

APPENDIX R614-301-722.100b

1984 Seep and Spring Inventory

CEDAR CREEK ASSOCIATES



**Regulatory Compliance
and Resource Specialists**

Seep and Spring Inventory
and
Proposed Seep and Spring Monitoring Program

Submitted to
Valley Camp of Utah, Inc.
Helper, Utah

Submitted by
Cedar Creek Associates
Fort Collins, Colorado

November 30, 1984

INVENTORY

On October 16, 1984, Cedar Creek Associates initiated field studies to inventory seeps and springs and characterize associated wetland vegetation on Valley Camp of Utah, Inc.'s mine permit area. The purpose of this inventory and the subsequent proposed monitoring program was to satisfy the requirements of Condition No. 7 imposed on Valley Camp of Utah, Inc.'s mine permit application. The following sections describe the methods employed to inventory seeps and springs, provide the results of the inventory, and propose a program to monitor seeps and springs on the permit area.

METHODOLOGY

To provide information on the size, source, and amount of water; vegetation present; photo-documentation; and an evaluation of wildlife utilization of each seep and spring, Cedar Creek personnel attempted to visit each of the 73 permit area springs during mid-October, 1984. However, only 18 springs were inventoried as a result of an unseasonably heavy snowstorm on October 17, 1984. This snowstorm and subsequent cold weather and snowstorms precluded completing the inventory in 1984. Springs inventoried included all those occurring in Sections 24 and 25 within the northern portion of the permit area, except for six springs in the SE 1/4 of Section 25 (see Plate 1, Valley Camp of Utah, Inc. permit application).

Standardized data sheets were completed for each spring visited. Information provided on these data sheets included location; slope; aspect; the size of the area around the spring supporting wetland, riparian, or other indicator species of vegetation; and vegetation species present. Where possible, information on the vigor and percent cover of vegetation stratum was recorded. In most cases (particularly for herbaceous species) data on vigor and percent cover could not be provided because of snow cover and decadent or dormant vegetation.

Other data recorded included source and flow of each spring, pertinent wildlife observations, and comments on wildlife habitat. Wildlife observations were limited due to the season in which the inventory occurred. The quantity of flow for each spring was obtained, where possible, by timing the filling a container of known capacity and then converting to gallons per

minute of discharge. The source of each spring was determined from hydrology information presented in the permit application.

As a final inventory procedure, a photograph of each spring site and an additional photograph of the surrounding vegetation community was taken for each spring visited. The frame number of each picture and camera orientation was noted on each data sheet.

RESULTS

Although only 18 springs were inventoried, it was determined that this was a sufficient number visited to adequately characterize the majority of the springs on the permit area and to propose an appropriate monitoring program. In addition, all springs had been previously visited and characterized by Vaughn Hansen Associates (Ground water Hydrology Report, mine permit application). Data sheets completed for the 18 springs inventoried are provided in Appendix 1.

Flows in the majority of the springs are low (less than 10 gpm), and Vaughn Hansen Associates (Ground Water Hydrology Report, mine permit application) concluded from variation in flows (from spring to summer) and geological information that "much, if not all, of the water found in a given spring originates in the small surface depression or basin immediately adjacent to the spring." Wetland habitat supported by these springs is represented primarily by small isolated stands of annual forbs and perennial grasses adapted to growing in close proximity to moist situations. Since wetland habitat supported by these springs is limited or nonexistent, the major value of these springs to most wildlife is their use as a local source of water and their contribution to total streamflow in associated drainages. In addition, springs in the permit area are relatively abundant (average of one for every 37 acres, excluding perennial streams), and travel distances between water sources are relatively short for most wildlife and livestock that utilize the area.

PROPOSED MONITORING PLAN

Based on the preliminary findings, Valley Camp of Utah, Inc. will commit, pursuant to OSM approval, to monitoring a representative sample of springs on a yearly basis. Monitoring will occur in late summer to coincide with low flow periods since low flow is the most limiting factor controlling the extent and vigor of associated wetland vegetation. Approximately 15 control and 15 potentially affected springs will be monitored each year. Control springs will be chosen from areas under which mining will not occur, while potentially affected springs will be monitored in areas under which mining will occur or has occurred. Other criteria to be used for selection of control springs will be similarity in source (formation), amount of flow, slope, aspect, and vegetation to the potentially affected springs. Control springs will be monitored in conjunction with the potentially affected springs so that potential mining related impacts to springs can be discerned from yearly fluctuations in springflow attributable to climatic variation. Monitoring at each spring will consist of measurement of flow present and photo-documentation of associated wetland vegetation. In order to maintain consistency in the specific area to be photographed from year to year, a permanent stake will be placed to mark the photo station at each spring. During the first year of monitoring the height of the camera from the ground and compass direction (degrees) of the camera orientation will be recorded. This height and camera orientation will be repeated from year to year for each spring. A chalkboard with the date and spring number will be placed in each photograph for identification purposes.

At the end of each year of monitoring, Valley Camp of Utah, Inc. will submit a summary of the results to the OSM.

Appendix 1

Spring Inventory Data Sheets and Photos



SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 25-17 Date: 10/16/84 Time: 10:00 am
 Observers: Viert/Phelan Elevation: 9,440'
 Legal Description: NW 1/4, SW 1/4, Sec. 25, T 13S, R 6 E
 Dimensions: 200' X 125' Acreage: 0.57
 Slope (Est.): 20% Aspect: NW
 USFWS Classification: Non-applicable (N/A)

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
<u>Trees</u>			
None			
<u>Shrubs</u>			
<u>Ribes</u> sp., <u>Sambucus</u> sp.	N/A	<5%	N/A
<u>Herbaceous</u>			
<u>Rudbeckia laciniata</u> , <u>Geranium</u> sp. <u>Festuca</u> sp., <u>Carex</u> spp., <u>Poa</u> sp.	N/A	? (snow cover)	N/A

Adjacent Communities Spruce fir forest

Comments: Photo No and Orientation: 1-1 146° seep, 1-2 Adj. 40°

Hydrology Information

Source of water: Blackhawk Formation
 Quantity of water (gal/min): None flowing - frozen
 Comments: _____

Wildlife Information

<u>Species Observed</u>	<u>Species Sign Observed</u>
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Mammals

snowshoe hare tracks

Birds

Reptiles and Amphibians

Habitat Considerations

Sambucus - good mule deer browse; no significant wetland vegetation

Comments: open meadow in spruce-fir forest; 2-3 inches snow cover

Photo Log

Area Photo



Site Photo





SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 25-2 Date: 10/16/84 Time: 10:30 am
 Observers: Viert/Phelan Elevation: 9,400'
 Legal Description: NE 1/4, SW 1/4, Sec. 25, T 13S, R 6 E
 Dimensions: 30' W X 120' L Acreage: 0.08
 Slope (Est.): 40% Aspect: N
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
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Trees

None

Shrubs

<u>Ribes sp., Sambucus sp.</u>	N/A	< 5%	N/A
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Herbaceous

<u>Geranium sp., Veratrum sp., Carex spp., Equisetum sp.</u>	N/A	? (snow cover)	N/A
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Adjacent Communities Spruce fir forest

Comments: Photo Nos. & Orientation: 1-3 Site 100°; 1-4 Adj. 295°

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): 2

Comments: Flowing

Wildlife Information

Species Observed	Species Sign Observed
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Mammals

Birds

Reptiles and Amphibians

Habitat Considerations No significant wetland vegetation, open grass/ forb
meadow in spruce/fir forest

Comments: 3-4 inches snow cover

Photo Log

Area Photo



Site Photo





SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 25-8 Date: 10/16/84 Time: 11:07 am
 Observers: Phelan/Viert Elevation: 9,400'
 Legal Description: NE 1/4, SW 1/4, Sec. 25, T 13S, R 6 E
 Dimensions: 75' X 50' Acreage: 0.09
 Slope (Est.): 25% Aspect: N
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
<u>Trees</u>			
None			
<u>Shrubs</u>			
<u>Sambucus sp., Ribes sp.</u>	N/A	10%	N/A
<u>Herbaceous</u>			
<u>Veratrum sp., Stipa sp., Festuca sp., Agropyron sp.</u>	N/A	? (snow cover)	N/A

Adjacent Communities Spruce/fir forest

Comments: Photo Nos. & Orientation: 1-7 Site 120°; 1-8 adj. 45°

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): .25 gpm

Comments: _____

Wildlife Information

<u>Species Observed</u>	<u>Species Sign Observed</u>
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Mammals

elk tracks

Birds

Reptiles and Amphibians

Habitat Considerations No significant wetland vegetation, Sambucus moderately
browsed

Comments: 3-4" snow

Photo Log

Area Photo



Site Photo





SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 25-9 Date: 10/16/84 Time: 11:18 am
 Observers: Phelan & Viert Elevation: 9400'
 Legal Description: NE 1/4, SW 1/4, Sec. 25, T 13S, R 6 E
 Dimensions: 50' dia. Acreage: 0.04
 Slope (Est.): 25% Aspect: N
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
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Trees

Shrubs

<u>Ribes sp.</u>	N/A	<5%	N/A
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Herbaceous

<u>Veratrum, sp., Festuca sp.</u> <u>Agropyron sp., Rudbeckia</u> <u>laciniata, Carex spp.</u>	N/A	? (snow cover)	N/A
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Adjacent Communities spruce/fir forest

Comments: Photo Orientation & Nos: Site 1-9 140°; adj. 1-10 350°

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): .25 gpm

Comments: slump evident

Wildlife Information

Species Observed	Species Sign Observed
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Mammals

elk tracks

Birds

Reptiles and Amphibians

Habitat Considerations

No significant wetland vegetation

Comments: Small clearing in spruce/fir community

2-4 in. snow

Photo Log

Area Photo



Site Photo





156-17-777

SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 24-10 Date: 10/16/84 Time: 1:34 pm
 Observers: Phelan/Viert Elevation: 8840'
 Legal Description: SE 1/4, SW 1/4, Sec. 24, T 13S, R 6 E
 Dimensions: 10' X 10' Acreage: < 0.01
 Slope (Est.): 35% Aspect: NE
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
<u>Trees</u>			
None			
<u>Shrubs</u>			
None			
<u>Herbaceous</u>			
mixed perennial grasses & annual forbs	N/A	? (snow cover)	N/A

Adjacent Communities Spruce/fir-Aspen mix

Comments: Photo orientation & Nos.: Site 1-22, 130°; Adj. 1-23, 20°

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): 2 gpm

Comments: _____

Wildlife Information

Species Observed

Species Sign Observed

Mammals

Birds

Reptiles and Amphibians

Habitat Considerations

No significant wetland vegetation

Comments: spring area covered partially by downed timber; within 25 yards of
South Fork drainage, 3-4 in. snow cover

Photo Log

Area Photo



Site Photo





SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 24-11 Date: 10/16/84 Time: 1:46 pm
 Observers: Phelan, Viert Elevation: 8,800'
 Legal Description: SE 1/4, SW 1/4, Sec. 24, T 13S, R 6 E
 Dimensions: 10' X 30' Acreage: 0.01
 Slope (Est.): 50% Aspect: ENE
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
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Trees

Shrubs

<u>Sambucus sp.</u>	N/A	<1%	N/A
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Herbaceous

<u>Agropyron spicatum, Carex spp.</u>	N/A	? (snow cover)	N/A
<u>Rudbeckia laciniata</u>			

