony	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Arsenic	2.5E-08	NV	1.4E-06	3.8E-07	1.8E-06	2.6E-08	NV	1.5E-06	4.0E-07	1.9E-06
Chromium, Hexavalent	3.6E-07	NV	NA	9.8E-09	3.7E-07	3.8E-07	NV	NA	1.0E-08	3.9E-07
Chromium, total	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Copper	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Lead	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Thallium	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Zinc	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Polycyclic Aromatic Hydrocarbons										
1-Methyl naphthalene	8.9E-14	6.4E-13	4.5E-11	2.5E-12	4.8E-11	7.6E-14	6.4E-13	3.9E-11	2.1E-12	4.2E-11
2-Methyl naphthalene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Anthracene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Benzo (a) anthracene	NA	6.4E-13	NA	NA	6.4E-13	NA	6.4E-13	NA	NA	6.4E-13
Benzo (a) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (b) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (ghi) perylene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Benzo (k) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Chrysene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Dibenzo (a,h) anthracene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Fluoranthene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Phenanthrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Pyrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
B(a)P Equivalent	2.3E-10	NV	2.7E-08	1.7E-09	2.9E-08	1.7E-10	NV	2.0E-08	1.2E-09	2.1E-08
Polychlorinated Biphenyls										
Total PCBs	9.6E-11	5.3E-11	2.4E-07	1.3E-08	2.6E-07	7.9E-11	5.3E-11	2.0E-07	1.1E-08	2.1E-07
Total Petroleum Hydrocarbons										
TPH as diesel	NC	NC	NC	NC	--	NC	NC	NC	NC	--
TPH as motor oil	NC	NC	NC	NC	--	NC	NC	NC	NC	--

Table AOC10-B1.8c
2-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk
Dioxins/Furans										
TEQ Human	5.7E-09	1.7E-09	5.0E-07	1.4E-07	6.4E-07	1.1E-08	1.7E-09	9.6E-07	2.6E-07	1.2E-06
Cumulative ILCR	**4E-07**	**2E-09**	**2E-06**	**5E-07**	**3E-06**	**4E-07**	**2E-09**	**3E-06**	**7E-07**	**4E-06**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
ILCR = Incremental Lifetime Cancer Risk.
mg/kg-day = milligrams per kilogram per day.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.9a
2-Foot Scouring Scenario HIs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child Camper (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Camper (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Camper (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Child Camper (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Child Camper (2 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Child Camper (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Camper (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Camper (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Child Camper (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Child Camper (2 to 6 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Total Hazard Index
Inorganics																					
Antimony	1.9E-07	NV	7.4E-05	2.6E-03	2.6E-03	1.9E-07	NV	1.0E-05	2.4E-04	2.5E-04	1.9E-07	NV	7.4E-05	2.6E-03	2.6E-03	1.9E-07	NV	1.0E-05	2.4E-04	2.5E-04
Arsenic	5.1E-06	NV	3.5E-02	4.0E-01	4.3E-01	5.1E-06	NV	4.7E-03	3.7E-02	4.2E-02	5.4E-06	NV	3.6E-02	4.2E-01	4.6E-01	5.4E-06	NV	5.0E-03	3.9E-02	4.4E-02
Chromium, Hexavalent	1.8E-07	NV	NA	1.1E-04	1.1E-04	1.8E-07	NV	NA	1.0E-05	1.0E-05	1.9E-07	NV	NA	1.2E-04	1.2E-04	1.9E-07	NV	NA	1.1E-05	1.1E-05
Chromium, total	9.4E-06	NV	2.0E-07	6.8E-06	1.6E-05	9.4E-06	NV	2.7E-08	6.4E-07	1.0E-05	1.5E-05	NV	3.2E-07	1.1E-05	2.7E-05	1.5E-05	NV	4.4E-08	1.0E-06	1.6E-05
Copper	1.6E-09	NV	3.4E-06	1.2E-04	1.2E-04	1.6E-09	NV	4.6E-07	1.1E-05	1.1E-05	1.8E-09	NV	3.7E-06	1.3E-04	1.3E-04	1.8E-09	NV	5.1E-07	1.2E-05	1.3E-05
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	1.8E-07	NV	1.7E-05	6.0E-04	6.2E-04	1.8E-07	NV	2.4E-06	5.7E-05	5.9E-05	1.8E-07	NV	1.7E-05	6.0E-04	6.2E-04	1.8E-07	NV	2.4E-06	5.7E-05	5.9E-05
Thallium	2.5E-06	NV	5.2E-03	1.8E-01	1.8E-01	2.5E-06	NV	7.1E-04	1.7E-02	1.7E-02	2.5E-06	NV	5.2E-03	1.8E-01	1.8E-01	2.5E-06	NV	7.1E-04	1.7E-02	1.7E-02
Zinc	1.9E-09	NV	3.9E-06	1.4E-04	1.4E-04	1.9E-09	NV	5.4E-07	1.3E-05	1.3E-05	1.8E-09	NV	3.8E-06	1.3E-04	1.3E-04	1.8E-09	NV	5.1E-07	1.2E-05	1.3E-05
Polycyclic Aromatic Hydrocarbons																				
1-Methyl naphthalene	3.3E-13	3.8E-09	1.1E-08	2.4E-08	3.9E-08	3.3E-13	3.8E-09	1.4E-09	2.3E-09	7.5E-09	2.9E-13	3.8E-09	9.1E-09	2.1E-08	3.4E-08	2.9E-13	3.8E-09	1.2E-09	2.0E-09	7.0E-09
2-Methyl naphthalene	6.8E-12	7.0E-08	2.2E-07	5.0E-07	7.8E-07	6.8E-12	7.0E-08	2.9E-08	4.7E-08	1.5E-07	5.8E-12	7.0E-08	1.8E-07	4.2E-07	6.7E-07	5.8E-12	7.0E-08	2.5E-08	3.9E-08	1.3E-07
Anthracene	1.3E-13	1.3E-10	4.2E-09	9.5E-09	1.4E-08	1.3E-13	1.3E-10	5.7E-10	8.9E-10	1.6E-09	1.1E-13	1.3E-10	3.4E-09	7.8E-09	1.1E-08	1.1E-13	1.3E-10	4.6E-10	7.3E-10	1.3E-09
Benzo (a) anthracene	7.6E-12	5.9E-10	2.4E-07	5.5E-07	7.9E-07	7.6E-12	5.9E-10	3.3E-08	5.1E-08	8.5E-08	5.5E-12	5.9E-10	1.7E-07	4.0E-07	5.8E-07	5.5E-12	5.9E-10	2.4E-08	3.8E-08	6.2E-08
Benzo (a) pyrene	5.2E-07	NV	2.8E-05	6.3E-05	9.1E-05	5.2E-07	NV	3.8E-06	5.9E-06	1.0E-05	3.8E-07	NV	2.0E-05	4.6E-05	6.7E-05	3.8E-07	NV	2.8E-06	4.4E-06	7.5E-06
Benzo (b) fluoranthene	1.1E-11	NV	3.4E-07	7.9E-07	1.1E-06	1.1E-11	NV	4.7E-08	7.4E-08	1.2E-07	8.0E-12	NV	2.5E-07	5.8E-07	8.3E-07	8.0E-12	NV	3.4E-08	5.4E-08	8.9E-08
Benzo (ghi) perylene	4.7E-12	NV	1.5E-07	3.4E-07	4.9E-07	4.7E-12	NV	2.0E-08	3.2E-08	5.2E-08	3.5E-12	NV	1.1E-07	2.6E-07	3.7E-07	3.5E-12	NV	1.5E-08	2.4E-08	3.9E-08
Benzo (k) fluoranthene	6.2E-12	NV	1.9E-07	4.5E-07	6.4E-07	6.2E-12	NV	2.6E-08	4.2E-08	6.8E-08	4.6E-12	NV	1.5E-07	3.4E-07	4.8E-07	4.6E-12	NV	2.0E-08	3.2E-08	5.1E-08
Chrysene	1.1E-11	NV	3.6E-07	8.2E-07	1.2E-06	1.1E-11	NV	4.9E-08	7.7E-08	1.3E-07	6.6E-12	NV	2.1E-07	4.8E-07	6.8E-07	6.6E-12	NV	2.8E-08	4.5E-08	7.3E-08
Dibenzo (a,h) anthracene	9.1E-08	NV	4.8E-06	1.1E-05	1.6E-05	9.1E-08	NV	6.5E-07	1.0E-06	1.8E-06	7.3E-08	NV	3.8E-06	8.8E-06	1.3E-05	7.3E-08	NV	5.2E-07	8.2E-07	1.4E-06
Fluoranthene	1.3E-11	NV	4.1E-07	9.4E-07	1.3E-06	1.3E-11	NV	5.6E-08	8.8E-08	1.4E-07	9.5E-12	NV	3.0E-07	6.9E-07	9.9E-07	9.5E-12	NV	4.1E-08	6.5E-08	1.1E-07
Indeno (1,2,3-cd) pyrene	6.4E-12	NV	2.0E-07	4.6E-07	6.6E-07	6.4E-12	NV	2.7E-08	4.3E-08	7.1E-08	4.6E-12	NV	1.5E-07	3.4E-07	4.8E-07	4.6E-12	NV	2.0E-08	3.2E-08	5.1E-08
Phenanthrene	4.4E-13	NV	1.4E-08	3.2E-08	4.6E-08	4.4E-13	NV	1.9E-09	3.0E-09	4.9E-09	3.5E-13	NV	1.1E-08	2.6E-08	3.7E-08	3.5E-13	NV	1.5E-09	2.4E-09	3.9E-09
Pyrene	1.6E-11	2.3E-09	5.0E-07	1.1E-06	1.7E-06	1.6E-11	2.3E-09	6.8E-08	1.1E-07	1.8E-07	1.2E-11	2.3E-09	3.7E-07	8.5E-07	1.2E-06	1.2E-11	2.3E-09	5.0E-08	8.0E-08	1.3E-07
B(a)P Equivalent	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Polychlorinated Biphenyls																				
Total PCBs	1.6E-07	1.4E-04	5.1E-03	1.2E-02	1.7E-02	1.6E-07	1.4E-04	6.9E-04	1.1E-03	1.9E-03	1.3E-07	1.4E-04	4.2E-03	9.6E-03	1.4E-02	1.3E-07	1.4E-04	5.7E-04	9.0E-04	1.6E-03
Total Petroleum Hydrocarbons																				
TPH as diesel	3.2E-09	3.8E-04	2.3E-04	8.0E-04	1.4E-03	3.2E-09	3.8E-04	3.2E-05	7.5E-05	4.9E-04	7.8E-10	3.8E-04	5.6E-05	1.9E-04	6.3E-04	7.8E-10	3.8E-04	7.7E-06	1.8E-05	4.1E-04
TPH as motor oil	1.3E-09	NV	2.8E-05	9.6E-05	1.2E-04	1.3E-09	NV	3.8E-06	9.0E-06	1.3E-05	1.1E-09	NV	2.2E-05	7.6E-05	9.9E-05	1.1E-09	NV	3.0E-06	7.2E-06	1.0E-05
Dioxins/Furans																				
TEQ Human	5.1E-08	2.4E-05	4.6E-03	5.2E-02	5.7E-02	5.1E-08	2.4E-05	6.2E-04	4.9E-03	5.6E-03	9.8E-08	2.4E-05	8.8E-03	1.0E-01	1.1E-01	9.8E-08	2.4E-05	1.2E-03	9.5E-03	1.1E-02
Total Hazard Index	**2E-05**	**6E-04**	**5E-02**	**6E-01**	**7E-01**	**2E-05**	**6E-04**	**7E-03**	**6E-02**	**7E-02**	**2E-05**	**6E-04**	**5E-02**	**7E-01**	**8E-01**	**2E-05**	**6E-04**	**7E-03**	**7E-02**	**7E-02**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
H I = Hazard Index
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.9b
2-Foot Scouring Scenario HIs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Total Hazard Index
Inorganics																					
Antimony	3.8E-07	NV	1.5E-04	5.1E-03	5.3E-03	3.8E-07	NV	2.0E-05	4.8E-04	5.0E-04	3.8E-07	NV	1.5E-04	5.1E-03	5.3E-03	3.8E-07	NV	2.0E-05	4.8E-04	5.0E-04
Arsenic	1.0E-05	NV	7.0E-02	8.0E-01	8.7E-01	1.0E-05	NV	9.5E-03	7.5E-02	8.4E-02	1.1E-05	NV	7.3E-02	8.4E-01	9.1E-01	1.1E-05	NV	1.0E-02	7.9E-02	8.9E-02
Chromium, Hexavalent	3.6E-07	NV	NA	2.2E-04	2.2E-04	3.6E-07	NV	NA	2.1E-05	2.1E-05	3.8E-07	NV	NA	2.3E-04	2.3E-04	3.8E-07	NV	NA	2.2E-05	2.2E-05
Chromium, total	1.9E-05	NV	4.0E-07	1.4E-05	3.3E-05	1.9E-05	NV	5.4E-08	1.3E-06	2.0E-05	3.1E-05	NV	6.4E-07	2.2E-05	5.3E-05	3.1E-05	NV	8.8E-08	2.1E-06	3.3E-05
Copper	3.2E-09	NV	6.7E-06	2.3E-04	2.4E-04	3.2E-09	NV	9.2E-07	2.2E-05	2.3E-05	3.6E-09	NV	7.5E-06	2.6E-04	2.7E-04	3.6E-09	NV	1.0E-06	2.4E-05	2.5E-05
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	3.5E-07	NV	3.5E-05	1.2E-03	1.2E-03	3.5E-07	NV	4.8E-06	1.1E-04	1.2E-04	3.5E-07	NV	3.5E-05	1.2E-03	1.2E-03	3.5E-07	NV	4.8E-06	1.1E-04	1.2E-04
Thallium	4.9E-06	NV	1.0E-02	3.6E-01	3.7E-01	4.9E-06	NV	1.4E-03	3.3E-02	3.5E-02	4.9E-06	NV	1.0E-02	3.6E-01	3.7E-01	4.9E-06	NV	1.4E-03	3.3E-02	3.5E-02
Zinc	3.7E-09	NV	7.9E-06	2.7E-04	2.8E-04	3.7E-09	NV	1.1E-06	2.5E-05	2.6E-05	3.6E-09	NV	7.5E-06	2.6E-04	2.7E-04	3.6E-09	NV	1.0E-06	2.4E-05	2.5E-05
Polycyclic Aromatic Hydrocarbons																				
1-Methyl naphthalene	6.7E-13	7.7E-09	2.1E-08	4.8E-08	7.7E-08	6.7E-13	7.7E-09	2.9E-09	4.5E-09	1.5E-08	5.7E-13	7.7E-09	1.8E-08	4.2E-08	6.7E-08	5.7E-13	7.7E-09	2.5E-09	3.9E-09	1.4E-08
2-Methyl naphthalene	1.4E-11	1.4E-07	4.3E-07	9.9E-07	1.6E-06	1.4E-11	1.4E-07	5.9E-08	9.3E-08	2.9E-07	1.2E-11	1.4E-07	3.6E-07	8.4E-07	1.3E-06	1.2E-11	1.4E-07	5.0E-08	7.9E-08	2.7E-07
Anthracene	2.6E-13	2.7E-10	8.3E-09	1.9E-08	2.8E-08	2.6E-13	2.7E-10	1.1E-09	1.8E-09	3.2E-09	2.1E-13	2.7E-10	6.8E-09	1.6E-08	2.3E-08	2.1E-13	2.7E-10	9.2E-10	1.5E-09	2.7E-09
Benzo (a) anthracene	1.5E-11	1.2E-09	4.8E-07	1.1E-06	1.6E-06	1.5E-11	1.2E-09	6.5E-08	1.0E-07	1.7E-07	1.1E-11	1.2E-09	3.5E-07	8.0E-07	1.2E-06	1.1E-11	1.2E-09	4.8E-08	7.5E-08	1.2E-07
Benzo (a) pyrene	1.0E-06	NV	5.5E-05	1.3E-04	1.8E-04	1.0E-06	NV	7.5E-06	1.2E-05	2.0E-05	7.7E-07	NV	4.0E-05	9.3E-05	1.3E-04	7.7E-07	NV	5.5E-06	8.7E-06	1.5E-05
Benzo (b) fluoranthene	2.2E-11	NV	6.9E-07	1.6E-06	2.3E-06	2.2E-11	NV	9.4E-08	1.5E-07	2.4E-07	1.6E-11	NV	5.0E-07	1.2E-06	1.7E-06	1.6E-11	NV	6.9E-08	1.1E-07	1.8E-07
Benzo (ghi) perylene	9.3E-12	NV	2.9E-07	6.8E-07	9.7E-07	9.3E-12	NV	4.0E-08	6.4E-08	1.0E-07	7.0E-12	NV	2.2E-07	5.1E-07	7.3E-07	7.0E-12	NV	3.0E-08	4.8E-08	7.8E-08
Benzo (k) fluoranthene	1.2E-11	NV	3.9E-07	8.9E-07	1.3E-06	1.2E-11	NV	5.3E-08	8.4E-08	1.4E-07	9.3E-12	NV	2.9E-07	6.7E-07	9.6E-07	9.3E-12	NV	4.0E-08	6.3E-08	1.0E-07
Chrysene	2.3E-11	NV	7.2E-07	1.6E-06	2.4E-06	2.3E-11	NV	9.8E-08	1.5E-07	2.5E-07	1.3E-11	NV	4.2E-07	9.5E-07	1.4E-06	1.3E-11	NV	5.7E-08	8.9E-08	1.5E-07
Dibenzo (a,h) anthracene	1.8E-07	NV	9.6E-06	2.2E-05	3.2E-05	1.8E-07	NV	1.3E-06	2.1E-06	3.6E-06	1.5E-07	NV	7.6E-06	1.8E-05	2.5E-05	1.5E-07	NV	1.0E-06	1.6E-06	2.8E-06
Fluoranthene	2.6E-11	NV	8.1E-07	1.9E-06	2.7E-06	2.6E-11	NV	1.1E-07	1.8E-07	2.9E-07	1.9E-11	NV	6.0E-07	1.4E-06	2.0E-06	1.9E-11	NV	8.2E-08	1.3E-07	2.1E-07
Indeno (1,2,3-cd) pyrene	1.3E-11	NV	4.0E-07	9.2E-07	1.3E-06	1.3E-11	NV	5.5E-08	8.7E-08	1.4E-07	9.3E-12	NV	2.9E-07	6.7E-07	9.6E-07	9.3E-12	NV	4.0E-08	6.3E-08	1.0E-07
Phenanthrene	8.8E-13	NV	2.8E-08	6.4E-08	9.1E-08	8.8E-13	NV	3.8E-09	6.0E-09	9.8E-09	7.0E-13	NV	2.2E-08	5.1E-08	7.3E-08	7.0E-13	NV	3.0E-09	4.8E-09	7.8E-09
Pyrene	3.2E-11	4.6E-09	1.0E-06	2.3E-06	3.3E-06	3.2E-11	4.6E-09	1.4E-07	2.2E-07	3.6E-07	2.3E-11	4.6E-09	7.4E-07	1.7E-06	2.4E-06	2.3E-11	4.6E-09	1.0E-07	1.6E-07	2.6E-07
B(a)P Equivalent	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Polychlorinated Biphenyls																				
Total PCBs	3.2E-07	2.9E-04	1.0E-02	2.3E-02	3.4E-02	3.2E-07	2.9E-04	1.4E-03	2.2E-03	3.9E-03	2.7E-07	2.9E-04	8.4E-03	1.9E-02	2.8E-02	2.7E-07	2.9E-04	1.1E-03	1.8E-03	3.2E-03
Total Petroleum Hydrocarbons																				
TPH as diesel	6.4E-09	7.7E-04	4.6E-04	1.6E-03	2.8E-03	6.4E-09	7.7E-04	6.3E-05	1.5E-04	9.8E-04	1.6E-09	7.7E-04	1.1E-04	3.9E-04	1.3E-03	1.6E-09	7.7E-04	1.5E-05	3.6E-05	8.2E-04
TPH as motor oil	2.6E-09	NV	5.5E-05	1.9E-04	2.5E-04	2.6E-09	NV	7.6E-06	1.8E-05	2.6E-05	2.1E-09	NV	4.4E-05	1.5E-04	2.0E-04	2.1E-09	NV	6.0E-06	1.4E-05	2.0E-05
Dioxins/Furans																				
TEQ Human	1.0E-07	4.7E-05	9.1E-03	1.0E-01	1.1E-01	1.0E-07	4.7E-05	1.2E-03	9.8E-03	1.1E-02	2.0E-07	4.7E-05	1.8E-02	2.0E-01	2.2E-01	2.0E-07	4.7E-05	2.4E-03	1.9E-02	2.1E-02
Total Hazard Index	**4E-05**	**1E-03**	**1E-01**	**1E+00**	**1E+00**	**4E-05**	**1E-03**	**1E-02**	**1E-01**	**1E-01**	**5E-05**	**1E-03**	**1E-01**	**1E+00**	**2E+00**	**5E-05**	**1E-03**	**1E-02**	**1E-01**	**1E-01**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
H I = Hazard Index
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.9c
2-Foot Scouring Scenario HIs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Total Hazard Index	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Total Hazard Index
Inorganics																				
Antimony	3.8E-05	NV	2.7E-04	3.6E-04	6.7E-04	3.8E-05	NV	2.3E-04	1.5E-04	4.2E-04	3.8E-05	NV	2.7E-04	3.6E-04	6.7E-04	3.8E-05	NV	2.3E-04	1.5E-04	4.2E-04
Arsenic	1.0E-03	NV	1.3E-01	5.6E-02	1.8E-01	1.0E-03	NV	1.1E-01	2.3E-02	1.3E-01	1.1E-03	NV	1.3E-01	5.9E-02	1.9E-01	1.1E-03	NV	1.1E-01	2.4E-02	1.4E-01
Chromium, Hexavalent	3.6E-05	NV	NA	1.5E-05	5.2E-05	3.6E-05	NV	NA	6.4E-06	4.3E-05	3.8E-05	NV	NA	1.6E-05	5.4E-05	3.8E-05	NV	NA	6.7E-06	4.5E-05
Chromium, total	1.9E-03	NV	7.2E-07	9.6E-07	1.9E-03	1.9E-03	NV	6.2E-07	4.0E-07	1.9E-03	3.1E-03	NV	1.2E-06	1.6E-06	3.1E-03	3.1E-03	NV	1.0E-06	6.4E-07	3.1E-03
Copper	3.2E-07	NV	1.2E-05	1.6E-05	2.9E-05	3.2E-07	NV	1.0E-05	6.7E-06	1.7E-05	3.6E-07	NV	1.4E-05	1.8E-05	3.2E-05	3.6E-07	NV	1.2E-05	7.5E-06	2.0E-05
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	3.6E-05	NV	6.4E-05	8.5E-05	1.8E-04	3.6E-05	NV	5.5E-05	3.5E-05	1.3E-04	3.6E-05	NV	6.4E-05	8.5E-05	1.8E-04	3.6E-05	NV	5.5E-05	3.5E-05	1.3E-04
Thallium	4.9E-04	NV	1.9E-02	2.5E-02	4.4E-02	4.9E-04	NV	1.6E-02	1.0E-02	2.7E-02	4.9E-04	NV	1.9E-02	2.5E-02	4.4E-02	4.9E-04	NV	1.6E-02	1.0E-02	2.7E-02
Zinc	3.7E-07	NV	1.4E-05	1.9E-05	3.4E-05	3.7E-07	NV	1.2E-05	7.9E-06	2.0E-05	3.6E-07	NV	1.4E-05	1.8E-05	3.2E-05	3.6E-07	NV	1.2E-05	7.5E-06	2.0E-05
Polycyclic Aromatic Hydrocarbons																				
1-Methyl naphthalene	6.7E-11	4.8E-10	3.8E-08	3.4E-09	4.2E-08	6.7E-11	4.8E-10	3.3E-08	1.4E-09	3.5E-08	5.8E-11	4.8E-10	3.3E-08	2.9E-09	3.6E-08	5.8E-11	4.8E-10	2.8E-08	1.2E-09	3.0E-08
2-Methyl naphthalene	1.4E-09	8.8E-09	7.9E-07	7.0E-08	8.7E-07	1.4E-09	8.8E-09	6.7E-07	2.9E-08	7.1E-07	1.2E-09	8.8E-09	6.6E-07	5.9E-08	7.3E-07	1.2E-09	8.8E-09	5.7E-07	2.4E-08	6.0E-07
Anthracene	2.6E-11	1.7E-11	1.5E-08	1.3E-09	1.6E-08	2.6E-11	1.7E-11	1.3E-08	5.5E-10	1.4E-08	2.2E-11	1.7E-11	1.2E-08	1.1E-09	1.3E-08	2.2E-11	1.7E-11	1.1E-08	4.5E-10	1.1E-08
Benzo (a) anthracene	1.5E-09	7.4E-11	8.7E-07	7.7E-08	9.5E-07	1.5E-09	7.4E-11	7.4E-07	3.2E-08	7.8E-07	1.1E-09	7.4E-11	6.3E-07	5.6E-08	6.9E-07	1.1E-09	7.4E-11	5.4E-07	2.3E-08	5.7E-07
Benzo (a) pyrene	1.0E-04	NV	1.0E-04	8.9E-06	2.1E-04	1.0E-04	NV	8.6E-05	3.7E-06	1.9E-04	7.7E-05	NV	7.4E-05	6.5E-06	1.6E-04	7.7E-05	NV	6.3E-05	2.7E-06	1.4E-04
Benzo (b) fluoranthene	2.2E-09	NV	1.2E-06	1.1E-07	1.4E-06	2.2E-09	NV	1.1E-06	4.6E-08	1.1E-06	1.6E-09	NV	9.2E-07	8.2E-08	1.0E-06	1.6E-09	NV	7.9E-07	3.4E-08	8.2E-07
Benzo (ghi) perylene	9.4E-10	NV	5.4E-07	4.8E-08	5.8E-07	9.4E-10	NV	4.6E-07	2.0E-08	4.8E-07	7.1E-10	NV	4.0E-07	3.6E-08	4.4E-07	7.1E-10	NV	3.5E-07	1.5E-08	3.6E-07
Benzo (k) fluoranthene	1.2E-09	NV	7.1E-07	6.3E-08	7.7E-07	1.2E-09	NV	6.1E-07	2.6E-08	6.3E-07	9.3E-10	NV	5.3E-07	4.7E-08	5.8E-07	9.3E-10	NV	4.6E-07	1.9E-08	4.8E-07
Chrysene	2.3E-09	NV	1.3E-06	1.2E-07	1.4E-06	2.3E-09	NV	1.1E-06	4.8E-08	1.2E-06	1.3E-09	NV	7.6E-07	6.7E-08	8.2E-07	1.3E-09	NV	6.5E-07	2.8E-08	6.8E-07
Dibenzo (a,h) anthracene	1.8E-05	NV	1.7E-05	1.5E-06	3.7E-05	1.8E-05	NV	1.5E-05	6.4E-07	3.4E-05	1.5E-05	NV	1.4E-05	1.2E-06	3.0E-05	1.5E-05	NV	1.2E-05	5.1E-07	2.7E-05
Fluoranthene	2.6E-09	NV	1.5E-06	1.3E-07	1.6E-06	2.6E-09	NV	1.3E-06	5.4E-08	1.3E-06	1.9E-09	NV	1.1E-06	9.7E-08	1.2E-06	1.9E-09	NV	9.4E-07	4.0E-08	9.8E-07
Indeno (1,2,3-cd) pyrene	1.3E-09	NV	7.3E-07	6.5E-08	8.0E-07	1.3E-09	NV	6.3E-07	2.7E-08	6.5E-07	9.3E-10	NV	5.3E-07	4.7E-08	5.8E-07	9.3E-10	NV	4.6E-07	1.9E-08	4.8E-07
Phenanthrene	8.8E-11	NV	5.0E-08	4.5E-09	5.5E-08	8.8E-11	NV	4.3E-08	1.8E-09	4.5E-08	7.1E-11	NV	4.0E-08	3.6E-09	4.4E-08	7.1E-11	NV	3.5E-08	1.5E-09	3.6E-08
Pyrene	3.2E-09	2.8E-10	1.8E-06	1.6E-07	2.0E-06	3.2E-09	2.8E-10	1.6E-06	6.7E-08	1.6E-06	2.3E-09	2.8E-10	1.3E-06	1.2E-07	1.5E-06	2.3E-09	2.8E-10	1.2E-06	4.9E-08	1.2E-06
B(a)P Equivalent	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Polychlorinated Biphenyls																				
Total PCBs	3.2E-05	1.8E-05	1.8E-02	1.6E-03	2.0E-02	3.2E-05	1.8E-05	1.6E-02	6.8E-04	1.7E-02	2.7E-05	1.8E-05	1.5E-02	1.4E-03	1.7E-02	2.7E-05	1.8E-05	1.3E-02	5.6E-04	1.4E-02
Total Petroleum Hydrocarbons																				
TPH as diesel	6.4E-07	4.8E-05	8.4E-04	1.1E-04	1.0E-03	6.4E-07	4.8E-05	7.2E-04	4.6E-05	8.2E-04	1.6E-07	4.8E-05	2.0E-04	2.7E-05	2.8E-04	1.6E-07	4.8E-05	1.8E-04	1.1E-05	2.3E-04
TPH as motor oil	2.6E-07	NV	1.0E-04	1.3E-05	1.1E-04	2.6E-07	NV	8.7E-05	5.5E-06	9.2E-05	2.1E-07	NV	8.1E-05	1.1E-05	9.1E-05	2.1E-07	NV	6.9E-05	4.4E-06	7.4E-05
Dioxins/Furans																				
TEQ Human	1.0E-05	2.9E-06	1.7E-02	7.4E-03	2.4E-02	1.0E-05	2.9E-06	1.4E-02	3.0E-03	1.7E-02	2.0E-05	2.9E-06	3.2E-02	1.4E-02	4.6E-02	2.0E-05	2.9E-06	2.7E-02	5.9E-03	3.3E-02
Total Hazard Index	**4E-03**	**7E-05**	**2E-01**	**9E-02**	**3E-01**	**4E-03**	**7E-05**	**2E-01**	**4E-02**	**2E-01**	**5E-03**	**7E-05**	**2E-01**	**1E-01**	**3E-01**	**5E-03**	**7E-05**	**2E-01**	**4E-02**	**2E-01**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface fill soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
H I = Hazard Index
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.10a