Adjacent Communities Spruce/fir-Aspen mix

Comments: Photo Nos. & orientation: Site 1-24, 350°; Adj. 1-25, 290°

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): <1 gpm

Comments: _____

Wildlife Information

Species Observed

Species Sign Observed

Mammals

vole runways in grass

Birds

Reptiles and Amphibians

Habitat Considerations

No significant wetland vegetation

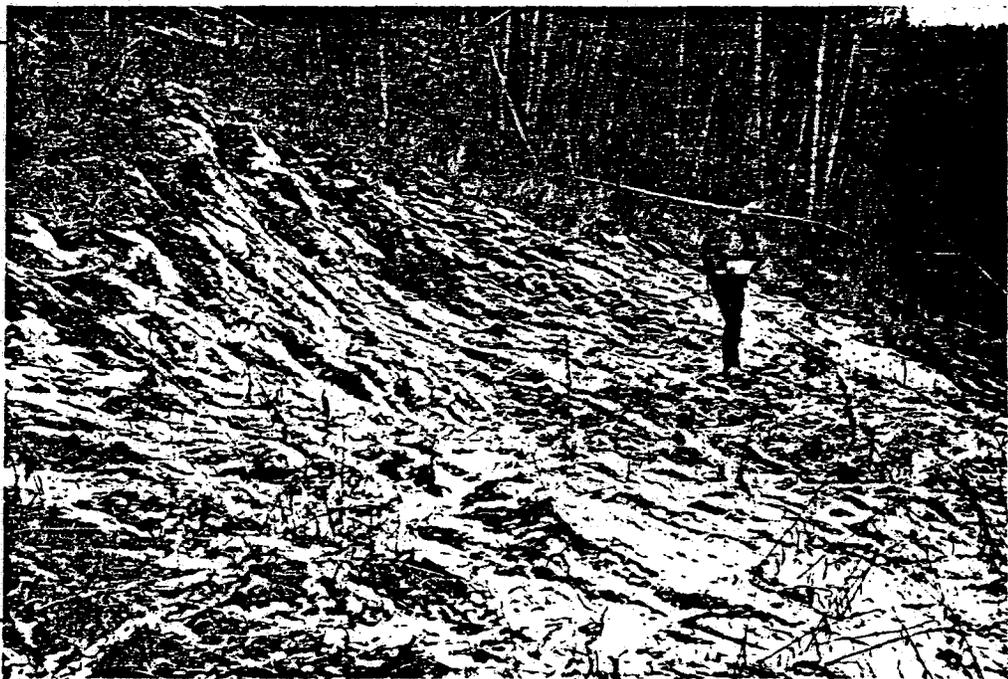
Comments: open meadow bordered by spruce fir & aspen, within 20 yards of South Fork drainage, 0-2 in. snow cover

Photo Log

Area Photo



Site Photo





SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 24-12 Date: 10/16/84 Time: 1:53 pm
 Observers: Phelan, Viert Elevation: 8,760'
 Legal Description: SE 1/4, SW 1/4, Sec. 24, T 13S, R 6 E
 Dimensions: 5' X 20' Acreage: < 0.01
 Slope (Est.): 50% Aspect: ENE
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
<u>Trees</u>			
None			
<u>Shrubs</u>			
None			
<u>Herbaceous</u>			
<u>Poa pratensis, moss</u>	N/A	? (snow cover)	N/A

Adjacent Communities Spruce/fir-Aspen mix

Comments: Photo Nos. and orientation: Site 1-26, 210°; Adj. 1-27, 260°

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): 1 gpm

Comments: _____

Wildlife Information

Species Observed

Species Sign Observed

Mammals

Birds

Reptiles and Amphibians

Habitat Considerations

No significant wetland vegetation

Comments: meadow adjacent to South Fork drainage, 0-1 in. snow

Photo Log

Area Photo



Site Photo





SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 24-1 Date: 10/16/84 Time: 3:41 pm
 Observers: Phelan, Viert Elevation: 9,160'
 Legal Description: NE 1/4, SE 1/4, Sec. 24, T 13S, R 6 E
 Dimensions: 30' X 50' Acreage: 0.03
 Slope (Est.): 20% Aspect: ESE
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
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Trees

None

Shrubs

<u>Sambucus sp.</u>	N/A	1%	N/A
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Herbaceous

<u>Veratrum sp., Festuca sp., Poa pratensis, Wyethia sp.</u>	N/A	? (snow cover)	N/A
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Adjacent Communities Aspen

Comments: Photo Nos. & orientation: Site 1-28, 350°; Adj. 1-29, 40°

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): 1 gpm

Comments: _____

Wildlife Information

Species Observed	Species Sign Observed
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Mammals

elk pellets & tracks

BirdsReptiles and AmphibiansHabitat ConsiderationsNo significant wetland vegetationComments: open meadow on south facing aspen hillside, good elk habitat,
elk tracks & pellets common, 0-1 in. snow cover

Photo Log

Area Photo



Site Photo





SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 25-11 Date: 10/16/84 Time: 4:07 pm
 Observers: Phelan, Viert Elevation: 9,240
 Legal Description: NW 1/4, NE 1/4, Sec. 25, T 13S, R 6 E
 Dimensions: (30' X 60') + (10' X 40') Acreage: 0.06
 Slope (Est.): 40% Aspect: WSW
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
<u>Trees</u>			
None			
<u>Shrubs</u>			
<u>Sambucus</u> sp.	N/A	<1%	N/A
<u>Herbaceous</u>			
<u>Veratrum</u> sp., <u>Rudbeckia</u> <u>laciniata</u> , <u>Stipa</u> sp., <u>Poa</u> sp., <u>Agropyron</u> sp., misc annual forbs	N/A	80%	N/A

Adjacent Communities Aspen, big sagebrush/rabbitbrush

Comments: Photo Nos. & orientation: Site 1-30, 75°; Site & Adj 1-31, 210°

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): 1 gpm

Comments: _____

Wildlife Information

Species Observed	Species Sign Observed
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Mammals

vole runways in grass

Birds

Reptiles and Amphibians

Habitat Considerations

No significant wetland vegetation

Comments: Open forb/grass meadow on sagebrush/rabbitbrush hillside, also
small open stands of aspen

Photo Log

Area Photo



Site Photo





SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 25-12 Date: 10/16/84 Time: 4:25 pm
 Observers: Phelan, Viert Elevation: 9,180'
 Legal Description: NW 1/4, NE 1/4, Sec. 25, T 13S, R 6 E
 Dimensions: 30' dia. Acreage: 0.02
 Slope (Est.): 45% Aspect: W
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
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Trees

None

Shrubs

<u>Artemisia tridentata,</u> <u>Chrysothamnus sp., Symphoricarpos</u> <u>occidentalis</u>	good	30%	N/A
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Herbaceous

<u>Rudbeckia laciniata, Poa sp.,</u> <u>Stipa sp., misc. annual forbs,</u> <u>Wyethia sp.</u>	N/A	20%	N/A
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Adjacent Communities Big Sagebrush/Rabbitbrush

Comments: Photo Nos. & orientation: Site 1-32, 300°; Adj. 360°, 1-33

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): No flow

Comments: _____

Wildlife Information

Species Observed	Species Sign Observed
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Mammals

Birds

Reptiles and Amphibians

Habitat Considerations

No significant wetland vegetation

Comments: _____

Photo Log

Area Photo



Site Photo





SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 25-13 Date: 10/16/84 Time: 4:40 pm
 Observers: Phelan, Viert Elevation: 9,280'
 Legal Description: NE 1/4, NE 1/4, Sec. 25, T 13S, R 6 E
 Dimensions: 10' X 120' Acreage: 0.03
 Slope (Est.): 45% Aspect: E
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
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Trees

None

Shrubs

None

Herbaceous

<u>Veratrum sp., Rudbeckia</u>			
<u>laciniata, Poa sp., Cirsium sp.,</u>			
<u>Agropyron sp., Carex spp.</u>	N/A	40%	N/A

Adjacent Communities forb/meadow

Comments: Photo Nos. & orientation: Site 1-34, 310°; Adj. 1-35, 0°

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): 0.25 gpm

Comments: _____

Wildlife Information

Species Observed

Species Sign Observed

Mammals

Birds

Reptiles and Amphibians

Habitat Considerations

No significant wetland vegetation

Comments: grasses heavily grazed

Photo Log

Area Photo



Site Photo





SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 25-14 Date: 10/16/84 Time: 5:14 pm
 Observers: Phelan, Viert Elevation: 9,280'
 Legal Description: SE 1/4, NE 1/4, Sec. 25, T 13S, R 6 E
 Dimensions: 15' X 100' Acreage: 0.03
 Slope (Est.): 50% Aspect: ESE
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
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Trees

None

Shrubs

None

Herbaceous

<u>Veratrum sp., Poa sp., Agropyron sp., mixed annual forbs & perennial grasses</u>	<u>N/A</u>	<u>50%</u>	<u>N/A</u>
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Adjacent Communities Forb meadow & Aspen

Comments: Photo Nos. & orientation: Site 1-36, 230°; Adj. 1-37, 10°

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): 4 0.25 gpm

Comments: _____

Wildlife Information

<u>Species Observed</u>	<u>Species Sign Observed</u>
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Mammals

2 mule deer does bedded down near spring

elk pellets

Birds

Reptiles and Amphibians

Habitat Considerations

No significant wetland vegetation

Comments: Good elk habitat -- forb meadow on open aspen hillside

Photo Log

Area Photo



Site Photo





SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 25-3, 25-10* Date: 10/16/84 Time: 11:28 am
 Observers: Phelan/Viert Elevation: 9,440'
 Legal Description: NE 1/4, SW 1/4, Sec. 25, T 13S, R 6 E
 Dimensions: 100' X 400' Acreage: 0.92
 Slope (Est.): 20% Aspect: N
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
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Trees

None

Shrubs

<u>Sambucus sp., Ribes sp.</u>	N/A	15%	N/A
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Herbaceous

<u>Veratrum sp., Stipa sp., Festuca sp., Agropyron sp.</u>	N/A	? (snow cover)	N/A
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Adjacent Communities spruce/fir-aspen

Comments: Photo Nos. and orientation: Site 1-11 175°; adj. 1-12 20°

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): 1 gpm

Comments: * springs connected by surface flow.

Wildlife Information

Species Observed	Species Sign Observed
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Mammals

Birds

Hairy woodpecker

Reptiles and Amphibians

Habitat Considerations

No significant wetland vegetation

Comments: open meadow bordered by spruce/fir and aspen communities,
2-4 in. snow.

Photo Log

Area Photo



Site Photo





SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 25-4 Date: 10/16/84 Time: 11:52 am
 Observers: Phelan, Viert Elevation: 9,400'
 Legal Description: NE 1/4, SW 1/4, Sec. 25, T 13S, R 6 E
 Dimensions: 50' X 75' Acreage: 0.09
 Slope (Est.): 20% Aspect: N
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
<u>Trees</u>			
None			
<u>Shrubs</u>			
<u>Ribes sp., Sambucus sp.</u>	N/A	15%	N/A
<u>Herbaceous</u>			
<u>Festuca sp., Carex spp., Agropyron sp.</u>	N/A	? (snow cover)	N/A

Adjacent Communities Spruce/fir, Aspen mixture (Open)

Comments: Photo Nos. and orientation: Site 1-13 212°; Adj 1-14 30°

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): None

Comments: _____

Wildlife Information

<u>Species Observed</u>	<u>Species Sign Observed</u>
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Mammals

elk tracks
mule deer tracks

Birds

Reptiles and Amphibians

Habitat Considerations

No significant wetland vegetation, Sambucus moderately browsed

Comments: open shrub meadow border by spruce/fir and aspen, 2-4 in. snow

Photo Log

Area Photo



Site Photo





SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 25-5 Date: 10/16/84 Time: 12:05 pm
 Observers: Phelan, Viert Elevation: 9,160'
 Legal Description: SF 1/4, NW 1/4, Sec. 25, T 13S, R 6 E
 Dimensions: 25' dia + (80' X 100') Acreage: 0.20
 Slope (Est.): 25% Aspect: W-NW
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
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Trees

None

Shrubs

1) None			
2) <u>Sambucus sp., Ribes sp.</u>	N/A	15%	N/A

Herbaceous

1) <u>Veratrum sp., Rudbeckia laciniata, Carex spp.</u>	N/A	? (snow cover)	N/A
2) <u>Festuca sp., Agropyron sp., Rudbeckia laciniata, Stipa sp., Carex spp.</u>	N/A	? (snow cover)	N/A

Adjacent communities

spruce/fir forest

Comments: Photo Nos. and orientation: Site 1-15, 175°; adj. 1-16 295° (2nd spring on right hand side of this photo), very sparse vegetation

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): 2 gpm

Comments: Spring continuous by surface flow with another 100 feet to north

Wildlife Information

Species Observed

Species Sign Observed

Mammals

Birds

Reptiles and Amphibians

Habitat Considerations

No significant wetland vegetation

Comments: small clearing in spruce fir community

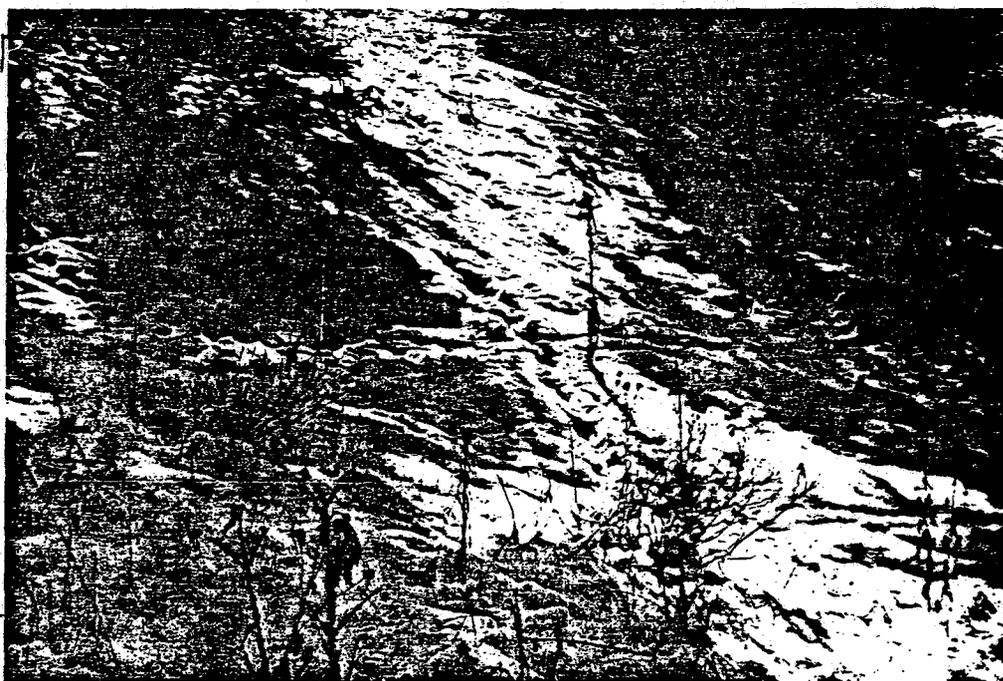
2-4 in. snow

Photo Log

Area Photo



Site Photo





SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 25-6 Date: 10/16/84 Time: 12:49 pm
 Observers: Phelan, Viert Elevation: 9,100'
 Legal Description: SE 1/4, NW 1/4, Sec. 25, T 13S, R 6 E
 Dimensions: 20' X 50' Acreage: 0.02
 Slope (Est.): 30% Aspect: W
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
---------	-------	----------------	------------

Trees

10 2-3 ft. <u>Pseudotsuga menziesii</u>	good	< 1%	N/A
--	------	------	-----

Shrubs

None

Herbaceous

mostly grass - <u>Carex</u> sp. & <u>Koeleria</u> sp.	N/A	? (snow cover)	N/A
--	-----	----------------	-----

Adjacent Communities spruce/fir forest

Comments: Photo Nos. & orientation: Site 1-18, 130°; Adj. 1-19, 220°

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): 6 gpm

Comments: _____

Wildlife Information

<u>Species Observed</u>	<u>Species Sign Observed</u>
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Mammals

Birds

Mt. chickadee

Reptiles and Amphibians

Habitat Considerations

No significant wetland vegetation

Comments: spring area crossed by down timber, 3-4 inches snow cover

Photo Log

Area Photo



Site Photo





SEEP AND SPRING INVENTORY
VALLEY CAMP OF UTAH, INC.

General Information

Seep, Spring Identification: 25-7 Date: 10/16/84 Time: 1:20 pm
 Observers: Phelan, Viert Elevation: 8,960'
 Legal Description: NE 1/4, NW 1/4, Sec. 25, T 13S, R 6 E
 Dimensions: 20' X 50' Acreage: 0.02
 Slope (Est.): 45% Aspect: NW
 USFWS Classification: Non-applicable

Vegetation Information

Species	Vigor	% Cover (Est.)	Importance
<u>Trees</u>			
None			
<u>Shrubs</u>			
<u>Ribes sp.</u>	N/A	<1%	N/A
<u>Herbaceous</u>			
Misc. perennial grasses & annual forbs	N/A	? (snow cover)	N/A

Adjacent Communities Spruce/fir forest

Comments: Photo Nos. & orientation: Site 1-20, 125°; Adj. 1-21, 25°

Hydrology Information

Source of water: Blackhawk Formation

Quantity of water (gal/min): 4 gpm

Comments: _____

Wildlife Information

Species Observed

Species Sign Observed

Mammals

Birds

Reptiles and Amphibians

Habitat Considerations

No significant wetland vegetation

Comments: 3-4 in. snow cover

Photo Log

Area Photo



Site Photo



APPENDIX R614-301-722.100c

Water Rights

VALLEY CAMP OF UTAH, INC. - LOCAL WATER RIGHTS

WATER RIGHT	CFS	QUANTITY AND/OR AC-FT	SOURCE DESCRIPTION or WELL INFO	POINT OF DIVERSION DESCRIPTION			U A P T S U P R														
				DIAMETER	DEPTH	YEAR LOG	NORTH	EAST	CNR	SEC	TWN	RNG	B&M	N	P	R	R	R	W	P	D
TOWNSHIP 13S RANGE 6E SL BASE AND MERIDIAN																					
91 424	.0110	.00	Unnamed Spring																		
	WATER USE (S):																				
	Marakis, Nick 165 E. 100 S. Price																				
91 431	.0000	.00	Unnamed Stream																		
	WATER USE (S):																				
	Marakis, Nick 166 East 1st South Price																				
91 432	.0110	.00	Unnamed Spring																		
	WATER USE (S):																				
	Marakis, Nick 165 East 1st South Price																				
91 433	.0110	.00	Unnamed Spring																		
	WATER USE (S):																				
	Marakis, Nick 675 East 1st South Price																				
91 436	.0000	.00	Unnamed Stream																		
	WATER USE (S):																				
	Marakis, Nick 165 East 1st South Price																				
91 463	.0110	.00	Unnamed Spring																		
	WATER USE (S): STOCKWATERING																				
	Eureka Energy 215 Market Street San Francisco CA 94106																				
91 471	.0000	.00	Unnamed Stream																		
	WATER USE (S):																				
	Marakis, John 165 East 1st South Price																				
91 472	.0110	.00	Unnamed Spring																		
	WATER USE (S):																				
	Marakis, John 165 East 1st South Price																				
91 473	.0110	.00	Unnamed Spring																		
	WATER USE (S):																				
	Marakis, John 165 East 1st South Price																				
91 476	.0000	.00	Unnamed Stream																		
	WATER USE (S):																				
	Marakis, John 165 East 1st South Price																				
91 1019	.0000	.00	Trib to Boardinghouse Canyon C																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1020	.0000	.00	Boardinghouse Canyon Creek																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1021	.0000	.00	Boardinghouse Canoyrn Creek																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1022	.0000	.00	South Fork Eccles Canyon Creek																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1023	.0000	.00	Trib to South Fork Eccles Cany																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1024	.0000	.00	Trib to South Fork Eccles Canyon																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1025	.0000	.00	Trib to Eccles Canyon Creek																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1026	.0000	.00	Trib to Eccles Canyon Creek																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1027	.0000	.00	Eccles Canyon Creek																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1028	.0000	.00	Eccles Canyon Creek																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1029	.0000	.00	Trib to Winter Quarters Canyon																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1030	.0000	.00	Trib to Winter Quarters Canyon																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1031	.0000	.00	Trib to Winter Quarters Canyon																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1032	.0000	.00	Trib to Winter Quarters Canyon																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1033	.0000	.00	Winter Quarters Canyon Creek																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1034	.0000	.00	Trib. to Winter Quarters Canyon																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1035	.0150	.00	Unnamed Spring																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				
91 1037	.0000	.00	Trib. to Winter Quarters Canyo																		
	WATER USE (S): STOCKWATERING																				
	USA Forest Service 324-25th Street Ogden UT 84401																				

Notes: General - Multiple points of diversion may exist for some water rights.
 * - Water right not plotted on map due to description error.