2-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Surface Soil (2 to 3 feet bgs) Using Depth-Weighted EPCs: Recreational User (Camper)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

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CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	29.5
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.007	0.014	0.02	0.02	0.02	2159
BLOOD Pb, PICA CHILD	0.015	0.03	0.03	0.04	0.04	1084

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.25[a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	2.1E-6	6.1E-05	1%	–	6.1E-05	0.4%
Soil Ingestion	2.5E-4	7.4E-03	99%	5.0E-4	1.5E-02	100%
Inhalation	7.0E-8	2.1E-06	0.03%	–	2.1E-06	0.01%

Notes:

[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.10b

2-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Shallow Soil (2 to 6 feet bgs) Using Depth-Weighted EPCs: Recreational User (Camper)

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Needles, California

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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	18.4
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.005	0.009	0.01	0.01	0.01	2159
BLOOD Pb, PICA CHILD	0.009	0.02	0.02	0.02	0.03	1084

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.25 [a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	2.1E-6	3.8E-05	1%	–	3.8E-05	0.4%
Soil Ingestion	2.5E-4	4.6E-03	99%	5.0E-4	9.3E-03	100%
Inhalation	7.0E-8	1.3E-06	0.03%	–	1.3E-06	0.01%

Notes:

[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.10c

2-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Surface Soil (2 to 3 feet bgs) Using Depth-Weighted EPCs: Recreational User (Hiker)

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Needles, California

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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	29.5
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.015	0.027	0.03	0.04	0.04	1079
BLOOD Pb, PICA CHILD	0.030	0.05	0.06	0.08	0.09	542

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5 [a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	4.1E-6	1.2E-04	1%	–	1.2E-04	0.4%
Soil Ingestion	5.0E-4	1.5E-02	99%	1.0E-3	3.0E-02	100%
Inhalation	1.4E-7	4.1E-06	0.03%	–	4.1E-06	0.01%

Notes:
[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.10d

2-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Shallow Soil (2 to 6 feet bgs) Using Depth-Weighted EPCs: Recreational User (Hiker)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	18.4
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.009	0.017	0.02	0.02	0.03	1079
BLOOD Pb, PICA CHILD	0.019	0.03	0.04	0.05	0.06	542

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5 [a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	4.1E-6	7.6E-05	1%	–	7.6E-05	0.4%
Soil Ingestion	5.0E-4	9.3E-03	99%	1.0E-3	1.9E-02	100%
Inhalation	1.4E-7	2.6E-06	0.03%	–	2.6E-06	0.01%

Notes:

[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.10e

2-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Surface Soil (2 to 3 feet bgs) Using Depth-Weighted EPCs: Recreational User (Off-highway Vehicle Rider)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	29.5
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.005	0.009	0.01	0.01	0.02	3180
BLOOD Pb, PICA CHILD	0.030	0.06	0.07	0.08	0.09	535

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5 [a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	800
Dermal uptake constant	(ug/dl)/(ug/day	0.0001
Soil ingestion	mg/day	31
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	0.425
Inhalation constant	(ug/dl)/(ug/day	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	1.7E-5	4.9E-04	10%	–	4.9E-04	1.6%
Soil Ingestion	1.6E-4	4.6E-03	90%	1.0E-3	3.0E-02	98%
Inhalation	8.7E-9	2.6E-07	0.01%	–	2.6E-07	0.00%

Notes:

[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.10f

2-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Shallow Soil (2 to 6 feet bgs) Using Depth-Weighted EPCs: Recreational User (Off-highway Vehicle Rider)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
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LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Click here for ABBREVIATED INSTRUCTIONS FOR LEADSPREAD 8

INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	18.4
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.003	0.006	0.01	0.01	0.01	3180
BLOOD Pb, PICA CHILD	0.019	0.03	0.04	0.05	0.06	535

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5 [a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	800
Dermal uptake constant	(ug/dl)/(ug/day	0.0001
Soil ingestion	mg/day	31
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	0.425
Inhalation constant	(ug/dl)/(ug/day	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	1.7E-5	3.0E-04	10%	–	3.0E-04	1.6%
Soil Ingestion	1.6E-4	2.9E-03	90%	1.0E-3	1.9E-02	98%
Inhalation	8.7E-9	1.6E-07	0.01%	–	1.6E-07	0.00%

Notes:

[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.11a
5-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics								
Arsenic	3.5E-11	NV	1.9E-08	1.9E-07	3.6E-11	NV	1.9E-08	2.0E-07
Chromium, Hexavalent	8.1E-12	NV	NA	7.3E-08	6.8E-12	NV	NA	6.1E-08
Chromium, total	NC	NV	NC	NC	NC	NV	NC	NC
Copper	NC	NV	NC	NC	NC	NV	NC	NC
Lead	na	na	na	na	na	na	na	na
Zinc	NC	NV	NC	NC	NC	NV	NC	NC
Polycyclic Aromatic Hydrocarbons								
Benzo (a) anthracene	NA	1.7E-11	NA	NA	NA	1.7E-11	NA	NA
Benzo (a) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (b) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (ghi) perylene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (k) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Chrysene	NA	NV	NA	NA	NA	NV	NA	NA
Dibenzo (a,h) anthracene	NA	NV	NA	NA	NA	NV	NA	NA
Fluoranthene	NC	NV	NC	NC	NC	NV	NC	NC
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Phenanthrene	NC	NV	NC	NC	NC	NV	NC	NC
Pyrene	NC	NV	NC	NC	NC	NV	NC	NC
B(a)P Equivalent	2.4E-13	NV	1.0E-09	2.2E-09	2.1E-13	NV	8.7E-10	1.9E-09
Polychlorinated Biphenyls								
Total PCBs	1.4E-12	1.4E-09	3.8E-09	7.8E-09	1.2E-12	1.4E-09	3.1E-09	6.4E-09
Total Petroleum Hydrocarbons								
TPH as diesel	NC	NC	NC	NC	NC	NC	NC	NC
TPH as motor oil	NC	NC	NC	NC	NC	NC	NC	NC

Table AOC10-B1.11a
5-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
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C O P C	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Dioxins/Furans								
TEQ Human	6.0E-16	3.8E-13	3.2E-13	3.3E-12	2.7E-16	3.8E-13	1.4E-13	1.5E-12

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface I soil (5 to 15 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.11b
5-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics								
Arsenic	7.0E-11	NV	3.7E-08	3.9E-07	7.2E-11	NV	3.8E-08	4.0E-07
Chromium, Hexavalent	1.6E-11	NV	NA	1.5E-07	1.4E-11	NV	NA	1.2E-07
Chromium, total	NC	NV	NC	NC	NC	NV	NC	NC
Copper	NC	NV	NC	NC	NC	NV	NC	NC
Lead	na	na	na	na	na	na	na	na
Zinc	NC	NV	NC	NC	NC	NV	NC	NC
Polycyclic Aromatic Hydrocarbons								
Benzo (a) anthracene	NA	3.5E-11	NA	NA	NA	3.5E-11	NA	NA
Benzo (a) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (b) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (ghi) perylene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (k) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Chrysene	NA	NV	NA	NA	NA	NV	NA	NA
Dibenzo (a,h) anthracene	NA	NV	NA	NA	NA	NV	NA	NA
Fluoranthene	NC	NV	NC	NC	NC	NV	NC	NC
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Phenanthrene	NC	NV	NC	NC	NC	NV	NC	NC
Pyrene	NC	NV	NC	NC	NC	NV	NC	NC
B(a)P Equivalent	4.9E-13	NV	2.0E-09	4.4E-09	4.2E-13	NV	1.7E-09	3.8E-09
Polychlorinated Biphenyls								
Total PCBs	2.8E-12	2.7E-09	7.5E-09	1.6E-08	2.3E-12	2.7E-09	6.2E-09	1.3E-08
Total Petroleum Hydrocarbons								
TPH as diesel	NC	NC	NC	NC	NC	NC	NC	NC
TPH as motor oil	NC	NC	NC	NC	NC	NC	NC	NC

Table AOC10-B1.11b
5-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
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C O P C	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Dioxins/Furans								
TEQ Human	1.2E-15	7.5E-13	6.3E-13	6.6E-12	5.4E-16	7.5E-13	2.9E-13	3.0E-12

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface I soil (5 to 15 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.11c

5-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
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C O P C	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics								
Arsenic	7.1E-09	NV	1.8E-07	4.9E-08	7.3E-09	NV	1.9E-07	5.1E-08
Chromium, Hexavalent	1.0E-09	NV	NA	8.5E-09	8.8E-10	NV	NA	7.1E-09
Chromium, total	NC	NV	NC	NC	NC	NV	NC	NC
Copper	NC	NV	NC	NC	NC	NV	NC	NC
Lead	na	na	na	na	na	na	na	na
Zinc	NC	NV	NC	NC	NC	NV	NC	NC
Polycyclic Aromatic Hydrocarbons								
Benzo (a) anthracene	NA	1.4E-12	NA	NA	NA	1.4E-12	NA	NA
Benzo (a) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (b) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (ghi) perylene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (k) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Chrysene	NA	NV	NA	NA	NA	NV	NA	NA
Dibenzo (a,h) anthracene	NA	NV	NA	NA	NA	NV	NA	NA
Fluoranthene	NC	NV	NC	NC	NC	NV	NC	NC
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Phenanthrene	NC	NV	NC	NC	NC	NV	NC	NC
Pyrene	NC	NV	NC	NC	NC	NV	NC	NC
B(a)P Equivalent	3.1E-11	NV	4.1E-09	2.6E-10	2.7E-11	NV	3.6E-09	2.2E-10
Polychlorinated Biphenyls								
Total PCBs	2.8E-10	1.7E-10	3.6E-08	2.0E-09	2.3E-10	1.7E-10	3.0E-08	1.6E-09
Total Petroleum Hydrocarbons								
TPH as diesel	NC	NC	NC	NC	NC	NC	NC	NC
TPH as motor oil	NC	NC	NC	NC	NC	NC	NC	NC

Table AOC10-B1.11c

5-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Dioxins/Furans								
TEQ Human	1.2E-13	4.7E-14	3.1E-12	8.4E-13	5.4E-14	4.7E-14	1.4E-12	3.8E-13

Notes:

[a] Exposure point concentrations (EPCs) for exposure to subsurface I soil (5 to 15 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:

B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.12a
5-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Noncarcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
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Needles, California

C O P C	Child Camper (5 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Camper (5 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Camper (5 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Camper (5 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Camper (5 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Camper (5 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Camper (5 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Camper (5 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Child Camper (5 to 10 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Camper (5 to 10 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Camper (5 to 10 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Camper (5 to 10 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Camper (5 to 10 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Camper (5 to 10 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Camper (5 to 10 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Camper (5 to 10 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics																
Arsenic	9.5E-11	NV	1.5E-07	1.7E-06	9.5E-11	NV	2.0E-08	1.6E-07	9.8E-11	NV	1.5E-07	1.8E-06	9.8E-11	NV	2.1E-08	1.7E-07
Chromium, Hexavalent	7.9E-12	NV	NA	1.4E-07	7.9E-12	NV	NA	1.3E-08	6.6E-12	NV	NA	1.2E-07	6.6E-12	NV	NA	1.1E-08
Chromium, total	7.2E-10	NV	3.8E-07	1.3E-05	7.2E-10	NV	5.2E-08	1.2E-06	7.4E-10	NV	3.9E-07	1.4E-05	7.4E-10	NV	5.3E-08	1.3E-06
Copper	3.0E-10	NV	1.6E-07	5.4E-06	3.0E-10	NV	2.2E-08	5.1E-07	2.7E-10	NV	1.4E-07	5.0E-06	2.7E-10	NV	2.0E-08	4.7E-07
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Zinc	9.5E-10	NV	5.0E-07	1.7E-05	9.5E-10	NV	6.8E-08	1.6E-06	9.4E-10	NV	4.9E-07	1.7E-05	9.4E-10	NV	6.7E-08	1.6E-06
Polycyclic Aromatic Hydrocarbons																
Benzo (a) anthracene	3.7E-13	1.7E-11	2.9E-09	6.7E-09	3.7E-13	1.7E-11	4.0E-10	6.3E-10	8.6E-14	1.7E-11	6.8E-10	1.6E-09	8.6E-14	1.7E-11	9.2E-11	1.5E-10
Benzo (a) pyrene	1.0E-13	NV	7.9E-10	1.8E-09	1.0E-13	NV	1.1E-10	1.7E-10	8.8E-14	NV	7.0E-10	1.6E-09	8.8E-14	NV	9.5E-11	1.5E-10
Benzo (b) fluoranthene	1.1E-13	NV	8.5E-10	2.0E-09	1.1E-13	NV	1.2E-10	1.8E-10	9.5E-14	NV	7.5E-10	1.7E-09	9.5E-14	NV	1.0E-10	1.6E-10
Benzo (ghi) perylene	2.7E-13	NV	2.2E-09	5.0E-09	2.7E-13	NV	2.9E-10	4.7E-10	7.4E-14	NV	5.9E-10	1.4E-09	7.4E-14	NV	8.0E-11	1.3E-10
Benzo (k) fluoranthene	4.8E-13	NV	3.8E-09	8.8E-09	4.8E-13	NV	5.2E-10	8.2E-10	9.8E-14	NV	7.7E-10	1.8E-09	9.8E-14	NV	1.0E-10	1.7E-10
Chrysene	1.4E-13	NV	1.1E-09	2.5E-09	1.4E-13	NV	1.5E-10	2.4E-10	1.2E-13	NV	9.3E-10	2.1E-09	1.2E-13	NV	1.3E-10	2.0E-10
Dibenzo (a,h) anthracene	1.2E-13	NV	9.5E-10	2.2E-09	1.2E-13	NV	1.3E-10	2.1E-10	1.0E-13	NV	8.3E-10	1.9E-09	1.0E-13	NV	1.1E-10	1.8E-10
Fluoranthene	2.4E-13	NV	1.9E-09	4.4E-09	2.4E-13	NV	2.6E-10	4.1E-10	2.0E-13	NV	1.6E-09	3.6E-09	2.0E-13	NV	2.1E-10	3.4E-10
Indeno (1,2,3-cd) pyrene	2.6E-13	NV	2.0E-09	4.7E-09	2.6E-13	NV	2.8E-10	4.4E-10	2.1E-13	NV	1.7E-09	3.9E-09	2.1E-13	NV	2.3E-10	3.6E-10
Phenanthrene	7.4E-13	NV	5.8E-09	1.3E-08	7.4E-13	NV	8.0E-10	1.3E-09	1.3E-13	NV	1.0E-09	2.3E-09	1.3E-13	NV	1.4E-10	2.2E-10
Pyrene	2.2E-13	5.5E-11	1.7E-09	4.0E-09	2.2E-13	5.5E-11	2.4E-10	3.7E-10	1.8E-13	5.5E-11	1.4E-09	3.3E-09	1.8E-13	5.5E-11	1.9E-10	3.1E-10
B(a)P Equivalent	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA
Polychlorinated Biphenyls																
Total PCBs	3.8E-12	3.7E-09	3.0E-08	6.9E-08	3.8E-12	3.7E-09	4.1E-09	6.5E-09	3.1E-12	3.7E-09	2.5E-08	5.7E-08	3.1E-12	3.7E-09	3.4E-09	5.3E-09
Total Petroleum Hydrocarbons																
TPH as diesel	5.5E-10	1.5E-04	2.9E-06	1.0E-05	5.5E-10	1.5E-04	4.0E-07	9.4E-07	4.6E-10	1.5E-04	2.4E-06	8.3E-06	4.6E-10	1.5E-04	3.3E-07	7.8E-07
TPH as motor oil	2.4E-10	NV	1.3E-06	4.4E-06	2.4E-10	NV	1.7E-07	4.1E-07	2.3E-10	NV	1.2E-06	4.2E-06	2.3E-10	NV	1.7E-07	3.9E-07
Dioxins/Furans																
TEQ Human	1.6E-15	1.0E-12	2.5E-12	2.9E-11	1.6E-15	1.0E-12	3.5E-13	2.7E-12	7.3E-16	1.0E-12	1.2E-12	1.3E-11	7.3E-16	1.0E-12	1.6E-13	1.2E-12