VALLEY CAMP OF UTAH, INC. - LOCAL WATER RIGHTS

WATER RIGHT	CFS	QUANTITY AND/OR AC-FT	SOURCE DESCRIPTION or WELL INFO				POINT OF DIVERSION DESCRIPTION						U A P T S U P R N P E E U G T E N P R R R W P D									
			DIAMETER	DEPTH	YEAR LOG	NORTH	EAST	CNR	SEC	TWN	RNG	B&M	N	P	R	R	W	P	D			
91 3057	.0000	.00	South Fork Eccles Canyon Creek					SW4NE4 SEC 24 TO SE4NE4 SEC 24										X	X	X		
WATER USE(S): STOCKWATERING																						
Oman, Milton A.																						
91 3059	.0000	.00	South Fork Eccles Canyon Creek					717 Continental Bank Building NE4NE4 SEC 24 TO NE4NE4 SEC 24										UT	X	X	X	
WATER USE(S):																						
Marakis, John																						
91 3060	.0000	.00	South Fork Eccles Canyon Creek					160 East 1st South NE4NE4 SEC 24 TO NE4NE4 SEC 24										UT	84501	X	X	X
WATER USE(S):																						
Marakis, Nick																						
91 3070	.0000	.00	Eccles Canyon Creek					789 East 8th North SW4SE4 SEC 13 TO NE4NE4 SEC 24										UT	84501	X	X	X
WATER USE(S):																						
Marakis, John																						
91 3071	.0000	.00	Eccles Canyon Creek					160 East 1st South SW4SE4 SEC 13 TO NE4NE4 SEC 24										UT	84501	X	X	X
WATER USE(S):																						
Marakis, Nick																						
91 3633	.0000	.00	Winter Quarters Creek					789 East 8th North SW4NW4 SEC 1 TO SE4NE4 SEC 1										UT	84501	X	X	X
WATER USE(S):																						
Allred, D. Euray																						
91 3635	.0000	.00	Unnamed Stream					Fountain Green SE4NW4 SEC 1 TO SE4NW4 SEC 1										UT	84632	X	X	X
WATER USE(S): STOCKWATERING																						
Allred, D. Euray																						
91 4344	.0000	.00	South Fork Eccles Canyon Creek					Fountain Green SE4SE4 SEC 23 TO SW4SW4 SEC 24										UT	84632	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
91 4345	.0150	.00	Unnamed Spring					324 25th Street SW4NW4 SEC 13										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
91 4361	.0000	.00	Trib. of Winter Quarters Cyn.					324 25th Street SW4NW4 SEC 10 TO SW4NW4 SEC 3										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
93 5	.0110	.00	North Huntington Spring					324 25th Street SE4SW4 SEC 10										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
93 6	.0000	.00	North Fork Huntington Creek					324 25th Street SE4SW4 SEC 10 TO LOT 4 SEC 15										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
93 8	.0000	.00	Fork of Huntington Creek					324 25th Street SE4NW4 SEC 23 TO SE4NW4 SEC 22										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
93 9	.0000	.00	Kitchen Fork of Huntington Cre					324 25th Street LOT 6 SEC 16 TO SE4NW4 SEC 22										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
93 11	.0000	.00	Swens Canyon Creek					324 25th Street SW4NW4 SEC 28 TO LOT 2 SEC 28										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
93 12	.0000	.00	Huntington Creek					324 25th Street SE4NW4 SEC 22 TO SW4SE4 SEC 34										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
93 13	.0000	.00	Burnout Canyon Creek					324 25th Street SW4SE4 SEC 23 TO LOT 7 SEC 34										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
93 14	.0000	.00	James Canyon Creek					324 25th Street SE4NW4 SEC 36 TO LOT 4 SEC 35										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
93 18	.0000	.00	Flat Canyon Creek					324 25th Street SE4NW4 SEC 33 TO SW4SE4 SEC 34										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
93 19	.0000	.00	Boulger Canyon Creek					324 25th Street SW4NW4 SEC 4 TO SW4SE4 SEC 34										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
93 1538	.0110	.00	Burnout Spring					324 25th Street NE4SE4 SEC 27										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
93 1539	.0110	.00	Eccles Spring					324 25th Street SW4SW4 SEC 14										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
93 1540	.0110	.00	Moss Pond Spring					324 25th Street NW4SW4 SEC 14										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
93 1541	.0110	.00	Eccles "A" Pond Spring					324 25th Street NW4NW4 SEC 15										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
93 1547	.0000	.00	Basin Creek					324 25th Street SE4NE4 SEC 4 TO NW4SW4 SEC 34										UT	84401	X	X	X
WATER USE(S): STOCKWATERING																						
USA Forest Service																						
E1114	.0000	30.00	Underground Water Well					N 900 E 1700 SW 13 13S 6E SL										UT	84401	X	X	X
WATER USE(S): OTHER																						
Coastal States Energy Co., Coastal Tower, Nine Greenway Plaza, Huston TX 77046																						
TOWNSHIP 13S RANGE 7E SL BASE AND MERIDIAN																						
91 2	.0000	12020.00	Gooseberry Creek					S 970 E 60 W4 5 13S 7E SL										X		X		
WATER USE(S): IRRIGATION DOMESTIC STOCKWATERING MUNICIPAL OTHER																						
Price River Water Users Association																						
91 106	.0090	.00	Three Springs					N2527' W1444' FROM SE COR SEC 27 S410' W50' FROM N4 COR SEC 27 S163' W300' FROM NE COR SEC 28										UT	84501	X	X	X
WATER USE(S): DOMESTIC STOCKWATERING																						
Jacob, Calvin K. Pleasant Grove UT 84062																						

Notes: General - Multiple points of diversion may exist for some water rights.
 * - Water right not plotted on map due to description error.

VALLEY CAMP OF UTAH, INC. - LOCAL WATER RIGHTS

WATER RIGHT	CFS	QUANTITY AND/OR AC-FT	SOURCE DESCRIPTION or WELL INFO				POINT OF DIVERSION DESCRIPTION				U A P T S U P R	
			DIAMETER	DEPTH	YEAR LOG	NORTH	EAST	CNR SEC	TWN	RNG B&M	N P R R R	U P R R R
91 200	.1340	.00 10	280	1953	Y N	450 E	500 S4	8 13S	7E SL		X X	
WATER USE(S): IRRIGATION DOMESTIC OTHER												
Alpine School District												
91 201	.0680	.00 Unnamed Spring	50 North Center Street			NW4NW4 SEC 9			American Fork		UT 84003	
WATER USE(S): STOCKWATERING												
Thomas, Earl												
91 345	.7500	.00 Green Canyon Spring Stream			S	650 W	100 N4	17 13S	7E SL		UT X X	
WATER USE(S): IRRIGATION												
Nicolaides, Tom												
Nicolaides, Leon												
Stathis, Mary												
Daraban, Bessie												
91 352	.0000	.00 Hopkins Creek				SE4NW4 SEC 3 TO SE4NE4 SEC 27			Salt Lake City		UT X X X	
WATER USE(S): DOMESTIC												
Anderson, Clarence (Estate)												
91 354	.0190	.00 Two Springs Trib to Winter Qua	N	388 E	437 W4	5 13S	7E SL				UT X X	
WATER USE(S): OTHER												
Pioneer Ditch Company #1												
91 407	.0110	.00 Unnamed Spring				SE4SW4 SEC 27					UT 84501	
WATER USE(S):												
Jacob, Calvin K.												
91 408	.0110	.00 Unnamed Spring				SW4SW4 SEC 28			Pleasant Grove		UT 84062	
WATER USE(S):												
Jacob, Calvin K.												
91 423	.0000	.00 Winter Quarters Creek				SW4NW4 SEC 6 TO SE4NE4 SEC 6			Pleasant Grove		UT 84062	
WATER USE(S):												
Marakis, Nick												
91 425	.0220	.00 Unnamed Spring	165 E. 100 S.			NW4SW4 SEC 6			Price		UT 94106	
WATER USE(S):												
Marakis, Nick												
91 434	.0110	.00 Unnamed Spring	165 E. 100 S.			NE4SW4 SEC 18			Price		UT X X X	
WATER USE(S):												
Marakis, Nick												
91 435	.0110	.00 Unnamed Spring	165 East 1st South			SE4NW4 SEC 7			Price		UT 84501	
WATER USE(S):												
Marakis, Nick												
91 437	.0000	.00 Clear Creek	165 East 1st South			SE4SE4 SEC 8 TO SW4SE4 SEC 8			Price		UT 84501	
WATER USE(S):												
Marakis, Nick												
91 438	.0000	.00 Clear Creek				NE4NE4 SEC 20 TO NE4NE4 SEC 20					UT X X X	
WATER USE(S):												
Marakis, Nick												
91 440	.0000	.00 Unnamed Wash	165 East 1st South			SW4SE4 SEC 16			Price		UT 84501	
WATER USE(S):												
Markis, Nick												
91 441	.0000	.00 Unnamed Stream	165 East 1st South			SE4SW4 SEC 16			Price		UT 84501	
WATER USE(S):												
Marakis, Nick												
91 455	.0110	.00 Unnamed Spring	165 East 1st South			NW4SE4 SEC 6			Price		UT 84501	
WATER USE(S): STOCKWATERING												
Radakovich, Robert												
91 462	.0000	.00 Winter Quarters Creek	340 North 6th East			SW4NW4 SEC 6 TO SE4NE4 SEC 6			Price		UT 84501	
WATER USE(S):												
Eureka Energy Company												
91 464	.0220	.00 Unnamed Spring	215 Market Street			NW4SW4 SEC 6			San Francisco		CA 94106	
WATER USE(S):												
Eureka Energy Company												
91 474	.0110	.00 Unnamed Spring	215 Market Street			NE4SW4 SEC 18			San Francisco		CA 94106	
WATER USE(S):												
Marakis, John												
91 475	.0110	.00 Unnamed Spring	165 East 1st South			SE4NW4 SEC 7			Price		UT 84501	
WATER USE(S):												
Marakis, John												
91 477	.0000	.00 Clear Creek	165 East 1st South			SE4SE4 SEC 8 TO SW4SE4 SEC 8			Price		UT 84501	
WATER USE(S):												
Marakis, John												
91 478	.0000	.00 Clear Creek	165 East 1st South			NE4NE4 SEC 20 TO NE4NE4 SEC 20			Price		UT 84501	
WATER USE(S):												
Marakis, John												
91 479	.0000	.00 Unnamed Wash	165 East 1st South			SW4SE4 SEC 16			Price		UT 84501	
WATER USE(S):												
Marakis, John (Estate)												
91 480	.0000	.00 Unnamed Stream				SE4SW4 SEC 16					UT X X X	
WATER USE(S):												
Marakis, John												
91 481	.0110	.00 Unnamed Spring	165 East 1st South			NE4SW4 SEC 6			Price		UT 84501	
WATER USE(S): STOCKWATERING												
Radakovich, Robert												
91 482	.0000	.00 Unnamed Stream	340 North 6th East			NE4NE4 SEC 7 TO NE4NE4 SEC 7			Price		UT 84501	
WATER USE(S): STOCKWATERING												
Radakovich, Robert												
91 483	.4430	.00 Winter Quarters Creek	340 North 6th East		N	700 W 1400 E4	6 13S	7E SL			UT 84501	
WATER USE(S): IRRIGATION STOCKWATERING												
Radakovich, Robert												

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VALLEY CAMP OF UTAH, INC. - LOCAL WATER RIGHTS