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface l soil (5 to 15 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.12b
5-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Noncarcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child Hiker (5 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Hiker (5 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Hiker (5 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Hiker (5 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Child Hiker (5 to 10 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Hiker (5 to 10 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Hiker (5 to 10 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Hiker (5 to 10 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics																
Arsenic	1.9E-10	NV	3.0E-07	3.4E-06	1.9E-10	NV	4.1E-08	3.2E-07	2.0E-10	NV	3.1E-07	3.5E-06	2.0E-10	NV	4.2E-08	3.3E-07
Chromium, Hexavalent	1.6E-11	NV	NA	2.9E-07	1.6E-11	NV	NA	2.7E-08	1.3E-11	NV	NA	2.4E-07	1.3E-11	NV	NA	2.3E-08
Chromium, total	1.4E-09	NV	7.6E-07	2.6E-05	1.4E-09	NV	1.0E-07	2.4E-06	1.5E-09	NV	7.8E-07	2.7E-05	1.5E-09	NV	1.1E-07	2.5E-06
Copper	6.0E-10	NV	3.2E-07	1.1E-05	6.0E-10	NV	4.3E-08	1.0E-06	5.5E-10	NV	2.9E-07	1.0E-05	5.5E-10	NV	3.9E-08	9.3E-07
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Zinc	1.9E-09	NV	1.0E-06	3.4E-05	1.9E-09	NV	1.4E-07	3.2E-06	1.9E-09	NV	9.8E-07	3.4E-05	1.9E-09	NV	1.3E-07	3.2E-06
Polycyclic Aromatic Hydrocarbons																
Benzo (a) anthracene	7.4E-13	3.4E-11	5.8E-09	1.3E-08	7.4E-13	3.4E-11	8.0E-10	1.3E-09	1.7E-13	3.4E-11	1.4E-09	3.1E-09	1.7E-13	3.4E-11	1.8E-10	2.9E-10
Benzo (a) pyrene	2.0E-13	NV	1.6E-09	3.6E-09	2.0E-13	NV	2.2E-10	3.4E-10	1.8E-13	NV	1.4E-09	3.2E-09	1.8E-13	NV	1.9E-10	3.0E-10
Benzo (b) fluoranthene	2.2E-13	NV	1.7E-09	3.9E-09	2.2E-13	NV	2.3E-10	3.7E-10	1.9E-13	NV	1.5E-09	3.4E-09	1.9E-13	NV	2.0E-10	3.2E-10
Benzo (ghi) perylene	5.5E-13	NV	4.3E-09	9.9E-09	5.5E-13	NV	5.9E-10	9.3E-10	1.5E-13	NV	1.2E-09	2.7E-09	1.5E-13	NV	1.6E-10	2.5E-10
Benzo (k) fluoranthene	9.7E-13	NV	7.6E-09	1.8E-08	9.7E-13	NV	1.0E-09	1.6E-09	2.0E-13	NV	1.5E-09	3.5E-09	2.0E-13	NV	2.1E-10	3.3E-10
Chrysene	2.8E-13	NV	2.2E-09	5.0E-09	2.8E-13	NV	3.0E-10	4.7E-10	2.4E-13	NV	1.9E-09	4.3E-09	2.4E-13	NV	2.6E-10	4.0E-10
Dibenzo (a,h) anthracene	2.4E-13	NV	1.9E-09	4.4E-09	2.4E-13	NV	2.6E-10	4.1E-10	2.1E-13	NV	1.7E-09	3.8E-09	2.1E-13	NV	2.3E-10	3.6E-10
Fluoranthene	4.9E-13	NV	3.8E-09	8.8E-09	4.9E-13	NV	5.2E-10	8.3E-10	4.0E-13	NV	3.1E-09	7.2E-09	4.0E-13	NV	4.3E-10	6.7E-10
Indeno (1,2,3-cd) pyrene	5.2E-13	NV	4.1E-09	9.4E-09	5.2E-13	NV	5.6E-10	8.8E-10	4.3E-13	NV	3.4E-09	7.8E-09	4.3E-13	NV	4.6E-10	7.3E-10
Phenanthrene	1.5E-12	NV	1.2E-08	2.7E-08	1.5E-12	NV	1.6E-09	2.5E-09	2.6E-13	NV	2.0E-09	4.7E-09	2.6E-13	NV	2.8E-10	4.4E-10
Pyrene	4.4E-13	1.1E-10	3.5E-09	7.9E-09	4.4E-13	1.1E-10	4.7E-10	7.5E-10	3.6E-13	1.1E-10	2.8E-09	6.5E-09	3.6E-13	1.1E-10	3.9E-10	6.1E-10
B(a)P Equivalent	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA
Polychlorinated Biphenyls																
Total PCBs	7.6E-12	7.4E-09	6.0E-08	1.4E-07	7.6E-12	7.4E-09	8.2E-09	1.3E-08	6.3E-12	7.4E-09	5.0E-08	1.1E-07	6.3E-12	7.4E-09	6.8E-09	1.1E-08
Total Petroleum Hydrocarbons																
TPH as diesel	1.1E-09	3.0E-04	5.8E-06	2.0E-05	1.1E-09	3.0E-04	7.9E-07	1.9E-06	9.2E-10	3.0E-04	4.8E-06	1.7E-05	9.2E-10	3.0E-04	6.6E-07	1.6E-06
TPH as motor oil	4.9E-10	NV	2.6E-06	8.8E-06	4.9E-10	NV	3.5E-07	8.3E-07	4.6E-10	NV	2.4E-06	8.4E-06	4.6E-10	NV	3.3E-07	7.9E-07
Dioxins/Furans																
TEQ Human	3.2E-15	2.0E-12	5.1E-12	5.8E-11	3.2E-15	2.0E-12	6.9E-13	5.5E-12	1.5E-15	2.0E-12	2.3E-12	2.6E-11	1.5E-15	2.0E-12	3.1E-13	2.5E-12

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface I soil (5 to 15 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.12c

5-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Noncarcinogenic Effects for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child OHV Rider (5 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child OHV Rider (5 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child OHV Rider (5 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child OHV Rider (5 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Child OHV Rider (5 to 10 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child OHV Rider (5 to 10 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child OHV Rider (5 to 10 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child OHV Rider (5 to 10 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics																
Arsenic	1.9E-08	NV	5.4E-07	2.4E-07	1.9E-08	NV	4.7E-07	1.0E-07	2.0E-08	NV	5.6E-07	2.5E-07	2.0E-08	NV	4.8E-07	1.0E-07
Chromium, Hexavalent	1.6E-09	NV	NA	2.0E-08	1.6E-09	NV	NA	8.3E-09	1.3E-09	NV	NA	1.7E-08	1.3E-09	NV	NA	7.0E-09
Chromium, total	1.4E-07	NV	1.4E-06	1.8E-06	1.4E-07	NV	1.2E-06	7.6E-07	1.5E-07	NV	1.4E-06	1.9E-06	1.5E-07	NV	1.2E-06	7.8E-07
Copper	6.0E-08	NV	5.7E-07	7.6E-07	6.0E-08	NV	4.9E-07	3.2E-07	5.5E-08	NV	5.3E-07	7.0E-07	5.5E-08	NV	4.5E-07	2.9E-07
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Zinc	1.9E-07	NV	1.8E-06	2.4E-06	1.9E-07	NV	1.6E-06	1.0E-06	1.9E-07	NV	1.8E-06	2.4E-06	1.9E-07	NV	1.5E-06	9.8E-07
Polycyclic Aromatic Hydrocarbons																
Benzo (a) anthracene	7.4E-11	2.1E-12	1.1E-08	9.5E-10	7.4E-11	2.1E-12	9.1E-09	3.9E-10	1.7E-11	2.1E-12	2.5E-09	2.2E-10	1.7E-11	2.1E-12	2.1E-09	9.0E-11
Benzo (a) pyrene	2.0E-11	NV	2.9E-09	2.5E-10	2.0E-11	NV	2.5E-09	1.1E-10	1.8E-11	NV	2.5E-09	2.2E-10	1.8E-11	NV	2.2E-09	9.3E-11
Benzo (b) fluoranthene	2.2E-11	NV	3.1E-09	2.7E-10	2.2E-11	NV	2.6E-09	1.1E-10	1.9E-11	NV	2.7E-09	2.4E-10	1.9E-11	NV	2.3E-09	1.0E-10
Benzo (ghi) perylene	5.5E-11	NV	7.9E-09	7.0E-10	5.5E-11	NV	6.7E-09	2.9E-10	1.5E-11	NV	2.1E-09	1.9E-10	1.5E-11	NV	1.8E-09	7.8E-11
Benzo (k) fluoranthene	9.7E-11	NV	1.4E-08	1.2E-09	9.7E-11	NV	1.2E-08	5.1E-10	2.0E-11	NV	2.8E-09	2.5E-10	2.0E-11	NV	2.4E-09	1.0E-10
Chrysene	2.8E-11	NV	4.0E-09	3.5E-10	2.8E-11	NV	3.4E-09	1.5E-10	2.4E-11	NV	3.4E-09	3.0E-10	2.4E-11	NV	2.9E-09	1.2E-10
Dibenzo (a,h) anthracene	2.4E-11	NV	3.5E-09	3.1E-10	2.4E-11	NV	3.0E-09	1.3E-10	2.1E-11	NV	3.0E-09	2.7E-10	2.1E-11	NV	2.6E-09	1.1E-10
Fluoranthene	4.9E-11	NV	7.0E-09	6.2E-10	4.9E-11	NV	6.0E-09	2.6E-10	4.0E-11	NV	5.7E-09	5.1E-10	4.0E-11	NV	4.9E-09	2.1E-10
Indeno (1,2,3-cd) pyrene	5.2E-11	NV	7.4E-09	6.6E-10	5.2E-11	NV	6.3E-09	2.7E-10	4.3E-11	NV	6.1E-09	5.5E-10	4.3E-11	NV	5.3E-09	2.3E-10
Phenanthrene	1.5E-10	NV	2.1E-08	1.9E-09	1.5E-10	NV	1.8E-08	7.8E-10	2.6E-11	NV	3.7E-09	3.3E-10	2.6E-11	NV	3.2E-09	1.4E-10
Pyrene	4.4E-11	6.8E-12	6.3E-09	5.6E-10	4.4E-11	6.8E-12	5.4E-09	2.3E-10	3.6E-11	6.8E-12	5.2E-09	4.6E-10	3.6E-11	6.8E-12	4.4E-09	1.9E-10
B(a)P Equivalent	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA	NA	NV	NA	NA
Polychlorinated Biphenyls																
Total PCBs	7.7E-10	4.6E-10	1.1E-07	9.7E-09	7.7E-10	4.6E-10	9.4E-08	4.0E-09	6.3E-10	4.6E-10	9.0E-08	8.0E-09	6.3E-10	4.6E-10	7.7E-08	3.3E-09
Total Petroleum Hydrocarbons																
TPH as diesel	1.1E-07	1.8E-05	1.1E-05	1.4E-06	1.1E-07	1.8E-05	9.0E-06	5.8E-07	9.2E-08	1.8E-05	8.8E-06	1.2E-06	9.2E-08	1.8E-05	7.5E-06	4.8E-07
TPH as motor oil	4.9E-08	NV	4.7E-06	6.2E-07	4.9E-08	NV	4.0E-06	2.6E-07	4.7E-08	NV	4.4E-06	5.9E-07	4.7E-08	NV	3.8E-06	2.4E-07
Dioxins/Furans																
TEQ Human	3.2E-13	1.3E-13	9.2E-12	4.1E-12	3.2E-13	1.3E-13	7.9E-12	1.7E-12	1.5E-13	1.3E-13	4.2E-12	1.9E-12	1.5E-13	1.3E-13	3.6E-12	7.7E-13

Notes:

[a] Exposure point concentrations (EPCs) for exposure to subsurface I soil (5 to 15 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:

B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.13a
5-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User- Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway Total Cancer Risk
Inorganics										
Arsenic	1.5E-10	NV	1.8E-07	1.8E-06	2.0E-06	1.6E-10	NV	1.8E-07	1.9E-06	2.1E-06
Chromium, Hexavalent	1.2E-09	NV	NA	3.6E-08	3.8E-08	1.0E-09	NV	NA	3.1E-08	3.2E-08
Chromium, total	NC	NC	NC	NC	–	NC	NC	NC	NC	--
Copper	NC	NC	NC	NC	–	NC	NC	NC	NC	--
Lead	na	na	na	na	na	na	na	na	na	na
Zinc	NC	NC	NC	NC	–	NC	NC	NC	NC	--
Polycyclic Aromatic Hydrocarbons										
Benzo (a) anthracene	NA	1.9E-12	NA	NA	1.9E-12	NA	1.9E-12	NA	NA	1.9E-12
Benzo (a) pyrene	NA	NV	NA	NA	–	NA	NV	NA	NA	--
Benzo (b) fluoranthene	NA	NV	NA	NA	–	NA	NV	NA	NA	--
Benzo (ghi) perylene	NC	NC	NC	NC	–	NC	NC	NC	NC	--
Benzo (k) fluoranthene	NA	NV	NA	NA	–	NA	NV	NA	NA	--
Chrysene	NA	NV	NA	NA	–	NA	NV	NA	NA	--
Dibenzo (a,h) anthracene	NA	NV	NA	NA	–	NA	NV	NA	NA	--
Fluoranthene	NC	NC	NC	NC	–	NC	NC	NC	NC	--
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	–	NA	NV	NA	NA	--
Phenanthrene	NC	NC	NC	NC	–	NC	NC	NC	NC	--
Pyrene	NC	NC	NC	NC	–	NC	NC	NC	NC	--
B(a)P Equivalent	2.7E-13	NV	1.0E-09	2.2E-09	3.2E-09	2.3E-13	NV	8.7E-10	1.9E-09	2.8E-09
Polychlorinated Biphenyls										
Total PCBs	1.4E-13	1.4E-10	7.5E-09	1.6E-08	2.3E-08	1.2E-13	1.4E-10	6.2E-09	1.3E-08	1.9E-08
Total Petroleum Hydrocarbons										
TPH as diesel	NC	NC	NC	NC	–	NC	NC	NC	NC	--
TPH as motor oil	NC	NC	NC	NC	–	NC	NC	NC	NC	--

Table AOC10-B1.13a
5-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User- Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (5 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (5 to 10 feet bgs)[a] Soil Pathway Total Cancer Risk
Dioxins/Furans										
TEQ Human	2.3E-11	1.4E-08	4.1E-08	4.3E-07	4.8E-07	1.0E-11	1.4E-08	1.9E-08	1.9E-07	2E-07
Cumulative ILCR	**1E-09**	**1E-08**	**2E-07**	**2E-06**	**3E-06**	**1E-09**	**1E-08**	**2E-07**	**2E-06**	**2E-06**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface I soil (5 to 15 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
ILCR = Incremental Lifetime Cancer Risk.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.13b
5-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway Total Cancer Risk
Inorganics										
Arsenic	3.0E-10	NV	3.5E-07	3.7E-06	4.0E-06	3.1E-10	NV	3.6E-07	3.8E-06	4.1E-06
Chromium, Hexavalent	2.4E-09	NV	NA	7.3E-08	7.5E-08	2.0E-09	NV	NA	6.1E-08	6.4E-08
Chromium, total	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Copper	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Lead	na	na	na	na	na	na	na	na	na	na
Zinc	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Polycyclic Aromatic Hydrocarbons										
Benzo (a) anthracene	NA	3.8E-12	NA	NA	3.8E-12	NA	3.8E-12	NA	NA	3.8E-12
Benzo (a) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (b) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (ghi) perylene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Benzo (k) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Chrysene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Dibenzo (a,h) anthracene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Fluoranthene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Phenanthrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Pyrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
B(a)P Equivalent	5.4E-13	NV	2.0E-09	4.4E-09	6.4E-09	4.7E-13	NV	1.7E-09	3.8E-09	5.6E-09
Polychlorinated Biphenyls										
Total PCBs	2.8E-13	2.7E-10	1.5E-08	3.1E-08	4.6E-08	2.3E-13	2.7E-10	1.2E-08	2.6E-08	3.8E-08
Total Petroleum Hydrocarbons										
TPH as diesel	NC	NC	NC	NC	--	NC	NC	NC	NC	--
TPH as motor oil	NC	NC	NC	NC	--	NC	NC	NC	NC	--

Table AOC10-B1.13b
5-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway Total Cancer Risk
Dioxins/Furans										
TEQ Human	4.5E-11	2.9E-08	8.2E-08	8.5E-07	9.7E-07	2.1E-11	2.9E-08	3.7E-08	3.9E-07	4.5E-07
Cumulative ILCR	**3E-09**	**3E-08**	**5E-07**	**5E-06**	**5E-06**	**2E-09**	**3E-08**	**4E-07**	**4E-06**	**5E-06**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface I soil (5 to 15 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
ILCR = Incremental Lifetime Cancer Risk.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.13c
5-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Total Cancer Risk
Inorganics										
Arsenic	3.0E-08	NV	1.7E-06	4.7E-07	2.2E-06	3.1E-08	NV	1.8E-06	4.8E-07	2.3E-06
Chromium, Hexavalent	1.6E-07	NV	NA	4.2E-09	1.6E-07	1.3E-07	NV	NA	3.6E-09	1.3E-07
Chromium, total	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Copper	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Lead	na	na	na	na	na	na	na	na	na	na
Zinc	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Polycyclic Aromatic Hydrocarbons										
Benzo (a) anthracene	NA	1.5E-13	NA	NA	1.5E-13	NA	1.5E-13	NA	NA	1.5E-13
Benzo (a) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (b) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (ghi) perylene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Benzo (k) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Chrysene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Dibenzo (a,h) anthracene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Fluoranthene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Phenanthrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Pyrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
B(a)P Equivalent	3.4E-11	NV	4.1E-09	2.6E-10	4.4E-09	3.0E-11	NV	3.6E-09	2.2E-10	3.8E-09
Polychlorinated Biphenyls										
Total PCBs	2.8E-11	1.7E-11	7.2E-08	4.0E-09	7.7E-08	2.3E-11	1.7E-11	6.0E-08	3.3E-09	6.3E-08
Total Petroleum Hydrocarbons										
TPH as diesel	NC	NC	NC	NC	--	NC	NC	NC	NC	--
TPH as motor oil	NC	NC	NC	NC	--	NC	NC	NC	NC	--