WATER RIGHT	CFS	QUANTITY AND/OR AC-FT	SOURCE DESCRIPTION or WELL INFO			POINT OF DIVERSION DESCRIPTION				U A P T S U P R											
			DIAMETER	DEPTH	YEAR LOG	NORTH	EAST	CNR	SEC	TWN	RNG	B&M	N	P	R	R	R	W	P	D	
91 1148	.0000	.00	Green Canyon Stream					SW4SE4 SEC 7 TO NE4NE4 SEC 18											X	X	X
	WATER USE (S): STOCKWATERING																		UT	84101	
	Nicolaides, Tom & Leon			1026 East 1st South															UT		
91 1643	.0110	.00	Unnamed Spring					NW4SW4 SEC 31											X	X	X
	WATER USE (S): STOCKWATERING																		UT		
	Thomas, Jack																		UT		
91 1644	.0000	.00	Unnamed Spring					NW4SE4 SEC 8											X	X	X
	WATER USE (S):																		UT		
	Thomas, Lee																		UT		
91 1678	.0000	.00	Unnamed Stream					SE4NE4 SEC 28 TO NE4NE4 SEC 20											X	X	X
	WATER USE (S):																		UT		
	Jacob, Calvin K.																		UT	84062	
91 1679	.0110	.00	Unnamed Spring					SW4SE4 SEC 21											X	X	X
	WATER USE (S): DOMESTIC																		UT	84062	
	Jacob, Calvin K.																		UT	84062	
91 1680	.0110	.00	Unnamed Spring					SE4SE4 SEC 21											X	X	X
	WATER USE (S):																		UT	84062	
	Jacob, Calvin K.																		X	X	X
91 1681	.0110	.00	Unnamed Spring					SW4NE4 SEC 21											X	X	X
	WATER USE (S):																		UT	84062	
	Jacob, Calvin K.																		X	X	
91 1986	.0500	.00	Unnamed Spring				S 1020 W 310 NE 17 13S 7E SL												X	X	
	WATER USE (S): OTHER																		UT		
	LDS Church, Corporation of the Presiding Bishopric			50 E. N. Temple															X	X	X
91 2018	.0000	.00	Green Canyon Stream					NW4NW4 SEC 17											X	X	X
	WATER USE (S): STOCKWATERING																		UT		
	Stilson, L. Clan & Beth																		UT		
91 2019	.0000	.00	Unnamed Stream					NW4SW4 SEC 8											X	X	X
	WATER USE (S): STOCKWATERING																		UT		
	Stilson, L. Clan & Beth																		UT		
91 2020	.0000	.00	Green Canyon Stream					NW4NW4 SEC 17 TO NE4NW4 SEC 17											X	X	X
	WATER USE (S): STOCKWATERING																		UT		
	Stilson, L. Clan & Beth																		UT		
91 2048	.0000	.00	Pleasant Creek					SW4NE4 SEC 8 TO NW4NE4 SEC 8											X	X	X
	WATER USE (S): STOCKWATERING																		UT		
	Radakovich, Robert & Ellen R.			340 N. 600 E.															UT	84501	
91 2049	.0110	.00	Unnamed Spring					NW4SE4 SEC 8											X	X	X
	WATER USE (S):																		UT	84501	
	Radakovich, Robert & Ellen R.			340 N. 600 E.															X	X	
91 2144	.0220	.00	Simonsen Spring				N 470 E 1280 W4 6 13S 7E SL												X	X	
	WATER USE (S): DOMESTIC																		UT		
	Simonsen, Elrie & Bertha																		UT		
91 2145	.0220	.00	Simonsen Spring				N 470 E 1280 W4 6 13S 7E SL												X	X	
	WATER USE (S): DOMESTIC																		UT		
	Radakovich, Robert			340 North 6th East															UT	84501	
91 2146	.0000	.00	Winter Quarters Creek					SW4NW4 SEC 5 TO SW4NW4 SEC 5											X	X	X
	WATER USE (S): STOCKWATERING																		UT		
	Simonsen, Elrie & Bertha																		UT		
91 2548	.0000	.00	Pleasant Creek					NW4SE4 SEC 8 TO NW4SE4 SEC 8											X	X	X
	WATER USE (S):																		UT		
	Radakovich, Robert & Ellen R.			340 N. 600 E.															UT	84501	
91 2549	.0000	.00	Pleasant Creek					NW4SE4 SEC 8 TO NW4SE4 SEC 8											X	X	X
	WATER USE (S):																		UT	84526	
	Radakovich, Robert & Ellen P.			General Delivery															X	X	X
91 2669	.0110	.00	Unnamed Spring					NE4NE4 SEC 7											UT	84501	
	WATER USE (S): STOCKWATERING																		UT	84501	
	Simonsen, H.B. & Della																		X	X	X
91 2970	.0150	.00	Unnamed Spring					NE4NW4 SEC 17											UT	84501	
	WATER USE (S): STOCKWATERING																		UT	84501	
	Georgedes, Angelo			761 North 3rd East															X	X	
91 2971	.1060	.00	Clear Creek				S 700 W 1840 E4 8 13S 7E SL												X	X	
	WATER USE (S): IRRIGATION																		UT		
	Radakovich, Robert & Ellen P.																		X	X	
91 2972	.1060	.00	Clear Creek				S 700 W 1840 E4 8 13S 7E SL												X	X	
	WATER USE (S): IRRIGATION																		UT	84501	
	Radakovich, Robert & Ellen R.			340 N. 600 E.															X	X	
91 2973	.3810	.00	Clear Creek				S 700 W 1840 E4 8 13S 7E SL												X	X	
	WATER USE (S): IRRIGATION																		UT	84501	
	Radakovich, Robert & Ellen R.			340 N. 600 E.															X	X	
91 2974	.1700	.00	Clear Creek				S 700 W 1840 E4 8 13S 7E SL												X	X	
	WATER USE (S): IRRIGATION																		UT	84647	
	Seely, Justus O.			General Delivery															X	X	
91 2975	.0110	.00	Unnamed Spring				N 420 W 80 S4 5 13S 7E SL												X	X	
	WATER USE (S): IRRIGATION																		UT		
	Radakovich, Robert & Ellen R.																		X	X	
91 2976	.0110	.00	Unnamed Spring				N 100 W 10 S4 5 13S 7E SL												X	X	
	WATER USE (S): IRRIGATION																		UT		
	Radakovich, Robert & Ellen R.																		X	X	
91 2977	.0750	.00	Clear Creek				S 700 W 1840 E4 8 13S 7E SL												X	X	
	WATER USE (S): IRRIGATION																		UT		
	Jensen, Fred and Shelia																		X	X	
91 2978	.6830	.00	Clear Creek				N 310 E 510 S4 5 13S 7E SL												X	X	
	WATER USE (S): IRRIGATION																		UT		
	Radakovich, Robert & Ellen R.																		UT		

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VALLEY CAMP OF UTAH, INC. - LOCAL WATER RIGHTS

WATER RIGHT	CFS	QUANTITY AND/OR AC-FT	SOURCE DESCRIPTION or WELL INFO			POINT OF DIVERSION DESCRIPTION				U A P T S U P R										
			DIAMETER	DEPTH	YEAR LOG	NORTH	EAST	CNR	SEC	TWN	RNG	B&M	N	P	R	R	R	W	P	D
91 3075	.0000	.00	Eccles Canyon Creek			SW4SE4 SEC 17 TO SE4SE4 SEC 17						X	X	X						
	WATER USE(S): STOCKWATERING																			
	Nicolaides, Tom																			
	1026 East 1st South																			
	Salt Lake City																			
	UT 84102																			
	UT																			
	UT																			
	UT																			
91 3076	.0110	.00	Unnamed Spring			SE4SW4 SEC 20						X	X	X						
	WATER USE(S):																			
	Oman, Milton A.																			
	717 Continental Bank Building																			
	Salt Lake City																			
	UT																			
91 3078	.0110	.00	Unnamed Spring			NW4NE4 SEC 29						X	X	X						
	WATER USE(S):																			
	Oman, Milton A.																			
	717 Continental Bank Building																			
	Salt Lake City																			
	UT																			
91 3080	.0000	.00	Boardinghouse Canyon Creek			NW4NW4 SEC 31 TO NW4NW4 SEC 31						X	X	X						
	WATER USE(S):																			
	Oman, Milton A.																			
	717 Continental Bank Building																			
	Salt Lake City																			
	UT																			
91 3081	.0000	.00	Boardinghouse Canyon Creek			NE4NW4 SEC 31 TO NE4NW4 SEC 31						X	X	X						
	WATER USE(S): STOCKWATERING																			
	Thomas, Jack																			
	Scotfield																			
	UT																			
91 3082	.0000	.00	Boardinghouse Canyon Creek			NW4NE4 SEC 31 TO NE4NW4 SEC 32						X	X	X						
	WATER USE(S):																			
	Oman, Milton A.																			
	717 Continental Bank Building																			
	Salt Lake City																			
	UT																			
91 3083	.0000	.00	Finn Canyon Creek			SW4SW4 SEC 31 TO SE4SW4 SEC 32						X	X	X						
	WATER USE(S): STOCKWATERING																			
	Jensen, Lavern																			
	Fairview																			
	UT 84629																			
91 3084	.0000	.00	Finn Canyon Creek			NE4SW4 SEC 32 TO NE4SW4 SEC 32						X	X	X						
	WATER USE(S):																			
	Oman, Milton A.																			
	717 Continental Bank Building																			
	Salt Lake City																			
	UT																			
91 3085	.0000	.00	Trib. to Mud Creek			NW4SW4 SEC 34 TO NE4SW4 SEC 33						X	X	X						
	WATER USE(S):																			
	Michellog, Anton																			
	Helper																			
	UT 84542																			
91 3088	.0000	.00	Trib. to Mud Creek			SW4NW4 SEC 3 TO NE4SW4 SEC 33						X	X	X						
	WATER USE(S): STOCKWATERING																			
	Michellog, Anton																			
	Price																			
	UT 84501																			
91 3089	.0000	.00	Unnamed Stream			SW4SE4 SEC 33						X	X	X						
	WATER USE(S):																			
	Michellog, Anton																			
	Price																			
	UT 84501																			
91 3090	.0000	.00	Unnamed Stream			NW4SE4 SEC 33						X	X	X						
	WATER USE(S): STOCKWATERING																			
	Michellog, Anton																			
	Price																			
	UT 84501																			
91 3091	.0000	.00	Unnamed Stream			SE4NW4 SEC 34						X	X	X						
	WATER USE(S):																			
	Michellog, Anton																			
	Price																			
	UT 84501																			
91 3092	.0000	.00	Unnamed Stream			SE4NW4 SEC 34						X	X	X						
	WATER USE(S):																			
	Michellog, Anton																			
	Price																			
	UT 84501																			
91 3093	.0000	.00	Unnamed Stream			SE4NW4 SEC 34						X	X	X						
	WATER USE(S):																			
	Michellog, Anton																			
	Price																			
	UT 84501																			
91 3094	.0330	.00	3 Springs			NE4NW4 SEC 17						X	X	X						
	WATER USE(S): MUNICIPAL																			
	Scotfield Town																			
	UT																			
91 3406	.0110	.00	Unnamed Spring			NE4NE4 SEC 30						X	X	X						
	WATER USE(S): STOCKWATERING																			
	Madsen, Della L.																			
	Meadow																			
	UT 84644																			
91 3425	.0000	.00	Unnamed Stream			NE4NW4 SEC 22						X	X	X						
	WATER USE(S):																			
	Jacob, Calvin K.																			
	Pleasant Grive																			
	UT 84602																			
91 3440	.0000	.00	Clear Creek			SE4NE4 SEC 20 TO SE4NE4 SEC 20						X	X	X						
	WATER USE(S):																			
	Jacob, Calvin K.																			
	Pleasant Grove																			
	UT 84062																			
91 3460	.1340	.00	Underground Water Well			N	450	E	500	S4	8	13S	7E	SL			X	X		
	WATER USE(S): IRRIGATION DOMESTIC OTHER																			
	Alpine School District Board of Educato 50 North Center																			
	American Fork																			
	UT 84003																			
91 3499	.0110	.00	Finn Spring			SW4SW4 SEC 31						X	X	X						
	WATER USE(S): DOMESTIC STOCKWATERING																			
	Jensen, Lavern																			
	Fairview																			
	UT 84629																			
91 3500	.0110	.00	Unnamed Spring			SE4SW4 SEC 31						X	X	X						
	WATER USE(S): DOMESTIC STOCKWATERING																			
	Jensen, Lavern																			
	Fairview																			
	UT 84629																			
91 3504	.0110	.00	Unnamed Spring			SE4SW4 SEC 27						X	X	X						
	WATER USE(S):																			
	Jacob, Calvin K.																			
	Pleasant Grove																			
	UT 84062																			
91 3586	.5000	.00	Clear Creek Spring Area			S	1070	W	1660	NE	32	13S	7E	SL			X	X		
	WATER USE(S): IRRIGATION DOMESTIC STOCKWATERING OTHER																			
	Kanawha and Hocking Coal and Coke Ccman 700 Westgate Tower																			
	Cleveland																			
	OH 44116																			
91 3587	.0000	.00	Boardinghouse Canyon Creek			NW4NE4 SEC 22 TO NW4NW4 SEC 33						X	X	X						
	WATER USE(S): STOCKWATERING																			
	Kanawha and Hocking Coal and Coke Compan 700 Westgate Tower																			
	Cleveland																			
	OH 44116																			
91 3588	.0000	.00	Finn Canyon Creek			NW4SE4 SEC 32 TO NW4SW4 SEC 33						X	X	X						
	WATER USE(S): STOCKWATERING																			
	Kanawha and Hocking Coal and Coke Compan 700 Westgate Tower																			
	Cleveland																			
	OH 44116																			
91 3589	.0000	.00	Mud Creek			NW4NW4 SEC 4 TO NW4NW4 SEC 33						X	X	X						
	WATER USE(S): STOCKWATERING																			
	Kanawah and Hocking Coal and Coke Ccman 700 Westgate Tower																			
	Cleveland																			
	OH 44116																			
91 3590	.4460	.00	Clear Creek Mine Tunnel #3 (UG S			2800	E	700	NW	33	13S	7E	SL			X	X			
	WATER USE(S):																			
	Kanawha and Hocking Coal and Coke Ccman 700 Westgate Tower																			
	Cleveland																			
	OH 44116																			

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VALLEY CAMP OF UTAH, INC. - LOCAL WATER RIGHTS

WATER RIGHT	CFS	QUANTITY AND/OR	AC-FT	SOURCE DESCRIPTION or WELL INFO				POINT OF DIVERSION DESCRIPTION				U A P T S U P R													
				DIAMETER	DEPTH	YEAR LOG	NORTH	EAST	CNR	SEC	TWN	RNG	B&M	N	P	R	R	R	W	P	D				
91 3591		.0000	.00	Unnamed Stream				NE4SW4 SEC 27													X	X	X		
		WATER USE(S):		Jacob, Calvin K.																					
91 3595		.03	.00	O'Connor Mine Tunnel #1 (UG Wa S 1600 E 800 NW 31				Pleasant Grove (12S 10E SL)														UT	84062		
		WATER USE(S): INDUSTRIAL		Kanawha and Hocking Coal and Company 700 Westgate Tower																					
91 3596		.0470	.00	O'Connor Mine Tunnel #2 (UG Wa S 1400 E 1000 NW 31				Cleveland 13S 7E SL														OH	44116		
		WATER USE(S): OTHER		Kanawha and Hocking Coal and Company 700 Westgate Tower																					
91 3622		.0160	.00	Clear Creek				N 310 E 510 S4 5 13S 7E SL														OH	44116		
		WATER USE(S): IRRIGATION		Nicolodemas, Mae																					
91 3640*		.0000	.00	Hopkins Creek				SE4SW4 SEC 10 TO NE4SW4 SEC 31														UT	84538		
		WATER USE(S): STOCKWATERING		Georgesdes, Angelo (c/o Luke Pappas)																					
91 3644		.0000	.00	Clear Creek				SW4SE4 SEC 5 TO SW4SE4 SEC 5														UT	84501		
		WATER USE(S):		Radakovich, Robert & Ellen R.																					
91 3645		.0000	.00	Clear Creek				NW4SE4 SEC 5 TO SW4NE4 SEC 5														UT			
		WATER USE(S): STOCKWATERING		Jensen, Fred and Shelia																					
91 3665		.0000	.00	Clear Creek				NE4SE4 SEC 17 TO N1250' W610' FROM E4 COR SEC 17														UT			
		WATER USE(S):		Marakisk, John (Estate)																					
91 3666		.0000	.00	Clear Creek				NE4SE4 SEC 17 TO N1250' W610' FROM E4 COR SEC 17														UT			
		WATER USE(S):		Marakis, Nick																					
91 3667		.0000	.00	Clear Creek				N1250' W630' FROM E4 COR SEC 17 TO NE4NE4 SEC 17														UT			
		WATER USE(S): DOMESTIC STOCKWATERING		LDS Church, Corporation of Presiding Bis 50 E. N. Temple, Twelfth Floor (Real Est Salt Lake City																					
91 3668		.0150	.00	Unnamed Spring				NE4NW4 SEC 17														UT	84501		
		WATER USE(S): STOCKWATERING		Stilson, L. Clan & Beth																					
91 4027		.0110	.00	Unnamed Spring				SW4NW4 SEC 10														UT			
		WATER USE(S): STOCKWATERING		Telonis, George (C/O Luke Pappas)																					
91 4031		.0110	.00	Unnamed Spring				SE4SW4 SEC 9														UT	84501		
		WATER USE(S): STOCKWATERING		Telonis, George (C/O Luke Pappas)																					
91 4032		.0110	.00	Unnamed Spring				NW4SW4 SEC 15														UT	84501		
		WATER USE(S): STOCKWATERING		Telonis, George (C/O Luke Pappas)																					
91 4033		.0110	.00	Unnamed Spring				NE4SW4 SEC 15														UT	84501		
		WATER USE(S): STOCKWATERING		Telonis, George (C/O Luke Pappas)																					
91 4084		.0220	.00	Tony's Springs (2)				NE4NW4 SEC 34														UT	84501		
		WATER USE(S): STOCKWATERING		Jacob, Calvin K.																					
91 4089		.0000	.00	Magazine Canyon Creek				NE4NE4 SEC 33 TO NE4NW4 SEC 33														UT	84062		
		WATER USE(S): STOCKWATERING		Jacob, Calvin K.																					
91 4090		.0000	.00	Unnamed Spring				SE4SW4 SEC 21														UT	84062		
		WATER USE(S): STOCKWATERING		Jacob, Calvin K.																					
91 4103		.0110	.00	Unnamed Spring				NE4SW4 SEC 34														UT	84660		
		WATER USE(S): STOCKWATERING		Michelog, Anton																					
91 4104		.0110	.00	Unnamed Spring				SE4SW4 SEC 34														UT	84501		
		WATER USE(S): STOCKWATERING		Michelog, Anton																					
91 4140		.1500	.00	Mine Tunnel (Utah Number 1)				S 1020 W 310 NE 17 13S 7E SL														UT	84501		
		WATER USE(S): DOMESTIC OTHER		Kanawha and Hocking Coal and Coke Compan 700 West Gate Tower																					
91 4141		.2860	.00	O'Connor Mine Tunnel Number 2				S 1400 E 1000 NW 31 13S 7E SL														OH	44116		
		WATER USE(S): DOMESTIC OTHER		Kanawha and Hocking Coal and Coke Compan 700 West Gate Tower																					
91 4142		.3030	.00	O'Connor Mine Tunnel Number 1				S 1600 E 800 NW 31 13S 7E SL														OH	44116		
		WATER USE(S): DOMESTIC OTHER		Kanawha and Hocking Coal and Coke Compan 700 West Gate Tower																					
91 4143		.0110	.00	Unnamed Spring				NW4SE4 SEC 9														OH	44116		
		WATER USE(S): STOCKWATERING		Telonis, George																					
91 4159		1.0000	.00	Old Gibson Mine Tunnel (Utah #				N 1220 W 780 SE 8 13S 7E SL														UT	84501		
		WATER USE(S): OTHER		Kanawha and Hocking Coal and Coke Compan 700 West Gate Tower																					
91 4174		1.0000	.00	6 50 - 250				S 970 E 60 W4 5 13S 7E SL														OH	44116		
		WATER USE(S): DOMESTIC STOCKWATERING		Radakovich, Robert																					
91 4195		.1000	.00	Mud Creek & Green Canyon Sprin				N 310 E 510 S4 5 13S 7E SL														UT	84501		
		WATER USE(S): MUNICIPAL		Scotfield Town																					
E452		.0000	.00	Underground Water Well				S 970 E 60 W4 5 13S 7E SL														UT	84538		
		WATER USE(S): STOCKWATERING		Radakevich, Robert																					
E772		.4460	.00	12 210				N 1150 W 400 SE 8 13S 7E SL														UT	84501		
		WATER USE(S): OTHER		Valley Camp Coal Company																					

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				DEPTH	YEAR LOG	NORTH	EAST	CNR	SEC	TWN	RNG	B&M	N	P	R	R	W	P	D	
E1058	.0000	7.70	8	300*		S	980	E	1090	NW	30	13S	7E	SL	X		X			
	WATER USE(S): OTHER Price River Water User's Association																			
E1560	.0000	118.00	8	500	- 1000	N	460	W	1725	SW	17	13S	7E	SL	X		X	UT	84501	
	WATER USE(S): MINING Coastal States Energy Company																			
E1658	.0000	1.00			Nine Greenway Plaza	S	120	W	2540	E4	8	13S	7E	SL	X		X	TX	77046	
	WATER USE(S): OTHER Radakovich, Robert and Ellen																			
E1691	.0000	7.70	8	720	340 North 6th East	N	50	E	1940	SW	19	13S	7E	SL	X		X	UT	84501	
	WATER USE(S): OTHER Valley Camp of Utah, Inc.																			
E1906	.0000	118.00			Scofield Route 1981	N	460	E	1725	SW	17	13S	7E	SL	X		X	UT	84526	
	WATER USE(S): OTHER Coastal States Energy Company																			
E1934	.0000	20.00			Coastal Tower, Nine Greenway Plaza	S	2100	E	2500	NW	6	13S	7E	SL	X		X	TX	77046	
	WATER USE(S): OTHER UCO, Incorporated																			
E2188	.0000	1.00	8	140	1580 Lincoln Suite 530	S	310	W	580	N4	8	13S	7E	SL	X		X	UT	80203	
	WATER USE(S): STOCKWATERING OTHER LDS Church, Corp. of Presiding Bishopric																			
E2475	.0000	.00	6	220	50 East North Temple	Y	S	1400	W	1305	NE	17	13S	7E	SL	X		X	UT	84150
	WATER USE(S): DOMESTIC Corp. Presiding Bishopric - LDS Church																			
TOWNSHIP 14S RANGE 6E SL BASE AND MERIDIAN																				
93	.0000	.00			Bear Canyon		N300'	E1250'	FROM W4 COR	SEC 15 TO SE4NW4	SEC 15				X		X	X		
	WATER USE(S): STOCKWATERING Carlisle, John																			
93	.0000	.00			Bear Canyon Creek		428 West 330 South			Bountiful					UT		84010			
	WATER USE(S): STOCKWATERING Conder, Mana H.																			
93	.0000	.00			Bear Canyon Creek		428 West 330 South			Bountiful					UT		84010			
	WATER USE(S): STOCKWATERING Phelps Dodge Corporation																			
93	.0000	.00			Bear Canyon Creek		300 Park Ave.			New York					NY		10010			
	WATER USE(S): STOCKWATERING Utah Power & Light Company																			
93	.0000	.00			Coal Creek		1407 West North Temple Street			Salt Lake City					UT		84140			
	WATER USE(S): STOCKWATERING USA Forest Service																			
93	.0000	.00			Coal Creek		324 25th Street			Ogden					UT		84401			
	WATER USE(S): STOCKWATERING USA Forest Service																			
93	.0000	.00			Huntington Creek		324 25th Street			Ogden					UT		84401			
	WATER USE(S): STOCKWATERING Nielsen, Bernard																			
93	.0000	.00			Huntington Creek		1407 West North Temple Street			Salt Lake City					UT		84140			
	WATER USE(S): STOCKWATERING Utah Power & Light Company																			
93	.0000	.00			Cox Canyon Creek		324 25th Street			Ogden					UT		84401			
	WATER USE(S): STOCKWATERING USA Forest Service																			
93	.0000	.00			Valentine Gulch		324 25th Street			Ogden					UT		84401			
	WATER USE(S): STOCKWATERING Kemmerer Coal Company																			
93	.0000	.00			Valentine Gulch		300 Park Ave.			New York					NY		10010			
	WATER USE(S): STOCKWATERING Phelps Dodge Corporation																			
93	.0000	.00			Valentine Gulch		300 Park Ave.			New York					NY		10010			
	WATER USE(S): DOMESTIC STOCKWATERING Valentine Gulch Inc. et al.																			
93	.0000	.00			Huntington Creek		c/o H.G. Christensen, 700 Continental Ban			Salt Lake City					UT		84101			
	WATER USE(S): STOCKWATERING Utah Power & Light Company																			
93	.0000	.00			Huntington Creek		1407 West North Temple Street			Salt Lake City					UT		84140			
	WATER USE(S): STOCKWATERING USA Forest Service																			
93	.0000	.00			North Hughes Canyon Creek		324 25th Street			Ogden					UT		84401			
	WATER USE(S): STOCKWATERING USA Forest Service																			
93	.0000	.00			Hughes Canyon Creek		324 25th Street			Ogden					UT		84401			
	WATER USE(S): STOCKWATERING USA Forest Service																			
93	.0000	.00			Coal Creek		324 25th Street			Ogden					UT		84401			
	WATER USE(S): STOCKWATERING Kemmerer Coal Company																			
93	.0000	.00			Coal Creek		300 Park Ave.			New York					NY		10010			
	WATER USE(S): STOCKWATERING Phelps Dodge Corporation																			
93	.0000	.00			Coal Creek		300 Park Ave.			New York					NY		10010			
	WATER USE(S): STOCKWATERING Utah Power & Light Company																			