Table AOC10-B1.13c
5-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Total Cancer Risk
Dioxins/Furans										
TEQ Human	4.6E-09	1.8E-09	4.0E-07	1.1E-07	5.1E-07	2.1E-09	1.8E-09	1.8E-07	4.9E-08	2.3E-07
Cumulative ILCR	**2E-07**	**2E-09**	**2E-06**	**6E-07**	**3E-06**	**2E-07**	**2E-09**	**2E-06**	**5E-07**	**3E-06**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface I soil (5 to 15 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
ILCR = Incremental Lifetime Cancer Risk.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.14a
5-Foot Scouring Scenario HIs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child Camper (5 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Camper (5 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Camper (5 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Child Camper (5 to 6 feet bgs)[a] Soil Pathway Ingestion	Child Camper (5 to 6 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Camper (5 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Camper (5 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Camper (5 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Adult Camper (5 to 6 feet bgs)[a] Soil Pathway Ingestion	Adult Camper (5 to 6 feet bgs)[a] Soil Pathway Total Hazard Index	Child Camper (5 to 10 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Camper (5 to 10 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Camper (5 to 10 feet bgs)[a] Soil Pathway Dermal Contact	Child Camper (5 to 10 feet bgs)[a] Soil Pathway Ingestion	Child Camper (5 to 10 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Camper (5 to 10 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Camper (5 to 10 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Camper (5 to 10 feet bgs)[a] Soil Pathway Dermal Contact	Adult Camper (5 to 10 feet bgs)[a] Soil Pathway Ingestion	Adult Camper (5 to 10 feet bgs)[a] Soil Pathway Total Hazard Index
Inorganics																					
Arsenic	6.3E-06	NV	4.3E-02	4.9E-01	5.3E-01	6.3E-06	NV	5.8E-03	4.6E-02	5.2E-02	6.5E-06	NV	4.4E-02	5.1E-01	5.5E-01	6.5E-06	NV	6.0E-03	4.7E-02	5.3E-02
Chromium, Hexavalent	7.9E-08	NV	NA	4.8E-05	4.8E-05	7.9E-08	NV	NA	4.5E-06	4.5E-06	6.6E-08	NV	NA	4.0E-05	4.0E-05	6.6E-08	NV	NA	3.8E-06	3.8E-06
Chromium, total	1.2E-05	NV	2.5E-07	8.7E-06	2.1E-05	1.2E-05	NV	3.4E-08	8.2E-07	1.3E-05	1.2E-05	NV	2.6E-07	9.0E-06	2.2E-05	1.2E-05	NV	3.6E-08	8.4E-07	1.3E-05
Copper	1.9E-09	NV	3.9E-06	1.4E-04	1.4E-04	1.9E-09	NV	5.4E-07	1.3E-05	1.3E-05	1.7E-09	NV	3.6E-06	1.2E-04	1.3E-04	1.7E-09	NV	4.9E-07	1.2E-05	1.2E-05
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Zinc	7.9E-10	NV	1.7E-06	5.7E-05	5.9E-05	7.9E-10	NV	2.3E-07	5.4E-06	5.6E-06	7.8E-10	NV	1.6E-06	5.7E-05	5.8E-05	7.8E-10	NV	2.2E-07	5.3E-06	5.5E-06
Polycyclic Aromatic Hydrocarbons																				
Benzo (a) anthracene	3.1E-12	1.4E-10	9.7E-08	2.2E-07	3.2E-07	3.1E-12	1.4E-10	1.3E-08	2.1E-08	3.4E-08	7.2E-13	1.4E-10	2.3E-08	5.2E-08	7.5E-08	7.2E-13	1.4E-10	3.1E-09	4.9E-09	8.1E-09
Benzo (a) pyrene	5.0E-08	NV	2.6E-06	6.0E-06	8.7E-06	5.0E-08	NV	3.6E-07	5.7E-07	9.7E-07	4.4E-08	NV	2.3E-06	5.3E-06	7.7E-06	4.4E-08	NV	3.2E-07	5.0E-07	8.6E-07
Benzo (b) fluoranthene	9.0E-13	NV	2.8E-08	6.5E-08	9.3E-08	9.0E-13	NV	3.9E-09	6.1E-09	1.0E-08	7.9E-13	NV	2.5E-08	5.7E-08	8.2E-08	7.9E-13	NV	3.4E-09	5.4E-09	8.8E-09
Benzo (ghi) perylene	2.3E-12	NV	7.2E-08	1.7E-07	2.4E-07	2.3E-12	NV	9.8E-09	1.6E-08	2.5E-08	6.2E-13	NV	2.0E-08	4.5E-08	6.5E-08	6.2E-13	NV	2.7E-09	4.2E-09	6.9E-09
Benzo (k) fluoranthene	4.0E-12	NV	1.3E-07	2.9E-07	4.2E-07	4.0E-12	NV	1.7E-08	2.7E-08	4.5E-08	8.1E-13	NV	2.6E-08	5.9E-08	8.5E-08	8.1E-13	NV	3.5E-09	5.5E-09	9.0E-09
Chrysene	1.2E-12	NV	3.6E-08	8.4E-08	1.2E-07	1.2E-12	NV	5.0E-09	7.8E-09	1.3E-08	9.9E-13	NV	3.1E-08	7.2E-08	1.0E-07	9.9E-13	NV	4.3E-09	6.7E-09	1.1E-08
Dibenzo (a,h) anthracene	6.0E-08	NV	3.2E-06	7.3E-06	1.1E-05	6.0E-08	NV	4.3E-07	6.8E-07	1.2E-06	5.2E-08	NV	2.8E-06	6.3E-06	9.2E-06	5.2E-08	NV	3.8E-07	5.9E-07	1.0E-06
Fluoranthene	1.5E-12	NV	4.8E-08	1.1E-07	1.6E-07	1.5E-12	NV	6.6E-09	1.0E-08	1.7E-08	1.2E-12	NV	3.9E-08	9.0E-08	1.3E-07	1.2E-12	NV	5.3E-09	8.4E-09	1.4E-08
Indeno (1,2,3-cd) pyrene	2.1E-12	NV	6.8E-08	1.6E-07	2.2E-07	2.1E-12	NV	9.3E-09	1.5E-08	2.4E-08	1.8E-12	NV	5.6E-08	1.3E-07	1.9E-07	1.8E-12	NV	7.7E-09	1.2E-08	2.0E-08
Phenanthrene	6.2E-13	NV	1.9E-08	4.5E-08	6.4E-08	6.2E-13	NV	2.7E-09	4.2E-09	6.9E-09	1.1E-13	NV	3.4E-09	7.8E-09	1.1E-08	1.1E-13	NV	4.6E-10	7.3E-10	1.2E-09
Pyrene	1.8E-12	4.6E-10	5.8E-08	1.3E-07	1.9E-07	1.8E-12	4.6E-10	7.9E-09	1.2E-08	2.1E-08	1.5E-12	4.6E-10	4.7E-08	1.1E-07	1.6E-07	1.5E-12	4.6E-10	6.5E-09	1.0E-08	1.7E-08
B(a)P Equivalent	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Polychlorinated Biphenyls																				
Total PCBs	4.8E-08	4.6E-05	1.5E-03	3.5E-03	5.0E-03	4.8E-08	4.6E-05	2.1E-04	3.2E-04	5.8E-04	3.9E-08	4.6E-05	1.2E-03	2.8E-03	4.1E-03	3.9E-08	4.6E-05	1.7E-04	2.7E-04	4.8E-04
Total Petroleum Hydrocarbons																				
TPH as diesel	2.1E-09	5.7E-04	1.5E-04	5.3E-04	1.2E-03	2.1E-09	5.7E-04	2.1E-05	4.9E-05	6.4E-04	1.8E-09	5.7E-04	1.3E-04	4.4E-04	1.1E-03	1.8E-09	5.7E-04	1.7E-05	4.1E-05	6.3E-04
TPH as motor oil	4.1E-10	NV	8.5E-06	2.9E-05	3.8E-05	4.1E-10	NV	1.2E-06	2.8E-06	3.9E-06	3.9E-10	NV	8.1E-06	2.8E-05	3.6E-05	3.9E-10	NV	1.1E-06	2.6E-06	3.7E-06
Dioxins/Furans																				
TEQ Human	4.0E-08	2.5E-05	3.6E-03	4.2E-02	4.5E-02	4.0E-08	2.5E-05	5.0E-04	3.9E-03	4.4E-03	1.8E-08	2.5E-05	1.6E-03	1.9E-02	2.1E-02	1.8E-08	2.5E-05	2.2E-04	1.8E-03	2.0E-03
Total Hazard Index	**2E-05**	**6E-04**	**5E-02**	**5E-01**	**6E-01**	**2E-05**	**6E-04**	**7E-03**	**5E-02**	**6E-02**	**2E-05**	**6E-04**	**5E-02**	**5E-01**	**6E-01**	**2E-05**	**6E-04**	**6E-03**	**5E-02**	**6E-02**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface I soil (5 to 15 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
H I = Hazard Index
ILCR = Incremental Lifetime Cancer Risk.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.14b
5-Foot Scouring Scenario HIs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child Hiker (5 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Hiker (5 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Hiker (5 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Child Hiker (5 to 6 feet bgs)[a] Soil Pathway Ingestion	Child Hiker (5 to 6 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway Ingestion	Adult Hiker (5 to 6 feet bgs)[a] Soil Pathway Total Hazard Index	Child Hiker (5 to 10 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Hiker (5 to 10 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Hiker (5 to 10 feet bgs)[a] Soil Pathway Dermal Contact	Child Hiker (5 to 10 feet bgs)[a] Soil Pathway Ingestion	Child Hiker (5 to 10 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway Dermal Contact	Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway Ingestion	Adult Hiker (5 to 10 feet bgs)[a] Soil Pathway Total Hazard Index
Inorganics																					
Arsenic	1.3E-05	NV	8.5E-02	9.8E-01	1.1E+00	1.3E-05	NV	1.2E-02	9.2E-02	1.0E-01	1.3E-05	NV	8.8E-02	1.0E+00	1.1E+00	1.3E-05	NV	1.2E-02	9.5E-02	1.1E-01
Chromium, Hexavalent	1.6E-07	NV	NA	9.5E-05	9.5E-05	1.6E-07	NV	NA	8.9E-06	9.1E-06	1.3E-07	NV	NA	8.0E-05	8.0E-05	1.3E-07	NV	NA	7.5E-06	7.7E-06
Chromium, total	2.4E-05	NV	5.0E-07	1.7E-05	4.2E-05	2.4E-05	NV	6.9E-08	1.6E-06	2.6E-05	2.5E-05	NV	5.2E-07	1.8E-05	4.3E-05	2.5E-05	NV	7.1E-08	1.7E-06	2.7E-05
Copper	3.7E-09	NV	7.9E-06	2.7E-04	2.8E-04	3.7E-09	NV	1.1E-06	2.5E-05	2.7E-05	3.4E-09	NV	7.2E-06	2.5E-04	2.6E-04	3.4E-09	NV	9.9E-07	2.3E-05	2.4E-05
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Zinc	1.6E-09	NV	3.3E-06	1.1E-04	1.2E-04	1.6E-09	NV	4.5E-07	1.1E-05	1.1E-05	1.6E-09	NV	3.3E-06	1.1E-04	1.2E-04	1.6E-09	NV	4.5E-07	1.1E-05	1.1E-05
Polycyclic Aromatic Hydrocarbons																				
Benzo (a) anthracene	6.2E-12	2.8E-10	1.9E-07	4.5E-07	6.4E-07	6.2E-12	2.8E-10	2.7E-08	4.2E-08	6.9E-08	1.4E-12	2.8E-10	4.5E-08	1.0E-07	1.5E-07	1.4E-12	2.8E-10	6.2E-09	9.7E-09	1.6E-08
Benzo (a) pyrene	1.0E-07	NV	5.3E-06	1.2E-05	1.7E-05	1.0E-07	NV	7.2E-07	1.1E-06	1.9E-06	8.8E-08	NV	4.6E-06	1.1E-05	1.5E-05	8.8E-08	NV	6.3E-07	1.0E-06	1.7E-06
Benzo (b) fluoranthene	1.8E-12	NV	5.7E-08	1.3E-07	1.9E-07	1.8E-12	NV	7.7E-09	1.2E-08	2.0E-08	1.6E-12	NV	5.0E-08	1.1E-07	1.6E-07	1.6E-12	NV	6.8E-09	1.1E-08	1.8E-08
Benzo (ghi) perylene	4.6E-12	NV	1.4E-07	3.3E-07	4.8E-07	4.6E-12	NV	2.0E-08	3.1E-08	5.1E-08	1.2E-12	NV	3.9E-08	9.0E-08	1.3E-07	1.2E-12	NV	5.3E-09	8.4E-09	1.4E-08
Benzo (k) fluoranthene	8.1E-12	NV	2.5E-07	5.8E-07	8.4E-07	8.1E-12	NV	3.5E-08	5.5E-08	9.0E-08	1.6E-12	NV	5.1E-08	1.2E-07	1.7E-07	1.6E-12	NV	7.0E-09	1.1E-08	1.8E-08
Chrysene	2.3E-12	NV	7.3E-08	1.7E-07	2.4E-07	2.3E-12	NV	9.9E-09	1.6E-08	2.6E-08	2.0E-12	NV	6.2E-08	1.4E-07	2.1E-07	2.0E-12	NV	8.5E-09	1.3E-08	2.2E-08
Dibenzo (a,h) anthracene	1.2E-07	NV	6.4E-06	1.5E-05	2.1E-05	1.2E-07	NV	8.7E-07	1.4E-06	2.4E-06	1.0E-07	NV	5.5E-06	1.3E-05	1.8E-05	1.0E-07	NV	7.5E-07	1.2E-06	2.0E-06
Fluoranthene	3.0E-12	NV	9.6E-08	2.2E-07	3.2E-07	3.0E-12	NV	1.3E-08	2.1E-08	3.4E-08	2.5E-12	NV	7.8E-08	1.8E-07	2.6E-07	2.5E-12	NV	1.1E-08	1.7E-08	2.8E-08
Indeno (1,2,3-cd) pyrene	4.3E-12	NV	1.4E-07	3.1E-07	4.5E-07	4.3E-12	NV	1.9E-08	2.9E-08	4.8E-08	3.6E-12	NV	1.1E-07	2.6E-07	3.7E-07	3.6E-12	NV	1.5E-08	2.4E-08	4.0E-08
Phenanthrene	1.2E-12	NV	3.9E-08	9.0E-08	1.3E-07	1.2E-12	NV	5.3E-09	8.4E-09	1.4E-08	2.1E-13	NV	6.8E-09	1.6E-08	2.2E-08	2.1E-13	NV	9.3E-10	1.5E-09	2.4E-09
Pyrene	3.7E-12	9.1E-10	1.2E-07	2.6E-07	3.8E-07	3.7E-12	9.1E-10	1.6E-08	2.5E-08	4.1E-08	3.0E-12	9.1E-10	9.5E-08	2.2E-07	3.1E-07	3.0E-12	9.1E-10	1.3E-08	2.0E-08	3.4E-08
B(a)P Equivalent	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Polychlorinated Biphenyls																				
Total PCBs	9.5E-08	9.2E-05	3.0E-03	6.9E-03	1.0E-02	9.5E-08	9.2E-05	4.1E-04	6.5E-04	1.2E-03	7.9E-08	9.2E-05	2.5E-03	5.7E-03	8.3E-03	7.9E-08	9.2E-05	3.4E-04	5.3E-04	9.6E-04
Total Petroleum Hydrocarbons																				
TPH as diesel	4.2E-09	1.1E-03	3.1E-04	1.1E-03	2.5E-03	4.2E-09	1.1E-03	4.2E-05	9.9E-05	1.3E-03	3.5E-09	1.1E-03	2.5E-04	8.7E-04	2.3E-03	3.5E-09	1.1E-03	3.5E-05	8.2E-05	1.3E-03
TPH as motor oil	8.1E-10	NV	1.7E-05	5.9E-05	7.6E-05	8.1E-10	NV	2.3E-06	5.5E-06	7.8E-06	7.7E-10	NV	1.6E-05	5.6E-05	7.2E-05	7.7E-10	NV	2.2E-06	5.3E-06	7.5E-06
Dioxins/Furans																				
TEQ Human	8.1E-08	5.1E-05	7.3E-03	8.3E-02	9.1E-02	8.1E-08	5.1E-05	9.9E-04	7.8E-03	8.9E-03	3.7E-08	5.1E-05	3.3E-03	3.8E-02	4.1E-02	3.7E-08	5.1E-05	4.5E-04	3.5E-03	4.0E-03
Total Hazard Index	**4E-05**	**1E-03**	**1E-01**	**1E+00**	**1E+00**	**4E-05**	**1E-03**	**1E-02**	**1E-01**	**1E-01**	**4E-05**	**1E-03**	**9E-02**	**1E+00**	**1E+00**	**4E-05**	**1E-03**	**1E-02**	**1E-01**	**1E-01**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface I soil (5 to 15 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
H I = Hazard Index
ILCR = Incremental Lifetime Cancer Risk.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.14c
5-Foot Scouring Scenario HIs for C O P Cs in AOC 10 Soil Using Depth-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Child OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Child OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Child OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Ingestion	Child OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Total Hazard Index	Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Ingestion	Adult OHV Rider (5 to 6 feet bgs)[a] Soil Pathway Total Hazard Index	Child OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Particulate Inhalation	Child OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Vapor Inhalation	Child OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Dermal Contact	Child OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Ingestion	Child OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Total Hazard Index	Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Dermal Contact	Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Ingestion	Adult OHV Rider (5 to 10 feet bgs)[a] Soil Pathway Total Hazard Index
Inorganics																				
Arsenic	1.3E-03	NV	1.6E-01	6.9E-02	2.3E-01	1.3E-03	NV	1.3E-01	2.8E-02	1.6E-01	1.3E-03	NV	1.6E-01	7.1E-02	2.3E-01	1.3E-03	NV	1.4E-01	2.9E-02	1.7E-01
Chromium, Hexavalent	1.6E-05	NV	NA	6.7E-06	2.3E-05	1.6E-05	NV	NA	2.8E-06	1.9E-05	1.3E-05	NV	NA	5.6E-06	1.9E-05	1.3E-05	NV	NA	2.3E-06	1.6E-05
Chromium, total	2.4E-03	NV	9.2E-07	1.2E-06	2.4E-03	2.4E-03	NV	7.9E-07	5.0E-07	2.4E-03	2.5E-03	NV	9.5E-07	1.3E-06	2.5E-03	2.5E-03	NV	8.1E-07	5.2E-07	2.5E-03
Copper	3.8E-07	NV	1.4E-05	1.9E-05	3.4E-05	3.8E-07	NV	1.2E-05	7.9E-06	2.1E-05	3.4E-07	NV	1.3E-05	1.8E-05	3.1E-05	3.4E-07	NV	1.1E-05	7.2E-06	1.9E-05
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Zinc	1.6E-07	NV	6.0E-06	8.1E-06	1.4E-05	1.6E-07	NV	5.2E-06	3.3E-06	8.7E-06	1.6E-07	NV	6.0E-06	8.0E-06	1.4E-05	1.6E-07	NV	5.1E-06	3.3E-06	8.6E-06
Polycyclic Aromatic Hydrocarbons																				
Benzo (a) anthracene	6.2E-10	1.8E-11	3.5E-07	3.2E-08	3.9E-07	6.2E-10	1.8E-11	3.0E-07	1.3E-08	3.2E-07	1.4E-10	1.8E-11	8.2E-08	7.3E-09	9.0E-08	1.4E-10	1.8E-11	7.0E-08	3.0E-09	7.4E-08
Benzo (a) pyrene	1.0E-05	NV	9.6E-06	8.5E-07	2.0E-05	1.0E-05	NV	8.2E-06	3.5E-07	1.9E-05	8.8E-06	NV	8.4E-06	7.5E-07	1.8E-05	8.8E-06	NV	7.2E-06	3.1E-07	1.6E-05
Benzo (b) fluoranthene	1.8E-10	NV	1.0E-07	9.2E-09	1.1E-07	1.8E-10	NV	8.8E-08	3.8E-09	9.2E-08	1.6E-10	NV	9.1E-08	8.1E-09	9.9E-08	1.6E-10	NV	7.8E-08	3.3E-09	8.1E-08
Benzo (ghi) perylene	4.6E-10	NV	2.6E-07	2.3E-08	2.9E-07	4.6E-10	NV	2.2E-07	9.6E-09	2.3E-07	1.2E-10	NV	7.1E-08	6.3E-09	7.8E-08	1.2E-10	NV	6.1E-08	2.6E-09	6.4E-08
Benzo (k) fluoranthene	8.1E-10	NV	4.6E-07	4.1E-08	5.0E-07	8.1E-10	NV	4.0E-07	1.7E-08	4.1E-07	1.6E-10	NV	9.3E-08	8.3E-09	1.0E-07	1.6E-10	NV	8.0E-08	3.4E-09	8.4E-08
Chrysene	2.3E-10	NV	1.3E-07	1.2E-08	1.4E-07	2.3E-10	NV	1.1E-07	4.9E-09	1.2E-07	2.0E-10	NV	1.1E-07	1.0E-08	1.2E-07	2.0E-10	NV	9.7E-08	4.2E-09	1.0E-07
Dibenzo (a,h) anthracene	1.2E-05	NV	1.2E-05	1.0E-06	2.5E-05	1.2E-05	NV	9.9E-06	4.2E-07	2.2E-05	1.1E-05	NV	1.0E-05	8.9E-07	2.1E-05	1.1E-05	NV	8.6E-06	3.7E-07	2.0E-05
Fluoranthene	3.1E-10	NV	1.7E-07	1.6E-08	1.9E-07	3.1E-10	NV	1.5E-07	6.4E-09	1.6E-07	2.5E-10	NV	1.4E-07	1.3E-08	1.6E-07	2.5E-10	NV	1.2E-07	5.2E-09	1.3E-07
Indeno (1,2,3-cd) pyrene	4.3E-10	NV	2.5E-07	2.2E-08	2.7E-07	4.3E-10	NV	2.1E-07	9.0E-09	2.2E-07	3.6E-10	NV	2.0E-07	1.8E-08	2.2E-07	3.6E-10	NV	1.8E-07	7.5E-09	1.8E-07
Phenanthrene	1.2E-10	NV	7.1E-08	6.3E-09	7.7E-08	1.2E-10	NV	6.1E-08	2.6E-09	6.4E-08	2.2E-11	NV	1.2E-08	1.1E-09	1.3E-08	2.2E-11	NV	1.1E-08	4.5E-10	1.1E-08
Pyrene	3.7E-10	5.7E-11	2.1E-07	1.9E-08	2.3E-07	3.7E-10	5.7E-11	1.8E-07	7.7E-09	1.9E-07	3.0E-10	5.7E-11	1.7E-07	1.5E-08	1.9E-07	3.0E-10	5.7E-11	1.5E-07	6.3E-09	1.5E-07
B(a)P Equivalent	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Polychlorinated Biphenyls																				
Total PCBs	9.6E-06	5.8E-06	5.5E-03	4.9E-04	6.0E-03	9.6E-06	5.8E-06	4.7E-03	2.0E-04	4.9E-03	7.9E-06	5.8E-06	4.5E-03	4.0E-04	4.9E-03	7.9E-06	5.8E-06	3.9E-03	1.7E-04	4.0E-03
Total Petroleum Hydrocarbons																				
TPH as diesel	4.3E-07	7.1E-05	5.5E-04	7.4E-05	7.0E-04	4.3E-07	7.1E-05	4.8E-04	3.1E-05	5.8E-04	3.5E-07	7.1E-05	4.6E-04	6.1E-05	5.9E-04	3.5E-07	7.1E-05	4.0E-04	2.5E-05	4.9E-04
TPH as motor oil	8.1E-08	NV	3.1E-05	4.1E-06	3.5E-05	8.1E-08	NV	2.7E-05	1.7E-06	2.8E-05	7.8E-08	NV	3.0E-05	3.9E-06	3.4E-05	7.8E-08	NV	2.5E-05	1.6E-06	2.7E-05
Dioxins/Furans																				
TEQ Human	8.1E-06	3.2E-06	1.3E-02	5.9E-03	1.9E-02	8.1E-06	3.2E-06	1.1E-02	2.4E-03	1.4E-02	3.7E-06	3.2E-06	6.0E-03	2.7E-03	8.7E-03	3.7E-06	3.2E-06	5.1E-03	1.1E-03	6.2E-03
Total Hazard Index	**4E-03**	**8E-05**	**2E-01**	**8E-02**	**3E-01**	**4E-03**	**8E-05**	**1E-01**	**3E-02**	**2E-01**	**4E-03**	**8E-05**	**2E-01**	**7E-02**	**2E-01**	**4E-03**	**8E-05**	**1E-01**	**3E-02**	**2E-01**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface I soil (5 to 15 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B(a)P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
H I = Hazard Index
ILCR = Incremental Lifetime Cancer Risk.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B1.15a
5-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Surface Soil (5 to 6 feet bgs) Using Depth-Weighted EPCs:
Recreational User (Camper)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	5.7
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.001	0.003	0.00	0.00	0.00	2159
BLOOD Pb, PICA CHILD	0.003	0.01	0.01	0.01	0.01	1084