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			DIAMETER	DEPTH	YEAR LOG	NORTH	EAST	CNR	SEC	TWN	RNG	B&M	N	P	R	R	R	W	P	D
93 290	.0000	.00	Coal Creek						SW4NE4 SEC 11	TO	NE4SW4 SEC 11				X	X	X			
WATER USE (S): STOCKWATERING																				
93 399	.0000	.00	Huntington Creek			1407 West North Temple Street			NW4NE4 SEC 3	TO	NW4SE4 SEC 3				X	X	X			
Utah Power & Light Company																				
WATER USE (S): STOCKWATERING																				
93 498	.0000	.00	Left Fork Huntington Creek			1407 West North Temple Street			NW4NW4 SEC 22	TO	SE4SW4 SEC 22				X	X	X			
Utah Power & Light Company																				
WATER USE (S): STOCKWATERING																				
93 500	.0000	.00	North Cleveland Reservoir			300 Park Ave.	S	580 E 1570 W4	22	14S	6E	SL			X	X				
Kemmerer Coal Company																				
WATER USE (S): STOCKWATERING																				
93 543	.0000	.00	Coal Creek			3 Triad Center, Suite 400, 355 West North Temple Street			NE4SW4 SEC 1	TO	SW4SW4 SEC 1				X	X	X			
State of Utah Division of State Lands & Parks																				
WATER USE (S): STOCKWATERING																				
93 544	.0000	.00	Coal Creek			Box 232			NE4NE4 SEC 11	TO	NE4NE4 SEC 11				X	X	X			
Cook, Morris S. and Betty A.																				
WATER USE (S): STOCKWATERING																				
93 545	.0000	.00	Coal Creek			300 Park Avenue			NE4NE4 SEC 11	TO	NE4NE4 SEC 11				X	X	X			
Kemmerer Coal Company																				
WATER USE (S): STOCKWATERING																				
93 549	.0000	.00	Cox Canyon Creek			300 Park Avenue			NE4SW4 SEC 12	TO	SW4SW4 SEC 12				X	X	X			
Phelps Dodge Corporation																				
WATER USE (S): STOCKWATERING																				
93 550	.0000	.00	Cox Canyon Creek			300 Park Ave.			NE4SW4 SEC 12	TO	SW4SW4 SEC 12				X	X	X			
Kemmerer Coal Company																				
WATER USE (S): STOCKWATERING																				
93 551	.0000	.00	Cox Canyon Creek			300 Park Avenue			SW4SW4 SEC 12	TO	NW4NE4 SEC 12				X	X	X			
Phelps Dodge Corporation																				
WATER USE (S): STOCKWATERING																				
93 553	.0000	.00	James Canyon Creek			1407 West North Temple Street			NW4NW4 SEC 2	TO	NE4SE4 SEC 3				X	X	X			
Utah Power & Light Company																				
WATER USE (S): STOCKWATERING																				
93 559	.0000	.00	Bear Canyon Creek			1407 West North Temple Street			SW4NW4 SEC 14	TO	SW4NE4 SEC 14				X	X	X			
Utah Power & Light Company																				
WATER USE (S): STOCKWATERING																				
93 610	.0000	.00	Left Fork Huntington Creek			1407 West North Temple Street			NW4NW4 SEC 22	TO	SE4SW4 SEC 22				X	X	X			
Utah Power & Light Company																				
WATER USE (S): STOCKWATERING																				
93 832	.0000	.00	Bear Canyon Creek			300 Park Ave.			NW4NW4 SEC 16	TO	N300' E1240' FORM W4 COR	SEC 15		X	X	X				
Phelps Dodge Corporation																				
WATER USE (S): STOCKWATERING																				
93 1116	.0000	31264.00	Huntington Creek			300 Park Ave.	N	2000 W	600	SE	14	14S	6E	SL	X	X				
Kemmerer Coal Company																				
WATER USE (S): POWER																				
93 1523	.0110	.00	Kemmerer Spring			1407 West North Temple Street			NW4NE4 SEC 23						X	X	X			
Utah Power & Light Company																				
WATER USE (S): STOCKWATERING																				
93 1524	.0110	.00	Valentine Pond Spring			324 25th Street			SE4SE4 SEC 13						X	X	X			
USA Forest Service																				
WATER USE (S): STOCKWATERING																				
93 1528	.0110	.00	Valentine Ridge Spring #1			324 25th Street			SE4SE4 SEC 12						X	X	X			
USA Forest Service																				
WATER USE (S): STOCKWATERING																				
93 1529	.0110	.00	Valentine Ridge Spring #2			324 25th Street			SE4SE4 SEC 12						X	X	X			
USA Forest Service																				
WATER USE (S): STOCKWATERING																				
93 1531	.0110	.00	Cox Ridge Spring			324 25th Street			SW4SE4 SEC 1						X	X	X			
USA Forest Service																				
WATER USE (S): STOCKWATERING																				
93 1532	.0110	.00	Cox Canyon Spring			324 25th Street			NE4SE4 SEC 1						X	X	X			
USA Forest Service																				
WATER USE (S): STOCKWATERING																				
93 1533	.0110	.00	Coal Canyon Spring			324 25th Street			SE4NE4 SEC 1						X	X	X			
USA Forest Service																				
WATER USE (S): STOCKWATERING																				
93 1537	.0110	.00	Coal Ridge Spring			324 25th Street			NW4NW4 SEC 1						X	X	X			
USA Forest Service																				
WATER USE (S): STOCKWATERING																				
93 1629	.0000	.00	Coal Creek			324 25th Street			NW4NE4 SEC 11	TO	SW4NE4 SEC 11				X	X	X			
USA Forest Service																				
WATER USE (S): STOCKWATERING																				
93 1630	.0000	.00	Coal Creek			324 25th Street			NW4NE4 SEC 11	TO	SW4NE4 SEC 11				X	X	X			
USA Forest Service																				
WATER USE (S): STOCKWATERING																				
93 2925	.0000	.00	Huntington Creek			324 25th Street			NW4NE4 SEC 24	TO	NE4SE4 SEC 24				X	X	X			
USA Forest Service																				
WATER USE (S): STOCKWATERING																				
93 2926	.0000	.00	Huntington Creek			300 Park Avenue			NW4NE4 SEC 24	TO	NE4SE4 SEC 24				X	X	X			
Phelps Dodge Corporation																				
WATER USE (S): STOCKWATERING																				
Kemmerer Coal Company																				
TOWNSHIP 14S RANGE 7E SL BASE AND MERIDIAN																				
91 592	.0000	.00	Mud Creek						SW4SW4 SEC 4	TO	SW4SW4 SEC 4				X	X	X			
Marakis, John (Estate)																				
WATER USE (S): STOCKWATERING																				
165 East 100 South																				
Price																				
UT 84501																				

Notes: General - Multiple points of diversion may exist for some water rights.
 * - Water right not plotted on map due to description error.