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.25[a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day)	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	2.1E-6	1.2E-05	1%	--	1.2E-05	0.4%
Soil Ingestion	2.5E-4	1.4E-03	99%	5.0E-4	2.9E-03	100%
Inhalation	7.0E-8	4.0E-07	0.03%	--	4.0E-07	0.01%

Notes:
[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.15b
5-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Shallow Soil (5 to 10 feet bgs) Using Depth-Weighted EPCs: Recreational User (Camper)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

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INPUT MEDIUM	INPUT LEVEL
Lead in Soil/Dust (ug/g)	5.3
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.001	0.002	0.00	0.00	0.00	2159
BLOOD Pb, PICA CHILD	0.003	0.00	0.01	0.01	0.01	1084

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.25 [a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day)	0.192

CHILDREN	typical Pathway contribution	typical Pathway contribution	typical Pathway contribution	with pica Pathway contribution	with pica Pathway contribution	with pica Pathway contribution
Pathway	PEF	ug/dl	percent	PEF	ug/dl	percent
Soil Contact	2.1E-6	1.1E-05	1%	--	1.1E-05	0.4%
Soil Ingestion	2.5E-4	1.3E-03	99%	5.0E-4	2.6E-03	100%
Inhalation	7.0E-8	3.7E-07	0.03%	--	3.7E-07	0.01%

Notes:
[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.15c
5-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Surface Soil (5 to 6 feet bgs) Using Depth-Weighted EPCs:
Recreational User (Hiker)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
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LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

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INPUT MEDIUM	INPUT LEVEL
Lead in Soil/Dust (ug/g)	5.7
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.003	0.005	0.01	0.01	0.01	1079
BLOOD Pb, PICA CHILD	0.006	0.01	0.01	0.02	0.02	542

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5 [a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day)	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	4.1E-6	2.4E-05	1%	--	2.4E-05	0.4%
Soil Ingestion	5.0E-4	2.9E-03	99%	1.0E-3	5.8E-03	100%
Inhalation	1.4E-7	8.0E-07	0.03%	--	8.0E-07	0.01%

Notes:
[a] Highlighted values are Site-specific: days per week based on the assumption of 2 days per month (2 days/4 weeks = 0.5 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.15d
5-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Shallow Soil (5 to 10 feet bgs) Using Depth-Weighted EPCs:
Recreational User (Hiker)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

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INPUT MEDIUM	INPUT LEVEL
Lead in Soil/Dust (ug/g)	5.3
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.003	0.005	0.01	0.01	0.01	1079
BLOOD Pb, PICA CHILD	0.005	0.01	0.01	0.01	0.02	542

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5 [a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day)	0.192

CHILDREN	typical Pathway contribution	typical Pathway contribution	typical Pathway contribution	with pica Pathway contribution	with pica Pathway contribution	with pica Pathway contribution
Pathway	PEF	ug/dl	percent	PEF	ug/dl	percent
Soil Contact	4.1E-6	2.2E-05	1%	--	2.2E-05	0.4%
Soil Ingestion	5.0E-4	2.6E-03	99%	1.0E-3	5.3E-03	100%
Inhalation	1.4E-7	7.3E-07	0.03%	--	7.3E-07	0.01%

Notes:
[a] Highlighted values are Site-specific: days per week based on the assumption of 2 days per month (2 days/4 weeks = 0.5 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B1.15e

5-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Surface Soil (5 to 6 feet bgs) Using Depth-Weighted EPCs: Recreational User (Off-Highway Vehicle Rider)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
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LEAD RISK ASSESSMENT SPREADSHEET 8
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INPUT MEDIUM	INPUT LEVEL
Lead in Soil/Dust (ug/g)	5.7
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.001	0.002	0.00	0.00	0.00	3180
BLOOD Pb, PICA CHILD	0.006	0.01	0.01	0.02	0.02	535

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5[a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	800[a]
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	31[a]
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	0.425[a]
Inhalation constant	(ug/dl)/(ug/day)	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	1.7E-5	9.5E-05	10%	--	9.5E-05	1.6%
Soil Ingestion	1.6E-4	8.9E-04	90%	1.0E-3	5.8E-03	98%
Inhalation	8.7E-9	5.0E-08	0.01%	--	5.0E-08	0.00%

Notes:
[a] Highlighted values are Site-specific: days per week based on the assumption of 2 days per month, 8 months per year. Soil ingestion rate of 330 mg/day is modified by exposure time (1.5 hours riding at site per 16 awake hours, or 0.09). Default inhalation breathing rate of 6.8 m^3/day is modified to account for exposure time (i.e., 1.5 hours riding at site per 24 hours, or 0.06) . See Table 5.1 of the main report for details.

Table AOC10-B1.15f
5-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Shallow Soil (5 to 10 feet bgs) Using Depth-Weighted EPCs:
Recreational User (Off-Highway Vehicle Rider)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
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LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	5.3
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.001	0.002	0.00	0.00	0.00	3180
BLOOD Pb, PICA CHILD	0.005	0.01	0.01	0.01	0.02	535

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5 [a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	800 [a]
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	31 [a]
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	0.425 [a]
Inhalation constant	(ug/dl)/(ug/day)	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	1.7E-5	8.7E-05	10%	–	8.7E-05	1.6%
Soil Ingestion	1.6E-4	8.2E-04	90%	1.0E-3	5.3E-03	98%
Inhalation	8.7E-9	4.6E-08	0.01%	--	4.6E-08	0.00%

Notes:
[a] Highlighted values are Site-specific: days per week based on the assumption of 2 days per month, 8 months per year. Soil ingestion rate of 330 mg/day is modified by exposure time (1.5 hours riding at site per 16 awake hours, or 0.09). Default inhalation breathing rate of 6.8 m^3/day is modified to account for exposure time (i.e., 1.5 hours riding at site per 24 hours, or 0.06) . See Table 5.1 of the main report for details.

Table AOC10-B2.1a
2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User - Camper

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C O P C	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics								
Antimony	NC	NV	NC	NC	NC	NV	NC	NC
Arsenic	2.7E-11	NV	1.5E-08	1.5E-07	2.9E-11	NV	1.6E-08	1.6E-07
Chromium, Hexavalent	2.8E-11	NV	NA	2.5E-07	1.9E-11	NV	NA	1.7E-07
Chromium, total	NC	NV	NC	NC	NC	NV	NC	NC
Copper	NC	NV	NC	NC	NC	NV	NC	NC
Lead	na	na	na	na	na	na	na	na
Mercury (inorganic)	NC	NC	NC	NC	NC	NC	NC	NC
Thallium	NC	NV	NC	NC	NC	NV	NC	NC
Zinc	NC	NV	NC	NC	NC	NV	NC	NC
Polycyclic Aromatic Hydrocarbons								
1-Methyl naphthalene	3.5E-14	4.0E-10	9.2E-11	1.9E-10	3.0E-14	4.0E-10	7.9E-11	1.6E-10
2-Methyl naphthalene	NC	NV	NC	NC	NC	NV	NC	NC
Anthracene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (a) anthracene	NA	4.9E-11	NA	NA	NA	4.9E-11	NA	NA
Benzo (a) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (b) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (ghi) perylene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (k) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Chrysene	NA	NV	NA	NA	NA	NV	NA	NA
Dibenzo (a,h) anthracene	NA	NV	NA	NA	NA	NV	NA	NA
Fluoranthene	NC	NV	NC	NC	NC	NV	NC	NC
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Phenanthrene	NC	NV	NC	NC	NC	NV	NC	NC
Pyrene	NC	NV	NC	NC	NC	NV	NC	NC
B(a)P Equivalent	ND	NV	ND	ND	ND	NV	ND	ND
Polychlorinated Biphenyls								
Total PCBs	4.8E-12	4.2E-09	1.3E-08	2.6E-08	3.9E-12	4.2E-09	1.0E-08	2.2E-08
Total Petroleum Hydrocarbons								
TPH as diesel	NC	NC	NC	NC	NC	NC	NC	NC
TPH as motor oil	NC	NC	NC	NC	NC	NC	NC	NC

Table AOC10-B2.1a
2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User - Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
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C O P C	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Dioxins/Furans								
TEQ Human	6.7E-16	3.4E-13	3.6E-13	3.7E-12	7.0E-16	3.4E-13	3.7E-13	3.9E-12

Notes:
[a] EPCs for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B2.1b
2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
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C O P C	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics								
Antimony	NC	NV	NC	NC	NC	NV	NC	NC
Arsenic	5.5E-11	NV	2.9E-08	3.0E-07	5.9E-11	NV	3.1E-08	3.2E-07
Chromium, Hexavalent	5.6E-11	NV	NA	5.0E-07	3.7E-11	NV	NA	3.4E-07
Chromium, total	NC	NV	NC	NC	NC	NV	NC	NC
Copper	NC	NV	NC	NC	NC	NV	NC	NC
Lead	na	na	na	na	na	na	na	na
Mercury (inorganic)	NC	NC	NC	NC	NC	NC	NC	NC
Thallium	NC	NV	NC	NC	NC	NV	NC	NC
Zinc	NC	NV	NC	NC	NC	NV	NC	NC
Polycyclic Aromatic Hydrocarbons								
1-Methyl naphthalene	6.9E-14	8.0E-10	1.8E-10	3.8E-10	6.0E-14	8.0E-10	1.6E-10	3.3E-10
2-Methyl naphthalene	NC	NV	NC	NC	NC	NV	NC	NC
Anthracene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (a) anthracene	NA	9.8E-11	NA	NA	NA	9.8E-11	NA	NA
Benzo (a) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (b) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (ghi) perylene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (k) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Chrysene	NA	NV	NA	NA	NA	NV	NA	NA
Dibenzo (a,h) anthracene	NA	NV	NA	NA	NA	NV	NA	NA
Fluoranthene	NC	NV	NC	NC	NC	NV	NC	NC
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Phenanthrene	NC	NV	NC	NC	NC	NV	NC	NC
Pyrene	NC	NV	NC	NC	NC	NV	NC	NC
B(a)P Equivalent	ND	NV	ND	ND	ND	NV	ND	ND
Polychlorinated Biphenyls								
Total PCBs	9.6E-12	8.5E-09	2.5E-08	5.3E-08	7.9E-12	8.5E-09	2.1E-08	4.3E-08
Total Petroleum Hydrocarbons								
TPH as diesel	NC	NC	NC	NC	NC	NC	NC	NC
TPH as motor oil	NC	NC	NC	NC	NC	NC	NC	NC

Table AOC10-B2.1b
2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User - Hiker

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C O P C	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Dioxins/Furans								
TEQ Human	1.3E-15	6.7E-13	7.1E-13	7.4E-12	1.4E-15	6.7E-13	7.5E-13	7.7E-12

Notes:
[a] EPCs for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B2.1c

2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
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C O P C	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics								
Antimony	NC	NV	NC	NC	NC	NV	NC	NC
Arsenic	5.5E-09	NV	1.4E-07	3.8E-08	5.9E-09	NV	1.5E-07	4.1E-08
Chromium, Hexavalent	3.6E-09	NV	NA	2.9E-08	2.4E-09	NV	NA	2.0E-08
Chromium, total	NC	NV	NC	NC	NC	NV	NC	NC
Copper	NC	NV	NC	NC	NC	NV	NC	NC
Lead	na	na	na	na	na	na	na	na
Mercury (inorganic)	NC	NC	NC	NC	NC	NC	NC	NC
Thallium	NC	NV	NC	NC	NC	NV	NC	NC
Zinc	NC	NV	NC	NC	NC	NV	NC	NC
Polycyclic Aromatic Hydrocarbons								
1-Methyl naphthalene	7.0E-12	5.0E-11	8.9E-10	4.9E-11	6.0E-12	5.0E-11	7.6E-10	4.2E-11
2-Methyl naphthalene	NC	NV	NC	NC	NC	NV	NC	NC
Anthracene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (a) anthracene	NA	3.9E-12	NA	NA	NA	3.9E-12	NA	NA
Benzo (a) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (b) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Benzo (ghi) perylene	NC	NV	NC	NC	NC	NV	NC	NC
Benzo (k) fluoranthene	NA	NV	NA	NA	NA	NV	NA	NA
Chrysene	NA	NV	NA	NA	NA	NV	NA	NA
Dibenzo (a,h) anthracene	NA	NV	NA	NA	NA	NV	NA	NA
Fluoranthene	NC	NV	NC	NC	NC	NV	NC	NC
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	NA	NV	NA	NA
Phenanthrene	NC	NV	NC	NC	NC	NV	NC	NC
Pyrene	NC	NV	NC	NC	NC	NV	NC	NC
B(a)P Equivalent	ND	NV	ND	ND	ND	NV	ND	ND
Polychlorinated Biphenyls								
Total PCBs	9.6E-10	5.3E-10	1.2E-07	6.7E-09	7.9E-10	5.3E-10	1.0E-07	5.5E-09
Total Petroleum Hydrocarbons								
TPH as diesel	NC	NC	NC	NC	NC	NC	NC	NC
TPH as motor oil	NC	NC	NC	NC	NC	NC	NC	NC

Table AOC10-B2.1c
2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Carcinogenic Effects for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

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C O P C	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Dioxins/Furans								
TEQ Human	1.3E-13	4.2E-14	3.4E-12	9.4E-13	1.4E-13	4.2E-14	3.6E-12	9.8E-13

Notes:
[a] EPCs for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
EC = Exposure Concentration.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (CPAHs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B2.2a
2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Noncarcinogenic Effects for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User - Camper

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C O P C	Child Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Child Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics																
Antimony	5.6E-11	NV	3.0E-08	1.0E-06	5.6E-11	NV	4.0E-09	9.6E-08	5.6E-11	NV	3.0E-08	1.0E-06	5.6E-11	NV	4.0E-09	9.6E-08
Arsenic	7.4E-11	NV	1.2E-07	1.3E-06	7.4E-11	NV	1.6E-08	1.3E-07	7.9E-11	NV	1.2E-07	1.4E-06	7.9E-11	NV	1.7E-08	1.3E-07
Chromium, Hexavalent	2.7E-11	NV	NA	4.9E-07	2.7E-11	NV	NA	4.6E-08	1.8E-11	NV	NA	3.3E-07	1.8E-11	NV	NA	3.1E-08
Chromium, total	6.0E-10	NV	3.1E-07	1.1E-05	6.0E-10	NV	4.3E-08	1.0E-06	7.7E-10	NV	4.0E-07	1.4E-05	7.7E-10	NV	5.5E-08	1.3E-06
Copper	2.6E-10	NV	1.4E-07	4.8E-06	2.6E-10	NV	1.9E-08	4.5E-07	2.4E-10	NV	1.3E-07	4.4E-06	2.4E-10	NV	1.7E-08	4.1E-07
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	5.3E-12	NV	2.8E-09	9.6E-08	5.3E-12	NV	3.8E-10	9.0E-09	5.3E-12	NV	2.8E-09	9.6E-08	5.3E-12	NV	3.8E-10	9.0E-09
Thallium	9.8E-11	NV	5.2E-08	1.8E-06	9.8E-11	NV	7.1E-09	1.7E-07	9.8E-11	NV	5.2E-08	1.8E-06	9.8E-11	NV	7.1E-09	1.7E-07
Zinc	1.5E-09	NV	7.7E-07	2.7E-05	1.5E-09	NV	1.1E-07	2.5E-06	1.4E-09	NV	7.5E-07	2.6E-05	1.4E-09	NV	1.0E-07	2.4E-06
Polycyclic Aromatic Hydrocarbons																
1-Methyl naphthalene	9.3E-14	1.1E-09	7.4E-10	1.7E-09	9.3E-14	1.1E-09	1.0E-10	1.6E-10	8.0E-14	1.1E-09	6.3E-10	1.5E-09	8.0E-14	1.1E-09	8.7E-11	1.4E-10
2-Methyl naphthalene	1.1E-13	1.1E-09	8.6E-10	2.0E-09	1.1E-13	1.1E-09	1.2E-10	1.9E-10	9.3E-14	1.1E-09	7.3E-10	1.7E-09	9.3E-14	1.1E-09	1.0E-10	1.6E-10
Anthracene	1.6E-13	1.6E-10	1.2E-09	2.9E-09	1.6E-13	1.6E-10	1.7E-10	2.7E-10	1.3E-13	1.6E-10	1.0E-09	2.3E-09	1.3E-13	1.6E-10	1.4E-10	2.2E-10
Benzo (a) anthracene	5.8E-13	4.8E-11	4.6E-09	1.0E-08	5.8E-13	4.8E-11	6.2E-10	9.8E-10	4.0E-13	4.8E-11	3.2E-09	7.3E-09	4.0E-13	4.8E-11	4.3E-10	6.8E-10
Benzo (a) pyrene	7.8E-13	NV	6.1E-09	1.4E-08	7.8E-13	NV	8.3E-10	1.3E-09	5.1E-13	NV	4.1E-09	9.3E-09	5.1E-13	NV	5.5E-10	8.7E-10
Benzo (b) fluoranthene	9.8E-13	NV	7.8E-09	1.8E-08	9.8E-13	NV	1.1E-09	1.7E-09	6.5E-13	NV	5.1E-09	1.2E-08	6.5E-13	NV	7.0E-10	1.1E-09
Benzo (ghi) perylene	5.9E-13	NV	4.7E-09	1.1E-08	5.9E-13	NV	6.4E-10	1.0E-09	4.1E-13	NV	3.2E-09	7.5E-09	4.1E-13	NV	4.4E-10	7.0E-10
Benzo (k) fluoranthene	7.8E-13	NV	6.2E-09	1.4E-08	7.8E-13	NV	8.4E-10	1.3E-09	5.2E-13	NV	4.1E-09	9.5E-09	5.2E-13	NV	5.6E-10	8.9E-10
Chrysene	9.4E-13	NV	7.4E-09	1.7E-08	9.4E-13	NV	1.0E-09	1.6E-09	6.5E-13	NV	5.2E-09	1.2E-08	6.5E-13	NV	7.0E-10	1.1E-09
Dibenzo (a,h) anthracene	1.9E-13	NV	1.5E-09	3.4E-09	1.9E-13	NV	2.0E-10	3.2E-10	1.4E-13	NV	1.1E-09	2.6E-09	1.4E-13	NV	1.5E-10	2.4E-10
Fluoranthene	1.4E-12	NV	1.1E-08	2.6E-08	1.4E-12	NV	1.5E-09	2.4E-09	9.6E-13	NV	7.6E-09	1.7E-08	9.6E-13	NV	1.0E-09	1.6E-09
Indeno (1,2,3-cd) pyrene	6.0E-13	NV	4.7E-09	1.1E-08	6.0E-13	NV	6.4E-10	1.0E-09	4.0E-13	NV	3.1E-09	7.2E-09	4.0E-13	NV	4.3E-10	6.7E-10
Phenanthrene	5.2E-13	NV	4.1E-09	9.5E-09	5.2E-13	NV	5.6E-10	8.9E-10	3.7E-13	NV	2.9E-09	6.7E-09	3.7E-13	NV	4.0E-10	6.3E-10
Pyrene	1.3E-12	1.9E-10	1.1E-08	2.4E-08	1.3E-12	1.9E-10	1.4E-09	2.3E-09	9.0E-13	1.9E-10	7.1E-09	1.6E-08	9.0E-13	1.9E-10	9.7E-10	1.5E-09
B(a)P Equivalent	ND	NV	ND	ND	ND	NV	ND	ND	ND	NV	ND	ND	ND	NV	ND	ND
Polychlorinated Biphenyls																
Total PCBs	1.3E-11	1.1E-08	1.0E-07	2.3E-07	1.3E-11	1.1E-08	1.4E-08	2.2E-08	1.1E-11	1.1E-08	8.4E-08	1.9E-07	1.1E-11	1.1E-08	1.1E-08	1.8E-08
Total Petroleum Hydrocarbons																
TPH as diesel	8.3E-10	1.2E-04	4.4E-06	1.5E-05	8.3E-10	1.2E-04	6.0E-07	1.4E-06	2.1E-10	1.2E-04	1.1E-06	3.8E-06	2.1E-10	1.2E-04	1.5E-07	3.6E-07
TPH as motor oil	7.6E-10	NV	4.0E-06	1.4E-05	7.6E-10	NV	5.4E-07	1.3E-06	7.1E-10	NV	3.7E-06	1.3E-05	7.1E-10	NV	5.1E-07	1.2E-06
Dioxins/Furans																
TEQ Human	1.8E-15	9.1E-13	2.9E-12	3.3E-11	1.8E-15	9.1E-13	3.9E-13	3.1E-12	1.9E-15	9.1E-13	3.0E-12	3.4E-11	1.9E-15	9.1E-13	4.1E-13	3.2E-12

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.

NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B2.2b
2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Noncarcinogenic Effects for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User - Hiker

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PG&E Topock Compressor Station
Needles, California

C O P C	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics																
Antimony	1.1E-10	NV	5.9E-08	2.0E-06	1.1E-10	NV	8.1E-09	1.9E-07	1.1E-10	NV	5.9E-08	2.0E-06	1.1E-10	NV	8.1E-09	1.9E-07
Arsenic	1.5E-10	NV	2.3E-07	2.7E-06	1.5E-10	NV	3.2E-08	2.5E-07	1.6E-10	NV	2.5E-07	2.9E-06	1.6E-10	NV	3.4E-08	2.7E-07
Chromium, Hexavalent	5.4E-11	NV	NA	9.8E-07	5.4E-11	NV	NA	9.2E-08	3.6E-11	NV	NA	6.6E-07	3.6E-11	NV	NA	6.2E-08
Chromium, total	1.2E-09	NV	6.3E-07	2.2E-05	1.2E-09	NV	8.5E-08	2.0E-06	1.5E-09	NV	8.1E-07	2.8E-05	1.5E-09	NV	1.1E-07	2.6E-06
Copper	5.3E-10	NV	2.8E-07	9.6E-06	5.3E-10	NV	3.8E-08	9.0E-07	4.8E-10	NV	2.5E-07	8.7E-06	4.8E-10	NV	3.4E-08	8.2E-07
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	1.1E-11	NV	5.6E-09	1.9E-07	1.1E-11	NV	7.6E-10	1.8E-08	1.1E-11	NV	5.6E-09	1.9E-07	1.1E-11	NV	7.6E-10	1.8E-08
Thallium	2.0E-10	NV	1.0E-07	3.6E-06	2.0E-10	NV	1.4E-08	3.3E-07	2.0E-10	NV	1.0E-07	3.6E-06	2.0E-10	NV	1.4E-08	3.3E-07
Zinc	2.9E-09	NV	1.5E-06	5.3E-05	2.9E-09	NV	2.1E-07	5.0E-06	2.8E-09	NV	1.5E-06	5.1E-05	2.8E-09	NV	2.0E-07	4.8E-06
Polycyclic Aromatic Hydrocarbons																
1-Methyl naphthalene	1.9E-13	2.1E-09	1.5E-09	3.4E-09	1.9E-13	2.1E-09	2.0E-10	3.2E-10	1.6E-13	2.1E-09	1.3E-09	2.9E-09	1.6E-13	2.1E-09	1.7E-10	2.7E-10
2-Methyl naphthalene	2.2E-13	2.3E-09	1.7E-09	4.0E-09	2.2E-13	2.3E-09	2.4E-10	3.7E-10	1.9E-13	2.3E-09	1.5E-09	3.4E-09	1.9E-13	2.3E-09	2.0E-10	3.1E-10
Anthracene	3.2E-13	3.2E-10	2.5E-09	5.7E-09	3.2E-13	3.2E-10	3.4E-10	5.4E-10	2.6E-13	3.2E-10	2.0E-09	4.7E-09	2.6E-13	3.2E-10	2.8E-10	4.4E-10
Benzo (a) anthracene	1.2E-12	9.5E-11	9.1E-09	2.1E-08	1.2E-12	9.5E-11	1.2E-09	2.0E-09	8.0E-13	9.5E-11	6.3E-09	1.5E-08	8.0E-13	9.5E-11	8.6E-10	1.4E-09
Benzo (a) pyrene	1.6E-12	NV	1.2E-08	2.8E-08	1.6E-12	NV	1.7E-09	2.6E-09	1.0E-12	NV	8.1E-09	1.9E-08	1.0E-12	NV	1.1E-09	1.7E-09
Benzo (b) fluoranthene	2.0E-12	NV	1.6E-08	3.6E-08	2.0E-12	NV	2.1E-09	3.3E-09	1.3E-12	NV	1.0E-08	2.4E-08	1.3E-12	NV	1.4E-09	2.2E-09
Benzo (ghi) perylene	1.2E-12	NV	9.4E-09	2.2E-08	1.2E-12	NV	1.3E-09	2.0E-09	8.2E-13	NV	6.5E-09	1.5E-08	8.2E-13	NV	8.8E-10	1.4E-09
Benzo (k) fluoranthene	1.6E-12	NV	1.2E-08	2.8E-08	1.6E-12	NV	1.7E-09	2.7E-09	1.0E-12	NV	8.3E-09	1.9E-08	1.0E-12	NV	1.1E-09	1.8E-09
Chrysene	1.9E-12	NV	1.5E-08	3.4E-08	1.9E-12	NV	2.0E-09	3.2E-09	1.3E-12	NV	1.0E-08	2.4E-08	1.3E-12	NV	1.4E-09	2.2E-09
Dibenzo (a,h) anthracene	3.7E-13	NV	2.9E-09	6.8E-09	3.7E-13	NV	4.0E-10	6.4E-10	2.8E-13	NV	2.2E-09	5.2E-09	2.8E-13	NV	3.1E-10	4.8E-10
Fluoranthene	2.9E-12	NV	2.3E-08	5.2E-08	2.9E-12	NV	3.1E-09	4.9E-09	1.9E-12	NV	1.5E-08	3.5E-08	1.9E-12	NV	2.1E-09	3.3E-09
Indeno (1,2,3-cd) pyrene	1.2E-12	NV	9.4E-09	2.2E-08	1.2E-12	NV	1.3E-09	2.0E-09	7.9E-13	NV	6.3E-09	1.4E-08	7.9E-13	NV	8.5E-10	1.3E-09
Phenanthrene	1.0E-12	NV	8.2E-09	1.9E-08	1.0E-12	NV	1.1E-09	1.8E-09	7.4E-13	NV	5.8E-09	1.3E-08	7.4E-13	NV	8.0E-10	1.3E-09
Pyrene	2.7E-12	3.8E-10	2.1E-08	4.8E-08	2.7E-12	3.8E-10	2.9E-09	4.5E-09	1.8E-12	3.8E-10	1.4E-08	3.3E-08	1.8E-12	3.8E-10	1.9E-09	3.1E-09
B(a)P Equivalent	ND	NV	ND	ND	ND	NV	ND	ND	ND	NV	ND	ND	ND	NV	ND	ND
Polychlorinated Biphenyls																
Total PCBs	2.6E-11	2.3E-08	2.0E-07	4.7E-07	2.6E-11	2.3E-08	2.8E-08	4.4E-08	2.1E-11	2.3E-08	1.7E-07	3.9E-07	2.1E-11	2.3E-08	2.3E-08	3.6E-08
Total Petroleum Hydrocarbons																
TPH as diesel	1.7E-09	2.4E-04	8.8E-06	3.0E-05	1.7E-09	2.4E-04	1.2E-06	2.8E-06	4.2E-10	2.4E-04	2.2E-06	7.7E-06	4.2E-10	2.4E-04	3.0E-07	7.2E-07
TPH as motor oil	1.5E-09	NV	8.0E-06	2.8E-05	1.5E-09	NV	1.1E-06	2.6E-06	1.4E-09	NV	7.4E-06	2.6E-05	1.4E-09	NV	1.0E-06	2.4E-06
Dioxins/Furans																
TEQ Human	3.6E-15	1.8E-12	5.7E-12	6.6E-11	3.6E-15	1.8E-12	7.8E-13	6.2E-12	3.8E-15	1.8E-12	6.0E-12	6.9E-11	3.8E-15	1.8E-12	8.2E-13	6.4E-12

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.

NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B2.2c
2-Foot Scouring Scenario Exposure Concentration and Dose Calculations for Noncarcinogenic Effects for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs:
Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Particulate Inhalation (mg/m^3)	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway EC: Outdoor Vapor Inhalation (mg/m^3)	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Dermal Contact (mg/kg-day)	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway CDI: Ingestion (mg/kg-day)
Inorganics																
Antimony	1.1E-08	NV	1.1E-07	1.4E-07	1.1E-08	NV	9.3E-08	5.9E-08	1.1E-08	NV	1.1E-07	1.4E-07	1.1E-08	NV	9.3E-08	5.9E-08
Arsenic	1.5E-08	NV	4.2E-07	1.9E-07	1.5E-08	NV	3.6E-07	7.8E-08	1.6E-08	NV	4.5E-07	2.0E-07	1.6E-08	NV	3.9E-07	8.3E-08
Chromium, Hexavalent	5.4E-09	NV	NA	6.9E-08	5.4E-09	NV	NA	2.9E-08	3.6E-09	NV	NA	4.6E-08	3.6E-09	NV	NA	1.9E-08
Chromium, total	1.2E-07	NV	1.1E-06	1.5E-06	1.2E-07	NV	9.8E-07	6.3E-07	1.5E-07	NV	1.5E-06	2.0E-06	1.5E-07	NV	1.3E-06	8.1E-07
Copper	5.3E-08	NV	5.1E-07	6.7E-07	5.3E-08	NV	4.3E-07	2.8E-07	4.8E-08	NV	4.6E-07	6.1E-07	4.8E-08	NV	3.9E-07	2.5E-07
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	1.1E-09	NV	1.0E-08	1.4E-08	1.1E-09	NV	8.7E-09	5.6E-09	1.1E-09	NV	1.0E-08	1.4E-08	1.1E-09	NV	8.7E-09	5.6E-09
Thallium	2.0E-08	NV	1.9E-07	2.5E-07	2.0E-08	NV	1.6E-07	1.0E-07	2.0E-08	NV	1.9E-07	2.5E-07	2.0E-08	NV	1.6E-07	1.0E-07
Zinc	2.9E-07	NV	2.8E-06	3.7E-06	2.9E-07	NV	2.4E-06	1.5E-06	2.8E-07	NV	2.7E-06	3.6E-06	2.8E-07	NV	2.3E-06	1.5E-06
Polycyclic Aromatic Hydrocarbons																
1-Methyl naphthalene	1.9E-11	1.3E-10	2.7E-09	2.4E-10	1.9E-11	1.3E-10	2.3E-09	9.8E-11	1.6E-11	1.3E-10	2.3E-09	2.1E-10	1.6E-11	1.3E-10	2.0E-09	8.5E-11
2-Methyl naphthalene	2.2E-11	1.4E-10	3.1E-09	2.8E-10	2.2E-11	1.4E-10	2.7E-09	1.2E-10	1.9E-11	1.4E-10	2.7E-09	2.4E-10	1.9E-11	1.4E-10	2.3E-09	9.7E-11
Anthracene	3.2E-11	2.0E-11	4.5E-09	4.0E-10	3.2E-11	2.0E-11	3.9E-09	1.7E-10	2.6E-11	2.0E-11	3.7E-09	3.3E-10	2.6E-11	2.0E-11	3.2E-09	1.4E-10
Benzo (a) anthracene	1.2E-10	6.0E-12	1.7E-08	1.5E-09	1.2E-10	6.0E-12	1.4E-08	6.1E-10	8.1E-11	6.0E-12	1.2E-08	1.0E-09	8.1E-11	6.0E-12	9.9E-09	4.2E-10
Benzo (a) pyrene	1.6E-10	NV	2.2E-08	2.0E-09	1.6E-10	NV	1.9E-08	8.2E-10	1.0E-10	NV	1.5E-08	1.3E-09	1.0E-10	NV	1.3E-08	5.4E-10
Benzo (b) fluoranthene	2.0E-10	NV	2.8E-08	2.5E-09	2.0E-10	NV	2.4E-08	1.0E-09	1.3E-10	NV	1.9E-08	1.7E-09	1.3E-10	NV	1.6E-08	6.8E-10
Benzo (ghi) perylene	1.2E-10	NV	1.7E-08	1.5E-09	1.2E-10	NV	1.5E-08	6.2E-10	8.2E-11	NV	1.2E-08	1.0E-09	8.2E-11	NV	1.0E-08	4.3E-10
Benzo (k) fluoranthene	1.6E-10	NV	2.2E-08	2.0E-09	1.6E-10	NV	1.9E-08	8.2E-10	1.1E-10	NV	1.5E-08	1.3E-09	1.1E-10	NV	1.3E-08	5.5E-10
Chrysene	1.9E-10	NV	2.7E-08	2.4E-09	1.9E-10	NV	2.3E-08	9.9E-10	1.3E-10	NV	1.9E-08	1.7E-09	1.3E-10	NV	1.6E-08	6.9E-10
Dibenzo (a,h) anthracene	3.8E-11	NV	5.4E-09	4.8E-10	3.8E-11	NV	4.6E-09	2.0E-10	2.9E-11	NV	4.1E-09	3.6E-10	2.9E-11	NV	3.5E-09	1.5E-10
Fluoranthene	2.9E-10	NV	4.1E-08	3.7E-09	2.9E-10	NV	3.5E-08	1.5E-09	1.9E-10	NV	2.8E-08	2.5E-09	1.9E-10	NV	2.4E-08	1.0E-09
Indeno (1,2,3-cd) pyrene	1.2E-10	NV	1.7E-08	1.5E-09	1.2E-10	NV	1.5E-08	6.3E-10	8.0E-11	NV	1.1E-08	1.0E-09	8.0E-11	NV	9.8E-09	4.2E-10
Phenanthrene	1.0E-10	NV	1.5E-08	1.3E-09	1.0E-10	NV	1.3E-08	5.5E-10	7.4E-11	NV	1.1E-08	9.5E-10	7.4E-11	NV	9.1E-09	3.9E-10
Pyrene	2.7E-10	2.4E-11	3.8E-08	3.4E-09	2.7E-10	2.4E-11	3.3E-08	1.4E-09	1.8E-10	2.4E-11	2.6E-08	2.3E-09	1.8E-10	2.4E-11	2.2E-08	9.5E-10
B(a)P Equivalent	ND	NV	ND	ND	ND	NV	ND	ND	ND	NV	ND	ND	ND	NV	ND	ND
Polychlorinated Biphenyls																
Total PCBs	2.6E-09	1.4E-09	3.7E-07	3.3E-08	2.6E-09	1.4E-09	3.2E-07	1.4E-08	2.1E-09	1.4E-09	3.0E-07	2.7E-08	2.1E-09	1.4E-09	2.6E-07	1.1E-08
Total Petroleum Hydrocarbons																
TPH as diesel	1.7E-07	1.5E-05	1.6E-05	2.1E-06	1.7E-07	1.5E-05	1.4E-05	8.8E-07	4.2E-08	1.5E-05	4.0E-06	5.4E-07	4.2E-08	1.5E-05	3.5E-06	2.2E-07
TPH as motor oil	1.5E-07	NV	1.5E-05	1.9E-06	1.5E-07	NV	1.2E-05	8.0E-07	1.4E-07	NV	1.4E-05	1.8E-06	1.4E-07	NV	1.2E-05	7.4E-07
Dioxins/Furans																
TEQ Human	3.6E-13	1.1E-13	1.0E-11	4.6E-12	3.6E-13	1.1E-13	8.9E-12	1.9E-12	3.8E-13	1.1E-13	1.1E-11	4.8E-12	3.8E-13	1.1E-13	9.3E-12	2.0E-12

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
CDI = Chronic Daily Intake.
C O P C = Constituent of Potential Concern.
mg/kg-day = milligrams per kilogram per day.
mg/m^3 = milligrams per cubic meter.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.

NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B2.3a
2-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User- Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk
Inorganics										
Antimony	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Arsenic	1.2E-10	NV	1.4E-07	1.4E-06	1.6E-06	1.3E-10	NV	1.5E-07	1.5E-06	1.7E-06
Chromium, Hexavalent	4.2E-09	NV	NA	1.3E-07	1.3E-07	2.8E-09	NV	NA	8.4E-08	8.7E-08
Chromium, total	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Copper	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Lead	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Thallium	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Zinc	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Polycyclic Aromatic Hydrocarbons										
1-Methyl naphthalene	4.4E-16	5.1E-12	4.7E-12	9.7E-12	2.0E-11	3.8E-16	5.1E-12	4.0E-12	8.4E-12	1.7E-11
2-Methyl naphthalene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Anthracene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Benzo (a) anthracene	NA	5.4E-12	NA	NA	5.4E-12	NA	5.4E-12	NA	NA	5.4E-12
Benzo (a) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (b) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (ghi) perylene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Benzo (k) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Chrysene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Dibenzo (a,h) anthracene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Fluoranthene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Phenanthrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Pyrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
B(a)P Equivalent	ND	NV	ND	ND	--	ND	NV	ND	ND	--
Polychlorinated Biphenyls										
Total PCBs	4.8E-13	4.2E-10	2.5E-08	5.3E-08	7.8E-08	3.9E-13	4.2E-10	2.1E-08	4.3E-08	6.5E-08
Total Petroleum Hydrocarbons										
TPH as diesel	NC	NC	NC	NC	--	NC	NC	NC	NC	--
TPH as motor oil	NC	NC	NC	NC	--	NC	NC	NC	NC	--

Table AOC10-B2.3a
2-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User- Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk
Dioxins/Furans										
TEQ Human	2.6E-11	1.3E-08	4.6E-08	4.8E-07	5.4E-07	2.7E-11	1.3E-08	4.8E-08	5.0E-07	5.6E-07
Cumulative ILCR	**4E-09**	**1E-08**	**2E-07**	**2E-06**	**2E-06**	**3E-09**	**1E-08**	**2E-07**	**2E-06**	**2E-06**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
ILCR = Incremental Lifetime Cancer Risk.
mg/kg-day = milligrams per kilogram per day.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B2.3b
2-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk
Inorganics										
Antimony	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Arsenic	2.4E-10	NV	2.8E-07	2.9E-06	3.1E-06	2.5E-10	NV	3.0E-07	3.1E-06	3.4E-06
Chromium, Hexavalent	8.4E-09	NV	NA	2.5E-07	2.6E-07	5.6E-09	NV	NA	1.7E-07	1.7E-07
Chromium, total	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Copper	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Lead	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Thallium	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Zinc	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Polycyclic Aromatic Hydrocarbons										
1-Methyl naphthalene	8.9E-16	1.0E-11	9.4E-12	1.9E-11	3.9E-11	7.6E-16	1.0E-11	8.1E-12	1.7E-11	3.5E-11
2-Methyl naphthalene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Anthracene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Benzo (a) anthracene	NA	1.1E-11	NA	NA	1.1E-11	NA	1.1E-11	NA	NA	1.1E-11
Benzo (a) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (b) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (ghi) perylene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Benzo (k) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Chrysene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Dibenzo (a,h) anthracene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Fluoranthene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Phenanthrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Pyrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
B(a)P Equivalent	ND	NV	ND	ND	--	ND	NV	ND	ND	--
Polychlorinated Biphenyls										
Total PCBs	9.6E-13	8.5E-10	5.1E-08	1.1E-07	1.6E-07	7.9E-13	8.5E-10	4.2E-08	8.7E-08	1.3E-07
Total Petroleum Hydrocarbons										
TPH as diesel	NC	NC	NC	NC	--	NC	NC	NC	NC	--
TPH as motor oil	NC	NC	NC	NC	--	NC	NC	NC	NC	--

Table AOC10-B2.3b
2-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk
Dioxins/Furans										
TEQ Human	5.1E-11	2.6E-08	9.3E-08	9.6E-07	1.1E-06	5.3E-11	2.6E-08	9.7E-08	1.0E-06	1.1E-06
Cumulative ILCR	**9E-09**	**3E-08**	**4E-07**	**4E-06**	**5E-06**	**6E-09**	**3E-08**	**4E-07**	**4E-06**	**5E-06**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
ILCR = Incremental Lifetime Cancer Risk.
mg/kg-day = milligrams per kilogram per day.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B2.3c
2-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk
Inorganics										
Antimony	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Arsenic	2.4E-08	NV	1.3E-06	3.6E-07	1.7E-06	2.5E-08	NV	1.4E-06	3.9E-07	1.8E-06
Chromium, Hexavalent	5.4E-07	NV	NA	1.5E-08	5.5E-07	3.6E-07	NV	NA	9.8E-09	3.7E-07
Chromium, total	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Copper	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Lead	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Thallium	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Zinc	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Polycyclic Aromatic Hydrocarbons										
1-Methyl naphthalene	8.9E-14	6.4E-13	4.5E-11	2.5E-12	4.8E-11	7.6E-14	6.4E-13	3.9E-11	2.1E-12	4.2E-11
2-Methyl naphthalene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Anthracene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Benzo (a) anthracene	NA	4.3E-13	NA	NA	4.3E-13	NA	4.3E-13	NA	NA	4.3E-13
Benzo (a) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (b) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Benzo (ghi) perylene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Benzo (k) fluoranthene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Chrysene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Dibenzo (a,h) anthracene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Fluoranthene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Indeno (1,2,3-cd) pyrene	NA	NV	NA	NA	--	NA	NV	NA	NA	--
Phenanthrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
Pyrene	NC	NC	NC	NC	--	NC	NC	NC	NC	--
B(a)P Equivalent	ND	NV	ND	ND	--	ND	NV	ND	ND	--
Polychlorinated Biphenyls										
Total PCBs	9.6E-11	5.3E-11	2.4E-07	1.3E-08	2.6E-07	7.9E-11	5.3E-11	2.0E-07	1.1E-08	2.1E-07
Total Petroleum Hydrocarbons										
TPH as diesel	NC	NC	NC	NC	--	NC	NC	NC	NC	--
TPH as motor oil	NC	NC	NC	NC	--	NC	NC	NC	NC	--

Table AOC10-B2.3c
2-Foot Scouring Scenario ILCRs for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Total Cancer Risk	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Age-Adjusted Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Total Cancer Risk
Dioxins/Furans										
TEQ Human	5.1E-09	1.6E-09	4.5E-07	1.2E-07	5.8E-07	5.4E-09	1.6E-09	4.7E-07	1.3E-07	6.0E-07
Cumulative ILCR	**6E-07**	**2E-09**	**2E-06**	**5E-07**	**3E-06**	**4E-07**	**2E-09**	**2E-06**	**5E-07**	**3E-06**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface II soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
ILCR = Incremental Lifetime Cancer Risk.
mg/kg-day = milligrams per kilogram per day.
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated using benzo(a)pyrene equivalents. Hexavalent chromium is not absorbed via dermal contact.
NC = Not considered a carcinogen.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B2.4a
2-Foot Scouring Scenario HIs for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User - Camper

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child Camper (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Camper (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Camper (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Child Camper (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Child Camper (2 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Adult Camper (2 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Child Camper (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Camper (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Camper (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Child Camper (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Child Camper (2 to 6 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Adult Camper (2 to 6 feet bgs)[a] Soil Pathway Total Hazard Index
Inorganics																					
Antimony	1.9E-07	NV	7.4E-05	2.6E-03	2.6E-03	1.9E-07	NV	1.0E-05	2.4E-04	2.5E-04	1.9E-07	NV	7.4E-05	2.6E-03	2.6E-03	1.9E-07	NV	1.0E-05	2.4E-04	2.5E-04
Arsenic	4.9E-06	NV	3.3E-02	3.8E-01	4.2E-01	4.9E-06	NV	4.6E-03	3.6E-02	4.0E-02	5.3E-06	NV	3.6E-02	4.1E-01	4.4E-01	5.3E-06	NV	4.9E-03	3.8E-02	4.3E-02
Chromium, Hexavalent	2.7E-07	NV	NA	1.6E-04	1.6E-04	2.7E-07	NV	NA	1.5E-05	1.6E-05	1.8E-07	NV	NA	1.1E-04	1.1E-04	1.8E-07	NV	NA	1.0E-05	1.0E-05
Chromium, total	9.9E-06	NV	2.1E-07	7.2E-06	1.7E-05	9.9E-06	NV	2.8E-08	6.7E-07	1.1E-05	1.3E-05	NV	2.7E-07	9.3E-06	2.2E-05	1.3E-05	NV	3.7E-08	8.7E-07	1.4E-05
Copper	1.7E-09	NV	3.5E-06	1.2E-04	1.2E-04	1.7E-09	NV	4.7E-07	1.1E-05	1.2E-05	1.5E-09	NV	3.2E-06	1.1E-04	1.1E-04	1.5E-09	NV	4.3E-07	1.0E-05	1.1E-05
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	1.8E-07	NV	1.7E-05	6.0E-04	6.2E-04	1.8E-07	NV	2.4E-06	5.7E-05	5.9E-05	1.8E-07	NV	1.7E-05	6.0E-04	6.2E-04	1.8E-07	NV	2.4E-06	5.7E-05	5.9E-05
Thallium	2.5E-06	NV	5.2E-03	1.8E-01	1.8E-01	2.5E-06	NV	7.1E-04	1.7E-02	1.7E-02	2.5E-06	NV	5.2E-03	1.8E-01	1.8E-01	2.5E-06	NV	7.1E-04	1.7E-02	1.7E-02
Zinc	1.2E-09	NV	2.6E-06	8.9E-05	9.1E-05	1.2E-09	NV	3.5E-07	8.3E-06	8.7E-06	1.2E-09	NV	2.5E-06	8.6E-05	8.8E-05	1.2E-09	NV	3.4E-07	8.0E-06	8.4E-06
Polycyclic Aromatic Hydrocarbons																				
1-Methyl naphthalene	3.3E-13	3.8E-09	1.1E-08	2.4E-08	3.9E-08	3.3E-13	3.8E-09	1.4E-09	2.3E-09	7.5E-09	2.9E-13	3.8E-09	9.1E-09	2.1E-08	3.4E-08	2.9E-13	3.8E-09	1.2E-09	2.0E-09	7.0E-09
2-Methyl naphthalene	6.8E-12	7.0E-08	2.2E-07	5.0E-07	7.8E-07	6.8E-12	7.0E-08	2.9E-08	4.7E-08	1.5E-07	5.8E-12	7.0E-08	1.8E-07	4.2E-07	6.7E-07	5.8E-12	7.0E-08	2.5E-08	3.9E-08	1.3E-07
Anthracene	1.3E-13	1.3E-10	4.2E-09	9.5E-09	1.4E-08	1.3E-13	1.3E-10	5.7E-10	8.9E-10	1.6E-09	1.1E-13	1.3E-10	3.4E-09	7.8E-09	1.1E-08	1.1E-13	1.3E-10	4.6E-10	7.3E-10	1.3E-09
Benzo (a) anthracene	4.8E-12	4.0E-10	1.5E-07	3.5E-07	5.0E-07	4.8E-12	4.0E-10	2.1E-08	3.3E-08	5.4E-08	3.3E-12	4.0E-10	1.1E-07	2.4E-07	3.5E-07	3.3E-12	4.0E-10	1.4E-08	2.3E-08	3.8E-08
Benzo (a) pyrene	3.9E-07	NV	2.0E-05	4.7E-05	6.8E-05	3.9E-07	NV	2.8E-06	4.4E-06	7.6E-06	2.6E-07	NV	1.4E-05	3.1E-05	4.5E-05	2.6E-07	NV	1.8E-06	2.9E-06	5.0E-06
Benzo (b) fluoranthene	8.2E-12	NV	2.6E-07	5.9E-07	8.5E-07	8.2E-12	NV	3.5E-08	5.6E-08	9.1E-08	5.4E-12	NV	1.7E-07	3.9E-07	5.6E-07	5.4E-12	NV	2.3E-08	3.7E-08	6.0E-08
Benzo (ghi) perylene	4.9E-12	NV	1.6E-07	3.6E-07	5.1E-07	4.9E-12	NV	2.1E-08	3.4E-08	5.5E-08	3.4E-12	NV	1.1E-07	2.5E-07	3.6E-07	3.4E-12	NV	1.5E-08	2.3E-08	3.8E-08
Benzo (k) fluoranthene	6.5E-12	NV	2.1E-07	4.7E-07	6.8E-07	6.5E-12	NV	2.8E-08	4.4E-08	7.2E-08	4.4E-12	NV	1.4E-07	3.2E-07	4.5E-07	4.4E-12	NV	1.9E-08	3.0E-08	4.8E-08
Chrysene	7.8E-12	NV	2.5E-07	5.7E-07	8.1E-07	7.8E-12	NV	3.4E-08	5.3E-08	8.7E-08	5.5E-12	NV	1.7E-07	4.0E-07	5.7E-07	5.5E-12	NV	2.3E-08	3.7E-08	6.1E-08
Dibenzo (a,h) anthracene	9.3E-08	NV	4.9E-06	1.1E-05	1.6E-05	9.3E-08	NV	6.7E-07	1.1E-06	1.8E-06	7.1E-08	NV	3.7E-06	8.6E-06	1.2E-05	7.1E-08	NV	5.1E-07	8.1E-07	1.4E-06
Fluoranthene	9.0E-12	NV	2.8E-07	6.5E-07	9.3E-07	9.0E-12	NV	3.9E-08	6.1E-08	1.0E-07	6.0E-12	NV	1.9E-07	4.4E-07	6.3E-07	6.0E-12	NV	2.6E-08	4.1E-08	6.7E-08
Indeno (1,2,3-cd) pyrene	5.0E-12	NV	1.6E-07	3.6E-07	5.2E-07	5.0E-12	NV	2.1E-08	3.4E-08	5.5E-08	3.3E-12	NV	1.0E-07	2.4E-07	3.4E-07	3.3E-12	NV	1.4E-08	2.2E-08	3.7E-08
Phenanthrene	4.4E-13	NV	1.4E-08	3.2E-08	4.5E-08	4.4E-13	NV	1.9E-09	3.0E-09	4.8E-09	3.1E-13	NV	9.7E-09	2.2E-08	3.2E-08	3.1E-13	NV	1.3E-09	2.1E-09	3.4E-09
Pyrene	1.1E-11	1.6E-09	3.5E-07	8.0E-07	1.2E-06	1.1E-11	1.6E-09	4.8E-08	7.5E-08	1.2E-07	7.5E-12	1.6E-09	2.4E-07	5.4E-07	7.8E-07	7.5E-12	1.6E-09	3.2E-08	5.1E-08	8.5E-08
B(a)P Equivalent	ND	NV	ND	ND	--	ND	NV	ND	ND	--	ND	NV	ND	ND	--	ND	NV	ND	ND	--
Polychlorinated Biphenyls																				
Total PCBs	1.6E-07	1.4E-04	5.1E-03	1.2E-02	1.7E-02	1.6E-07	1.4E-04	6.9E-04	1.1E-03	1.9E-03	1.3E-07	1.4E-04	4.2E-03	9.6E-03	1.4E-02	1.3E-07	1.4E-04	5.7E-04	9.0E-04	1.6E-03
Total Petroleum Hydrocarbons																				
TPH as diesel	3.2E-09	4.6E-04	2.3E-04	8.0E-04	1.5E-03	3.2E-09	4.6E-04	3.2E-05	7.5E-05	5.7E-04	8.1E-10	4.6E-04	5.8E-05	2.0E-04	7.2E-04	8.1E-10	4.6E-04	8.0E-06	1.9E-05	4.9E-04
TPH as motor oil	1.3E-09	NV	2.7E-05	9.2E-05	1.2E-04	1.3E-09	NV	3.6E-06	8.6E-06	1.2E-05	1.2E-09	NV	2.5E-05	8.6E-05	1.1E-04	1.2E-09	NV	3.4E-06	8.0E-06	1.1E-05
Dioxins/Furans																				
TEQ Human	4.5E-08	2.3E-05	4.1E-03	4.7E-02	5.1E-02	4.5E-08	2.3E-05	5.6E-04	4.4E-03	5.0E-03	4.7E-08	2.3E-05	4.3E-03	4.9E-02	5.3E-02	4.7E-08	2.3E-05	5.8E-04	4.6E-03	5.2E-03
Total Hazard Index	**2E-05**	**6E-04**	**5E-02**	**6E-01**	**7E-01**	**2E-05**	**6E-04**	**7E-03**	**6E-02**	**7E-02**	**2E-05**	**6E-04**	**5E-02**	**6E-01**	**7E-01**	**2E-05**	**6E-04**	**7E-03**	**6E-02**	**7E-02**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface fill soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
H I = Hazard Index
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B2.4b
2-Foot Scouring Scenario HIs for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User - Hiker

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Child Hiker (2 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Adult Hiker (2 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Child Hiker (2 to 6 feet bgs)[a] Soil Pathway Total Hazard Index	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Adult Hiker (2 to 6 feet bgs)[a] Soil Pathway Total Hazard Index
Inorganics																					
Antimony	3.8E-07	NV	1.5E-04	5.1E-03	5.3E-03	3.8E-07	NV	2.0E-05	4.8E-04	5.0E-04	3.8E-07	NV	1.5E-04	5.1E-03	5.3E-03	3.8E-07	NV	2.0E-05	4.8E-04	5.0E-04
Arsenic	9.9E-06	NV	6.7E-02	7.7E-01	8.3E-01	9.9E-06	NV	9.1E-03	7.2E-02	8.1E-02	1.1E-05	NV	7.1E-02	8.2E-01	8.9E-01	1.1E-05	NV	9.7E-03	7.7E-02	8.6E-02
Chromium, Hexavalent	5.4E-07	NV	NA	3.3E-04	3.3E-04	5.4E-07	NV	NA	3.1E-05	3.1E-05	3.6E-07	NV	NA	2.2E-04	2.2E-04	3.6E-07	NV	NA	2.1E-05	2.1E-05
Chromium, total	2.0E-05	NV	4.2E-07	1.4E-05	3.5E-05	2.0E-05	NV	5.7E-08	1.3E-06	2.1E-05	2.6E-05	NV	5.4E-07	1.9E-05	4.5E-05	2.6E-05	NV	7.3E-08	1.7E-06	2.7E-05
Copper	3.3E-09	NV	7.0E-06	2.4E-04	2.5E-04	3.3E-09	NV	9.5E-07	2.2E-05	2.3E-05	3.0E-09	NV	6.3E-06	2.2E-04	2.2E-04	3.0E-09	NV	8.6E-07	2.0E-05	2.1E-05
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	3.5E-07	NV	3.5E-05	1.2E-03	1.2E-03	3.5E-07	NV	4.8E-06	1.1E-04	1.2E-04	3.5E-07	NV	3.5E-05	1.2E-03	1.2E-03	3.5E-07	NV	4.8E-06	1.1E-04	1.2E-04
Thallium	4.9E-06	NV	1.0E-02	3.6E-01	3.7E-01	4.9E-06	NV	1.4E-03	3.3E-02	3.5E-02	4.9E-06	NV	1.0E-02	3.6E-01	3.7E-01	4.9E-06	NV	1.4E-03	3.3E-02	3.5E-02
Zinc	2.4E-09	NV	5.1E-06	1.8E-04	1.8E-04	2.4E-09	NV	7.0E-07	1.7E-05	1.7E-05	2.4E-09	NV	5.0E-06	1.7E-04	1.8E-04	2.4E-09	NV	6.8E-07	1.6E-05	1.7E-05
Polycyclic Aromatic Hydrocarbons																				
1-Methyl naphthalene	6.7E-13	7.7E-09	2.1E-08	4.8E-08	7.7E-08	6.7E-13	7.7E-09	2.9E-09	4.5E-09	1.5E-08	5.7E-13	7.7E-09	1.8E-08	4.2E-08	6.7E-08	5.7E-13	7.7E-09	2.5E-09	3.9E-09	1.4E-08
2-Methyl naphthalene	1.4E-11	1.4E-07	4.3E-07	9.9E-07	1.6E-06	1.4E-11	1.4E-07	5.9E-08	9.3E-08	2.9E-07	1.2E-11	1.4E-07	3.6E-07	8.4E-07	1.3E-06	1.2E-11	1.4E-07	5.0E-08	7.9E-08	2.7E-07
Anthracene	2.6E-13	2.7E-10	8.3E-09	1.9E-08	2.8E-08	2.6E-13	2.7E-10	1.1E-09	1.8E-09	3.2E-09	2.1E-13	2.7E-10	6.8E-09	1.6E-08	2.3E-08	2.1E-13	2.7E-10	9.2E-10	1.5E-09	2.7E-09
Benzo (a) anthracene	9.6E-12	7.9E-10	3.0E-07	7.0E-07	1.0E-06	9.6E-12	7.9E-10	4.1E-08	6.5E-08	1.1E-07	6.7E-12	7.9E-10	2.1E-07	4.9E-07	7.0E-07	6.7E-12	7.9E-10	2.9E-08	4.5E-08	7.5E-08
Benzo (a) pyrene	7.8E-07	NV	4.1E-05	9.4E-05	1.4E-04	7.8E-07	NV	5.6E-06	8.8E-06	1.5E-05	5.1E-07	NV	2.7E-05	6.2E-05	9.0E-05	5.1E-07	NV	3.7E-06	5.8E-06	1.0E-05
Benzo (b) fluoranthene	1.6E-11	NV	5.2E-07	1.2E-06	1.7E-06	1.6E-11	NV	7.1E-08	1.1E-07	1.8E-07	1.1E-11	NV	3.4E-07	7.9E-07	1.1E-06	1.1E-11	NV	4.7E-08	7.4E-08	1.2E-07
Benzo (ghi) perylene	9.9E-12	NV	3.1E-07	7.2E-07	1.0E-06	9.9E-12	NV	4.3E-08	6.7E-08	1.1E-07	6.8E-12	NV	2.2E-07	5.0E-07	7.1E-07	6.8E-12	NV	2.9E-08	4.7E-08	7.6E-08
Benzo (k) fluoranthene	1.3E-11	NV	4.1E-07	9.4E-07	1.4E-06	1.3E-11	NV	5.6E-08	8.8E-08	1.4E-07	8.7E-12	NV	2.8E-07	6.3E-07	9.1E-07	8.7E-12	NV	3.8E-08	5.9E-08	9.7E-08
Chrysene	1.6E-11	NV	4.9E-07	1.1E-06	1.6E-06	1.6E-11	NV	6.7E-08	1.1E-07	1.7E-07	1.1E-11	NV	3.4E-07	7.9E-07	1.1E-06	1.1E-11	NV	4.7E-08	7.4E-08	1.2E-07
Dibenzo (a,h) anthracene	1.9E-07	NV	9.8E-06	2.3E-05	3.3E-05	1.9E-07	NV	1.3E-06	2.1E-06	3.6E-06	1.4E-07	NV	7.5E-06	1.7E-05	2.5E-05	1.4E-07	NV	1.0E-06	1.6E-06	2.8E-06
Fluoranthene	1.8E-11	NV	5.7E-07	1.3E-06	1.9E-06	1.8E-11	NV	7.7E-08	1.2E-07	2.0E-07	1.2E-11	NV	3.8E-07	8.7E-07	1.3E-06	1.2E-11	NV	5.2E-08	8.2E-08	1.3E-07
Indeno (1,2,3-cd) pyrene	1.0E-11	NV	3.1E-07	7.2E-07	1.0E-06	1.0E-11	NV	4.3E-08	6.8E-08	1.1E-07	6.6E-12	NV	2.1E-07	4.8E-07	6.9E-07	6.6E-12	NV	2.8E-08	4.5E-08	7.3E-08
Phenanthrene	8.7E-13	NV	2.7E-08	6.3E-08	9.1E-08	8.7E-13	NV	3.7E-09	5.9E-09	9.7E-09	6.2E-13	NV	1.9E-08	4.5E-08	6.4E-08	6.2E-13	NV	2.7E-09	4.2E-09	6.9E-09
Pyrene	2.2E-11	3.1E-09	7.0E-07	1.6E-06	2.3E-06	2.2E-11	3.1E-09	9.6E-08	1.5E-07	2.5E-07	1.5E-11	3.1E-09	4.7E-07	1.1E-06	1.6E-06	1.5E-11	3.1E-09	6.5E-08	1.0E-07	1.7E-07
B(a)P Equivalent	ND	NV	ND	ND	--	ND	NV	ND	ND	--	ND	NV	ND	ND	--	ND	NV	ND	ND	--
Polychlorinated Biphenyls																				
Total PCBs	3.2E-07	2.9E-04	1.0E-02	2.3E-02	3.4E-02	3.2E-07	2.9E-04	1.4E-03	2.2E-03	3.9E-03	2.7E-07	2.9E-04	8.4E-03	1.9E-02	2.8E-02	2.7E-07	2.9E-04	1.1E-03	1.8E-03	3.2E-03
Total Petroleum Hydrocarbons																				
TPH as diesel	6.4E-09	9.2E-04	4.6E-04	1.6E-03	3.0E-03	6.4E-09	9.2E-04	6.3E-05	1.5E-04	1.1E-03	1.6E-09	9.2E-04	1.2E-04	4.0E-04	1.4E-03	1.6E-09	9.2E-04	1.6E-05	3.8E-05	9.7E-04
TPH as motor oil	2.5E-09	NV	5.3E-05	1.8E-04	2.4E-04	2.5E-09	NV	7.3E-06	1.7E-05	2.4E-05	2.4E-09	NV	5.0E-05	1.7E-04	2.2E-04	2.4E-09	NV	6.8E-06	1.6E-05	2.3E-05
Dioxins/Furans																				
TEQ Human	9.0E-08	4.5E-05	8.2E-03	9.4E-02	1.0E-01	9.0E-08	4.5E-05	1.1E-03	8.8E-03	9.9E-03	9.5E-08	4.5E-05	8.5E-03	9.8E-02	1.1E-01	9.5E-08	4.5E-05	1.2E-03	9.2E-03	1.0E-02
Total Hazard Index	**4E-05**	**1E-03**	**1E-01**	**1E+00**	**1E+00**	**4E-05**	**1E-03**	**1E-02**	**1E-01**	**1E-01**	**4E-05**	**1E-03**	**1E-01**	**1E+00**	**1E+00**	**4E-05**	**1E-03**	**1E-02**	**1E-01**	**1E-01**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
H I = Hazard Index
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B2.4c
2-Foot Scouring Scenario HIs for C O P Cs in AOC 10 Soil Using Area-Weighted EPCs: Recreational User - Off-Highway Vehicle Rider

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

C O P C	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Child OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Dermal Contact	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Ingestion	Adult OHV Rider (2 to 3 feet bgs)[a] Soil Pathway Total Hazard Index	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Child OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Total Hazard Index	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Particulate Inhalation	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Vapor Inhalation	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Dermal Contact	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Ingestion	Adult OHV Rider (2 to 6 feet bgs)[a] Soil Pathway Total Hazard Index
Inorganics																				
Antimony	3.8E-05	NV	2.7E-04	3.6E-04	6.7E-04	3.8E-05	NV	2.3E-04	1.5E-04	4.2E-04	3.8E-05	NV	2.7E-04	3.6E-04	6.7E-04	3.8E-05	NV	2.3E-04	1.5E-04	4.2E-04
Arsenic	9.9E-04	NV	1.2E-01	5.4E-02	1.8E-01	9.9E-04	NV	1.0E-01	2.2E-02	1.3E-01	1.1E-03	NV	1.3E-01	5.8E-02	1.9E-01	1.1E-03	NV	1.1E-01	2.4E-02	1.4E-01
Chromium, Hexavalent	5.4E-05	NV	NA	2.3E-05	7.8E-05	5.4E-05	NV	NA	9.5E-06	6.4E-05	3.6E-05	NV	NA	1.5E-05	5.2E-05	3.6E-05	NV	NA	6.4E-06	4.3E-05
Chromium, total	2.0E-03	NV	7.6E-07	1.0E-06	2.0E-03	2.0E-03	NV	6.5E-07	4.2E-07	2.0E-03	2.6E-03	NV	9.8E-07	1.3E-06	2.6E-03	2.6E-03	NV	8.4E-07	5.4E-07	2.6E-03
Copper	3.3E-07	NV	1.3E-05	1.7E-05	3.0E-05	3.3E-07	NV	1.1E-05	7.0E-06	1.8E-05	3.0E-07	NV	1.1E-05	1.5E-05	2.7E-05	3.0E-07	NV	9.8E-06	6.3E-06	1.6E-05
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Mercury (inorganic)	3.6E-05	NV	6.4E-05	8.5E-05	1.8E-04	3.6E-05	NV	5.5E-05	3.5E-05	1.3E-04	3.6E-05	NV	6.4E-05	8.5E-05	1.8E-04	3.6E-05	NV	5.5E-05	3.5E-05	1.3E-04
Thallium	4.9E-04	NV	1.9E-02	2.5E-02	4.4E-02	4.9E-04	NV	1.6E-02	1.0E-02	2.7E-02	4.9E-04	NV	1.9E-02	2.5E-02	4.4E-02	4.9E-04	NV	1.6E-02	1.0E-02	2.7E-02
Zinc	2.5E-07	NV	9.4E-06	1.2E-05	2.2E-05	2.5E-07	NV	8.0E-06	5.1E-06	1.3E-05	2.4E-07	NV	9.0E-06	1.2E-05	2.1E-05	2.4E-07	NV	7.8E-06	5.0E-06	1.3E-05
Polycyclic Aromatic Hydrocarbons																				
1-Methyl naphthalene	6.7E-11	4.8E-10	3.8E-08	3.4E-09	4.2E-08	6.7E-11	4.8E-10	3.3E-08	1.4E-09	3.5E-08	5.8E-11	4.8E-10	3.3E-08	2.9E-09	3.6E-08	5.8E-11	4.8E-10	2.8E-08	1.2E-09	3.0E-08
2-Methyl naphthalene	1.4E-09	8.8E-09	7.9E-07	7.0E-08	8.7E-07	1.4E-09	8.8E-09	6.7E-07	2.9E-08	7.1E-07	1.2E-09	8.8E-09	6.6E-07	5.9E-08	7.3E-07	1.2E-09	8.8E-09	5.7E-07	2.4E-08	6.0E-07
Anthracene	2.6E-11	1.7E-11	1.5E-08	1.3E-09	1.6E-08	2.6E-11	1.7E-11	1.3E-08	5.5E-10	1.4E-08	2.2E-11	1.7E-11	1.2E-08	1.1E-09	1.3E-08	2.2E-11	1.7E-11	1.1E-08	4.5E-10	1.1E-08
Benzo (a) anthracene	9.6E-10	5.0E-11	5.5E-07	4.9E-08	6.0E-07	9.6E-10	5.0E-11	4.7E-07	2.0E-08	4.9E-07	6.7E-10	5.0E-11	3.8E-07	3.4E-08	4.2E-07	6.7E-10	5.0E-11	3.3E-07	1.4E-08	3.4E-07
Benzo (a) pyrene	7.8E-05	NV	7.4E-05	6.6E-06	1.6E-04	7.8E-05	NV	6.4E-05	2.7E-06	1.4E-04	5.2E-05	NV	4.9E-05	4.4E-06	1.1E-04	5.2E-05	NV	4.2E-05	1.8E-06	9.6E-05
Benzo (b) fluoranthene	1.6E-09	NV	9.4E-07	8.4E-08	1.0E-06	1.6E-09	NV	8.1E-07	3.4E-08	8.4E-07	1.1E-09	NV	6.2E-07	5.5E-08	6.8E-07	1.1E-09	NV	5.3E-07	2.3E-08	5.6E-07
Benzo (ghi) perylene	9.9E-10	NV	5.7E-07	5.0E-08	6.2E-07	9.9E-10	NV	4.9E-07	2.1E-08	5.1E-07	6.9E-10	NV	3.9E-07	3.5E-08	4.3E-07	6.9E-10	NV	3.4E-07	1.4E-08	3.5E-07
Benzo (k) fluoranthene	1.3E-09	NV	7.5E-07	6.6E-08	8.1E-07	1.3E-09	NV	6.4E-07	2.7E-08	6.7E-07	8.8E-10	NV	5.0E-07	4.5E-08	5.5E-07	8.8E-10	NV	4.3E-07	1.8E-08	4.5E-07
Chrysene	1.6E-09	NV	9.0E-07	8.0E-08	9.8E-07	1.6E-09	NV	7.7E-07	3.3E-08	8.0E-07	1.1E-09	NV	6.3E-07	5.6E-08	6.8E-07	1.1E-09	NV	5.4E-07	2.3E-08	5.6E-07
Dibenzo (a,h) anthracene	1.9E-05	NV	1.8E-05	1.6E-06	3.8E-05	1.9E-05	NV	1.5E-05	6.6E-07	3.5E-05	1.4E-05	NV	1.4E-05	1.2E-06	2.9E-05	1.4E-05	NV	1.2E-05	5.0E-07	2.6E-05
Fluoranthene	1.8E-09	NV	1.0E-06	9.1E-08	1.1E-06	1.8E-09	NV	8.8E-07	3.8E-08	9.2E-07	1.2E-09	NV	6.9E-07	6.1E-08	7.5E-07	1.2E-09	NV	5.9E-07	2.5E-08	6.2E-07
Indeno (1,2,3-cd) pyrene	1.0E-09	NV	5.7E-07	5.1E-08	6.2E-07	1.0E-09	NV	4.9E-07	2.1E-08	5.1E-07	6.6E-10	NV	3.8E-07	3.4E-08	4.1E-07	6.6E-10	NV	3.3E-07	1.4E-08	3.4E-07
Phenanthrene	8.7E-11	NV	5.0E-08	4.4E-09	5.4E-08	8.7E-11	NV	4.3E-08	1.8E-09	4.5E-08	6.2E-11	NV	3.5E-08	3.2E-09	3.9E-08	6.2E-11	NV	3.0E-08	1.3E-09	3.2E-08
Pyrene	2.2E-09	2.0E-10	1.3E-06	1.1E-07	1.4E-06	2.2E-09	2.0E-10	1.1E-06	4.7E-08	1.1E-06	1.5E-09	2.0E-10	8.6E-07	7.7E-08	9.4E-07	1.5E-09	2.0E-10	7.4E-07	3.2E-08	7.7E-07
B(a)P Equivalent	ND	NV	ND	ND	--	ND	NV	ND	ND	--	ND	NV	ND	ND	--	ND	NV	ND	ND	--
Polychlorinated Biphenyls																				
Total PCBs	3.2E-05	1.8E-05	1.8E-02	1.6E-03	2.0E-02	3.2E-05	1.8E-05	1.6E-02	6.8E-04	1.7E-02	2.7E-05	1.8E-05	1.5E-02	1.4E-03	1.7E-02	2.7E-05	1.8E-05	1.3E-02	5.6E-04	1.4E-02
Total Petroleum Hydrocarbons																				
TPH as diesel	6.4E-07	5.7E-05	8.4E-04	1.1E-04	1.0E-03	6.4E-07	5.7E-05	7.2E-04	4.6E-05	8.3E-04	1.6E-07	5.7E-05	2.1E-04	2.8E-05	3.0E-04	1.6E-07	5.7E-05	1.8E-04	1.2E-05	2.5E-04
TPH as motor oil	2.5E-07	NV	9.7E-05	1.3E-05	1.1E-04	2.5E-07	NV	8.3E-05	5.3E-06	8.9E-05	2.4E-07	NV	9.0E-05	1.2E-05	1.0E-04	2.4E-07	NV	7.7E-05	5.0E-06	8.3E-05
Dioxins/Furans																				
TEQ Human	9.1E-06	2.8E-06	1.5E-02	6.6E-03	2.1E-02	9.1E-06	2.8E-06	1.3E-02	2.7E-03	1.5E-02	9.5E-06	2.8E-06	1.6E-02	6.9E-03	2.2E-02	9.5E-06	2.8E-06	1.3E-02	2.8E-03	1.6E-02
Total Hazard Index	**4E-03**	**8E-05**	**2E-01**	**9E-02**	**3E-01**	**4E-03**	**8E-05**	**1E-01**	**4E-02**	**2E-01**	**4E-03**	**8E-05**	**2E-01**	**9E-02**	**3E-01**	**4E-03**	**8E-05**	**2E-01**	**4E-02**	**2E-01**

Notes:
[a] Exposure point concentrations (EPCs) for exposure to subsurface soil (2 to 12 feet bgs) are used to evaluate the vapor inhalation pathway.

Abbreviations:
-- = not calculated.
B (a) P equivalent = Benzo(a)pyrene equivalent.
bgs = below ground surface.
C O P C = Constituent of Potential Concern.
H I = Hazard Index
na = Not applicable. Potential exposure to lead is evaluated using California Environmental Protection Agency (Cal/E P A) Department of Toxic Substances Control's (DTSC) LeadSpread model. Please see text for discussion.
NA = Not applicable. Noncancer effects of carcinogenic polycyclic aromatic hydrocarbons (C P A Hs) are evaluated separately for each chemical (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene). Hexavalent chromium is not absorbed via dermal contact.
NV = Not volatile.
PCB = Polychlorinated biphenyls.
TPH = Total Petroleum Hydrocarbons.
TEQ = Toxic Equivalent.

Table AOC10-B2.5a

2-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Surface Soil (2 to 3 feet bgs) Using Area-Weighted EPCs: Recreational User (Camper)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	19.6
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.005	0.009	0.01	0.01	0.01	2159
BLOOD Pb, PICA CHILD	0.010	0.02	0.02	0.03	0.03	1084

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.25[a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	2.1E-6	4.1E-05	1%	–	4.1E-05	0.4%
Soil Ingestion	2.5E-4	4.9E-03	99%	5.0E-4	9.9E-03	100%
Inhalation	7.0E-8	1.4E-06	0.03%	–	1.4E-06	0.01%

Notes:

[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B2.5b

2-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Shallow Soil (2 to 6 feet bgs) Using Area-Weighted EPCs: Recreational User (Camper)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	20.0
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.005	0.009	0.01	0.01	0.02	2159
BLOOD Pb, PICA CHILD	0.010	0.02	0.02	0.03	0.03	1084

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.25 [a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	2.1E-6	4.1E-05	1%	–	4.1E-05	0.4%
Soil Ingestion	2.5E-4	5.0E-03	99%	5.0E-4	1.0E-02	100%
Inhalation	7.0E-8	1.4E-06	0.03%	–	1.4E-06	0.01%

Notes:

[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B2.5c

2-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Surface Soil (2 to 3 feet bgs) Using Area-Weighted EPCs: Recreational User (Hiker)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	19.6
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.010	0.018	0.02	0.03	0.03	1079
BLOOD Pb, PICA CHILD	0.020	0.04	0.04	0.05	0.06	542

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5 [a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	4.1E-6	8.1E-05	1%	–	8.1E-05	0.4%
Soil Ingestion	5.0E-4	9.9E-03	99%	1.0E-3	2.0E-02	100%
Inhalation	1.4E-7	2.7E-06	0.03%	–	2.7E-06	0.01%

Notes:
[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B2.5d

2-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Shallow Soil (2 to 6 feet bgs) Using Area-Weighted EPCs: Recreational User (Hiker)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	20.0
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.010	0.019	0.02	0.03	0.03	1079
BLOOD Pb, PICA CHILD	0.020	0.04	0.04	0.05	0.06	542

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5 [a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	4.1E-6	8.3E-05	1%	–	8.3E-05	0.4%
Soil Ingestion	5.0E-4	1.0E-02	99%	1.0E-3	2.0E-02	100%
Inhalation	1.4E-7	2.8E-06	0.03%	–	2.8E-06	0.01%

Notes:

[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B2.5e

2-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Surface Soil (2 to 3 feet bgs) Using Area-Weighted EPCs: Recreational User (Off-highway Vehicle Rider)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	19.6
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.003	0.006	0.01	0.01	0.01	3180
BLOOD Pb, PICA CHILD	0.020	0.04	0.04	0.05	0.06	535

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5 [a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	800
Dermal uptake constant	(ug/dl)/(ug/day	0.0001
Soil ingestion	mg/day	31
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	0.425
Inhalation constant	(ug/dl)/(ug/day	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	1.7E-5	3.2E-04	10%	–	3.2E-04	1.6%
Soil Ingestion	1.6E-4	3.0E-03	90%	1.0E-3	2.0E-02	98%
Inhalation	8.7E-9	1.7E-07	0.01%	–	1.7E-07	0.00%

Notes:

[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

Table AOC10-B2.5f

2-Foot Scouring Scenario Risk Evaluation for Lead in AOC 10 Shallow Soil (2 to 6 feet bgs) Using Area-Weighted EPCs: Recreational User (Off-highway Vehicle Rider)

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

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INPUT MEDIUM	**INPUT** LEVEL
Lead in Soil/Dust (ug/g)	20.0
Respirable Dust (ug/m^3)	1.5

OUTPUT	Percentile Estimate of Blood Pb (ug/dl) 50th	Percentile Estimate of Blood Pb (ug/dl) 90th	Percentile Estimate of Blood Pb (ug/dl) 95th	Percentile Estimate of Blood Pb (ug/dl) 98th	Percentile Estimate of Blood Pb (ug/dl) 99th	PRG-90 (ug/g)
BLOOD Pb, CHILD	0.003	0.006	0.01	0.01	0.01	3180
BLOOD Pb, PICA CHILD	0.020	0.04	0.04	0.05	0.06	535

EXPOSURE PARAMETERS	units	children
Days per week	days/wk	0.5 [a]
Geometric Standard Deviation	ug/dl	1.6
Blood lead level of concern	ug/dl	1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	800 [a]
Dermal uptake constant	(ug/dl)/(ug/day	0.0001
Soil ingestion	mg/day	31 [a]
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	0.425 [a]
Inhalation constant	(ug/dl)/(ug/day	0.192

CHILDREN Pathway	typical Pathway contribution PEF	typical Pathway contribution ug/dl	typical Pathway contribution percent	with pica Pathway contribution PEF	with pica Pathway contribution ug/dl	with pica Pathway contribution percent
Soil Contact	1.7E-5	3.3E-04	10%	–	3.3E-04	1.6%
Soil Ingestion	1.6E-4	3.1E-03	90%	1.0E-3	2.0E-02	98%
Inhalation	8.7E-9	1.7E-07	0.01%	–	1.7E-07	0.00%

Notes:

[a] Highlighted values are Site-specific: days per week based on the assumption of 1 day per month (1 day/4 weeks = 0.25 days/week), 8 months per year. See Table 5.1 of the main report for details.

ATTACHMENT C

Dose and Risk Calculations for Ecological Receptors at AOC 10 Using Depth-Weighted EPCs and Area-Weighted EPCs

For additional help with the information provided in Attachment C, please contact Erin Osborn, Arcadis Principal Toxicologist, at 1-510-684-6760.

Table AOC10-C.1
Desert Shrew Risk Calculations Using Depth-Weighted and Area-Weighted Exposure Point Concentrations for AOC 10

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

Scenario	Category	COPEC	Terrestrial Receptors	TRV Type	Soil EPC (mg/kg or ng/kg)[a]	Diet Composition (Biota)	Diet Composition (Soil Fraction)	Tissue EPCs (mg/kg dw)	Body Weight (kg)	Intake Estimates (F I R) (kg dw/kg-day)	Intake Estimates (S I R) (kg dw/kg-day)	Site Use Factor (unitless)
Baseline (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	1.6E+01	100% Insects	2.0E-02	7.3E+01	5.0E-03	2.0E-01	4.1E-03	1.0E+00
Baseline (Area-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	8.0E+00	100% Insects	2.0E-02	3.3E+01	5.0E-03	2.0E-01	4.1E-03	1.0E+00
2 ft Scouring (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	1.3E+02	100% Insects	2.0E-02	8.4E+02	5.0E-03	2.0E-01	4.1E-03	1.0E+00
2 ft Scouring (Area-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	1.1E+02	100% Insects	2.0E-02	7.3E+02	5.0E-03	2.0E-01	4.1E-03	1.0E+00
5 ft Scouring (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	1.0E+02	100% Insects	2.0E-02	6.4E+02	5.0E-03	2.0E-01	4.1E-03	1.0E+00
5 ft Scouring (Area-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	1.0E+02	100% Insects	2.0E-02	6.4E+02	5.0E-03	2.0E-01	4.1E-03	1.0E+00

Table AOC10-C.1
Desert Shrew Risk Calculations Using Depth-Weighted and Area-Weighted Exposure Point Concentrations for AOC 10

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

Scenario	Category	COPEC	Terrestrial Receptors	TRV Type	Dose (Terrestrial Insects) (mg/kg-day)	Dose (Soil) (mg/kg-day)	Total Dose (mg/kg-day)	N O A E L TRV (mg/kg-day)	L O A E L TRV (mg/kg-day)	N O A E L HQ (unitless)	L O A E L HQ (unitless)	HQ Notes
Baseline (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	1.5E+01	6.4E-02	1.5E+01	4.9E+00	3.0E+01	3E+00	5E-01	Note 1
Baseline (Area-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	6.6E+00	3.3E-02	6.6E+00	4.9E+00	3.0E+01	1E+00	2E-01	None
2 ft Scouring (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	1.7E+02	5.1E-01	1.7E+02	4.9E+00	3.0E+01	3E+01	6E+00	Note 2
2 ft Scouring (Area-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	1.5E+02	4.6E-01	1.5E+02	4.9E+00	3.0E+01	3E+01	5E+00	Note 2
5 ft Scouring (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	1.3E+02	4.1E-01	1.3E+02	4.9E+00	3.0E+01	3E+01	4E+00	Note 2
5 ft Scouring (Area-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	1.3E+02	4.1E-01	1.3E+02	4.9E+00	3.0E+01	3E+01	4E+00	Note 2

Table AOC10-C.1
Desert Shrew Risk Calculations Using Depth-Weighted and Area-Weighted Exposure Point Concentrations for AOC 10

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

Notes:

[a] Inorganics presented in mg/kg; dioxin presented in ng/kg.
[b] Total dose equation is presented below:

Total Dose (mg/kg-day) = $[(EPC_{soil} \times SIR) + (C_{plants} \times FIR \times F_{plants}) + (C_{insects} \times FIR \times F_{insects}) + (C_{mammals} \times FIR \times F_{mammals})] \times SUF$

[c] HQ = Total Dose / TRV

Note 1	N O A E L HQ greater than 1
Note 2	L O A E L HQ greater than 1
Note 3	L O A E L HQ greater than 10
Note 4	L O A E L HQ greater than 100

Abbreviations:

AOC = area of concern
COPEC = constituent of potential ecological concern
dw = dry weight
EPC_{soil} = exposure point concentration in soil (mg/kg dw)
EPC_{plants} = exposure point concentration in plants (mg/kg dw)
$EPC_{insects}$ = exposure point concentration in insects (mg/kg dw)
$EPC_{mammals}$ = exposure point concentration in mammals (mg/kg dw)
F_{plants} = fraction of plants in diet
$F_{insects}$ = fraction of insects in diet
$F_{mammals}$ = fraction of mammals in diet
FIR = food ingestion rate (kg dw/kg bw-day)
HQ = hazard quotient (unitless)
kg = kilogram
kg dw/kg bw-day = kilograms per kilogram of body weight per day
LOAEL = lowest observed adverse effect level (mg/kg-day)
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
ND = not detected
ng/kg = nanograms per kilogram
NOAEL = no observed adverse effect level (mg/kg-day)
SIR = soil ingestion rate (kg dw/kg bw-day)
SUF = site use factor (fraction)
TRV = toxicity reference value (mg/kg-day)

Table AOC10-C.2
Desert Shrew Risk Calculations Using Depth-Weighted Exposure Point Concentrations and Alternate BAFs for AOC 10

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
PG&E Topock Compressor Station
Needles, California

Scenario	Category	COPEC	Terrestrial Receptors	TRV Type	BAF Type	Soil EPC (mg/kg or ng/kg)[a]	Diet Composition (Biota)	Diet Composition (Soil Fraction)	Tissue EPCs (mg/kg dw)	Body Weight (kg)	Intake Estimates (F I R) (kg dw/kg-day)	Intake Estimates (S I R) (kg dw/kg-day)	Site Use Factor (unitless)
Baseline (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	Congener-Specific (USEPA 1999)	1.6E+01	100% Insects	2.0E-02	5.2E+00	5.0E-03	2.0E-01	4.1E-03	1.0E+00
Baseline (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	Congener-Specific (Fagervold et al. 2010)	1.6E+01	100% Insects	2.0E-02	7.2E+00	5.0E-03	2.0E-01	4.1E-03	1.0E+00
2 ft Scouring (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	Congener-Specific (USEPA 1999)	1.3E+02	100% Insects	2.0E-02	4.3E+01	5.0E-03	2.0E-01	4.1E-03	1.0E+00
2 ft Scouring (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	Congener-Specific (Fagervold et al. 2010)	1.3E+02	100% Insects	2.0E-02	2.7E+01	5.0E-03	2.0E-01	4.1E-03	1.0E+00
5 ft Scouring (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	Congener-Specific (USEPA 1999)	1.0E+02	100% Insects	2.0E-02	1.9E+01	5.0E-03	2.0E-01	4.1E-03	1.0E+00
5 ft Scouring (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	Alternate	Congener-Specific (Fagervold et al. 2010)	1.0E+02	100% Insects	2.0E-02	1.3E+01	5.0E-03	2.0E-01	4.1E-03	1.0E+00

Table AOC10-C.2
Desert Shrew Risk Calculations Using Depth-Weighted Exposure Point Concentrations and Alternate BAFs for AOC 10

Post-Soil N T C R A Human Health and Ecological Risk Assessment Report
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Needles, California

Scenario	Category	COPEC	Terrestrial Receptors	Dose (Terrestrial Insects) (mg/kg-day)	Dose (Soil) (mg/kg-day)	Total Dose (mg/kg-day)	N O A E L TRV (mg/kg-day)	L O A E L TRV (mg/kg-day)	N O A E L HQ (unitless)	L O A E L HQ (unitless)	HQ Notes
Baseline (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	1.0E+00	6.4E-02	1.1E+00	4.9E+00	3.0E+01	2E-01	4E-02	None
Baseline (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	1.5E+00	6.4E-02	1.5E+00	4.9E+00	3.0E+01	3E-01	5E-02	None
2 ft Scouring (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	8.7E+00	5.1E-01	9.2E+00	4.9E+00	3.0E+01	**2E+00**	3E-01	Note 1
2 ft Scouring (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	5.5E+00	5.1E-01	6.0E+00	4.9E+00	3.0E+01	1E+00	2E-01	None
5 ft Scouring (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	3.9E+00	4.1E-01	4.3E+00	4.9E+00	3.0E+01	9E-01	1E-01	None
5 ft Scouring (Depth-Weighted)	Dioxins	TEQ Mammals	Desert Shrew	2.7E+00	4.1E-01	3.1E+00	4.9E+00	3.0E+01	6E-01	1E-01	None

Table AOC10-C.2
Desert Shrew Risk Calculations Using Depth-Weighted Exposure Point Concentrations and Alternate BAFs for AOC 10

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Notes:

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[b] Total dose equation is presented below:

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ND = not detected
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SIR = soil ingestion rate (kg dw/kg bw-day)
SUF = site use factor (fraction)
TRV = toxicity reference value (mg/kg-day)

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