VALLEY CAMP OF UTAH, INC. - LOCAL WATER RIGHTS

WATER RIGHT	CFS	QUANTITY AND/OR AC-FT	SOURCE DESCRIPTION or WELL INFO			POINT OF DIVERSION DESCRIPTION				U A P T S U P R N P E E U G T E N P R R R R W P D												
			DIAMETER	DEPTH	YEAR LOG	NORTH	EAST	CNR	SEC	TWN	RNG	B&M	N	P	R	R	R	W	P	D		
91 593	.0000		.00	Mud Creek					SW4SW4 SEC 4 TO SW4SW4 SEC 4										X	X	X	
91 999*	.0150		.00	Bob Wright Canyon Creek	165 East 100 South				NE4SW4 SEC 10 TO NW4SW4 SEC 1	Price									UT 84501	X	X	X
91 1000	.0150		.00	Collar Spring	324 25th Street				LOT 3 SEC 10	Ogden									UT 84401	X	X	X
91 1001	.0150		.00	Unnamed Spring	324 25th Street				NE4SW4 SEC 10	Ogden									UT 84401	X	X	X
91 1002	.0150		.00	Unnamed Spring	324 25th Street				NE4SW4 SEC 10	Ogden									UT 84401	X	X	X
91 1003	.0150		.00	Unnamed Spring	324 25th Street				NW4SE4 SEC 10	Ogden									UT 84401	X	X	X
91 1005	.0150		.00	Unnamed Spring	324 25th Street				NE4SW4 SEC 15	Ogden									UT 84401	X	X	X
91 1006	.0000		.00	Trib. to Second Water Canyon C	324 35th Street				NE4SW4 SEC 15 TO SW4SW4 SEC 14	Ogden									UT 84401	X	X	X
91 1007	.0000		.00	Trib. to Bob Wright Canyon Cre	324 25th Street				SE4SW4 SEC 10 TO NE4SE4 SEC 2	Ogden									UT 84401	X	X	X
91 1008	.0000		.00	Snider Canyon Creek	324 25th Street				SW4SW4 SEC 10 TO LOT 1 SEC 9	Ogden									UT 84401	X	X	X
91 1009	.0000		.00	Trib. to Snider Canyon Creek	324 25th Street				SW4SE4 SEC 9 TO LOT 1 SEC 9	Ogden									UT 84401	X	X	X
91 1010	.0000		.00	Trib. to Mud Creek	324 25th Street				SE4SE4 SEC 9 TO NE4NW4 SEC 16	Ogden									UT 84401	X	X	X
91 1011	.0000		.00	Mud Creek	324 25th Street				NW4SW4 SEC 16 TO LOT 4 SEC 9	Ogden									UT 84401	X	X	X
91 1012	.0000		.00	Mud Creek	324 25th Street				NE4SW4 SEC 17 TO LOT 4 SEC 9	Ogden									UT 84401	X	X	X
91 1013	.0000		.00	Trib. to Mud Creek	324 25th Street				NW4NE4 SEC 20 TO NE4SE4 SEC 17	Ogden									UT 84401	X	X	X
91 1014	.0000		.00	Trib. to Mud Creek	324 25th Street				SW4NW4 SEC 17 TO NE4NW4 SEC 16	Ogden									UT 84401	X	X	X
91 1015	.0000		.00	Trib. to Mud Creek	324 25th Street				SE4NE4 SEC 7 TO NW4SW4 SEC 9	Ogden									UT 84401	X	X	X
91 1016	.0000		.00	Long Canyon Creek	324 25th Street				NW4NE4 SEC 7 TO NE4SE4 SEC 6	Ogden									UT 84401	X	X	X
91 1017	.0000		.00	Trib. to Long Canyon Creek	324 25th Street				NW4SE4 SEC 6 TO NE4SE4 SEC 6	Ogden									UT 84401	X	X	X
91 1018	.0000		.00	Tributary to Mud Creek	324 35th Street				SW4SW4 SEC 8 TO NW4SW4 SEC 9	Ogden									UT 84401	X	X	X
91 3014	.0000		.00	Snider Creek	324 25th Street				SE4SE4 SEC 4 TO NW4SW4 SEC 4	Ogden									UT 84401	X	X	X
91 3015	.0000		.00	Mud Creek					NW4SW4 SEC 4 TO SW4NW4 SEC 4	Price									UT 84501	X	X	X
91 3086	.0000		.00	Long Canyon Creek					NW4SW4 SEC 5 TO SW4NW4 SEC 4	Price									UT 84501	X	X	X
91 3087	.0110		.00	Unnamed Spring					SE4SW4 SEC 5	Price									UT 84501	X	X	X
91 4105	.0110		.00	Unnamed Spring					SE4SE4 SEC 5	Price									UT 84501	X	X	X
91 4106	.0110		.00	Unnamed Spring					NE4NE4 SEC 5	Price									UT 84501	X	X	X
91 4241	.0000		.00	Trib. Second Water					NE4NW4 SEC 15 TO NW4SE4 SEC 14	Price									UT 84501	X	X	X
91 4244	.0000		.00	Snider Spring Stream	324 25th Street				NE4SE4 SEC 9 TO NE4SE4 SEC 9	Ogden									UT 84401	X	X	X
91 4246	.0000		.00	Dugway Spring Stream	324 25th Street				NW4NE4 SEC 15 TO NW4NE4 SEC 15	Ogden									UT 84401	X	X	X
					324 25th Street					Ogden									UT 84401			

Notes: General - Multiple points of diversion may exist for some water rights.
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VALLEY CAMP OF UTAH, INC. - LOCAL WATER RIGHTS

WATER RIGHT	CFS	QUANTITY AND/OR AC-FT	SOURCE DESCRIPTION or WELL INFO			POINT OF DIVERSION DESCRIPTION				RNG	B&M	U A P T S U P R N P E E U G T E N P R R R W P D							
			DIAMETER	DEPTH	YEAR LOG	NORTH	EAST	CNR	SEC			TWN	N	P	R	R	W	P	D
91 4334	.0150	.00	Snider Spring					NE4SE4	SEC 9								X	X	X
	WATER USE (S): STOCKWATERING																		
	USA Forest Service																		
91 4335	.0150	.00	Pine Spring	324	25th Street			SW4NE4	SEC 22			Ogden					UT	84401	
	WATER USE (S): STOCKWATERING																		
	USA Forest Service																		
91 4336	.0150	.00	Dugway Spring	324	25th Street			NW4SE4	SEC 15			Ogden					UT	84401	
	WATER USE (S): STOCKWATERING																		
	USA Forest Service																		
91 4349	.0000	.00	Mud Creek	324	25th Street			NE4SW4	SEC 9 TO LOT 4 SEC 9			Ogden					UT	84401	
	WATER USE (S): STOCKWATERING																		
	USA Forest Service																		
93 104	.0000	.00	Unnamed Stream	324	25th Street			NE4NW4	SEC 20 TO SE4SW4 SEC 19			Ogden					UT	84401	
	WATER USE (S): STOCKWATERING																		
	USA Forest Service																		
93 124	.0000	.00	Sawmill Canyon Creek	324	25th Street			SW4NW4	SEC 21 TO NW4NW4 SEC 27			Ogden					UT	84401	
	WATER USE (S): STOCKWATERING																		
	USA Forest Service																		
93 125	.0000	.00	Sawmill Canyon Creek	324	25th Street			SW4NW4	SEC 21 TO NE4NE4 SEC 28			Ogden					UT	84401	
	WATER USE (S): STOCKWATERING																		
	USA Forest Service																		
93 126	.0000	.00	Woodward Canyon Creek	324	25th Street			SW4NW4	SEC 15 TO NW4NW4 SEC 27			Ogden					UT	84401	
	WATER USE (S): STOCKWATERING																		
	USA Forest Service																		
93 1518	.0110	.00	Hughes Pond Spring	324	25th Street			NE4SE4	SEC 20			Ogden					UT	84401	
	WATER USE (S): STOCKWATERING																		
	USA Forest Service																		
93 1519	.0110	.00	Olsen Spring	324	25th Street			SE4NW4	SEC 20			Ogden					UT	84401	
	WATER USE (S): STOCKWATERING																		
	USA Forest Service																		
93 1520	.0110	.00	Mud Spring	324	25th Street			NE4NW4	SEC 20			Ogden					UT	84401	
	WATER USE (S): STOCKWATERING																		
	USA Forest Service																		
93 1525	.0110	.00	Valentine Spring	324	25th Street			NW4SW4	SEC 18			Ogden					UT	84401	
	WATER USE (S): STOCKWATERING																		
	USA Forest Service																		
93 1526	.0110	.00	North Hughes Spring #1	324	25th Street			NW4SE4	SEC 18			Ogden					UT	84401	
	WATER USE (S): STOCKWATERING																		
	USA Forest Service																		
93 1527	.0110	.00	North Hughes Spring #2	324	25th Street			SW4SE4	SEC 7			Ogden					UT	84401	
	WATER USE (S): STOCKWATERING																		
	USA Forest Service																		
93 1530	.0110	.00	North Hughes Spring	324	25th Street			NE4SW4	SEC 7			Ogden					UT	84401	
	WATER USE (S): STOCKWATERING																		
	USA Forest Service																		
E1669	.0000	3.00	4	180	25th Street			S 2640 E 1056 NW	4 14S 7E SL			Ogden					UT	84401	
	WATER USE (S): OTHER																		
	Otani, Jack																		
E2385	.0000	.50	Unnamed Spring		Star Route, Clear Creek Box 555			N 100 W 340 SE	4 14S 7E SL			Helper					CO	80202	
	WATER USE (S): DOMESTIC																		
	Blackham, Max A.																		
					2024 North 600 West							Pleasant Grove					UT	84062	

Notes: General - Multiple points of diversion may exist for some water rights.
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APPENDIX R614-301-725.100

Well Logs



STATE OF UTAH-DEPARTMENT OF SOCIAL SERVICES

CALVIN L. RAMPTON
Governor
PAUL S. ROSE
Executive Director

DIVISION OF HEALTH
44 MEDICAL DRIVE
SALT LAKE CITY, UTAH 84113
AREA CODE 801

Board of Health
Air Conservation Committee
Health Facilities Council
Medical Examiner Committee
Nursing Home Advisory Committee
Water Pollution Committee

LYMAN J. OLSEN, M.D., M.P.H.
Director of Health

Environmental Health Services Bureau
72 East 4th South
Salt Lake City, Utah

533-6146
August 16, 1976

RECEIVED
AUG 17 1976
WATER RIGHTS

Mr. Dan Guy
Project Engineer
Valley Camp of Utah, Inc.
P.O. Box 507
Clear Creek, Utah 84517

Re: Chemical Analysis of Well #2 Water
Utah #2 Mine

Dear Mr. Guy:

Enclosed is a copy of our laboratory report #76-0502 covering results of a chemical analysis of a water sample from the new #2 Well serving your #2 Mine located in Section 8, T13S, R7E, SLB&M in Carbon County, Utah.

This report indicates that none of the substances measured are present in concentrations exceeding maximum permissible levels prescribed in the U.S. Public Health Service Drinking Water Standards.

Total iron and turbidity were found in the sample to exceed the maximum recommended level as follows:

<u>Substance</u>	<u>Concentration In Sample</u>	<u>USPHS Maximum Recommended Concentration</u>
Turbidity	7.5 JTU	5.0 JTU
Total Iron	0.45 mg/l	0.30 mg/l

This water is considered to be of good chemical quality for culinary use provided the excessive levels of iron and turbidity can be lowered.

The use of water containing excessive iron in the concentration indicated does not constitute a health hazard but is objectionable because of staining

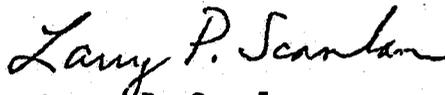
problems which will result with respect to plumbing fixtures, laundered items, etc. and because of the possible taste problems which may be involved.

Since this is a new well, we suggest another one gallon sample be submitted so a re-check of total iron and turbidity only can be made. Such a sample should be collected after the well has been pumped continuously for at least 24 hours.

This report in no way implies approval of the well as a source of public water supply as other determinations are necessary before such approval can be made. We will need a copy of the "Report of Well Driller", results of pumping tests and plans showing the connection of the well to the system.

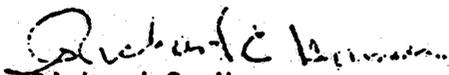
If you have any questions, please let us know.

Very truly yours,



Larry P. Scanlan
Water Quality Specialist
Bureau of Water Quality

APPROVED BY:



Richard C. Hansen
Assistant Director
Bureau of Water Quality

LPS:ndp
Enclosure

cc: Utah State Division of Water Rights
Southeastern District Health Dept

UTAH STATE DIVISION OF HEALTH
BUREAU OF WATER QUALITY
CHEMICAL, RADIOLOGIC & PESTICIDES ANALYSIS

JUN 2 1976

760502

Utah State Div. of Health

Sample No. 760502 Store No. 702 Date Collected 05/18/76 Time Collected 610 Environmental Health 703 Water Rights No. 707
 mo. dy. yr. 714
 Supply Owned by VALLEY CAMP OF UT River Mile Code 706 Merd. Township 135 Range 07E Section 08 QTRSC 707 QTRCR 705
 Sample Collected by DAN GUY TYPE OF SOURCE TABLE WATER USE TABLE COUNTY CODE TABLE
 Exact Description of Sampling Point UT B2 MINE B2 WELL 645
1050' N & 480' W OF SE 647
COR 710
 Name SEND REPORT TO: 715
VALLEY CAMP OF UT
 Address PO BOX 507 648 Phone No. 4489413 718
CILHARI CREEK UT 84517 717

CHEMICAL ANALYSIS

mg/l	CATIONS	mg/l	ug/l	
	Ammonia as N	0.0		722
	Arsenic		03	723
	Barium		00	724
	Boron		270	725
	Cadmium		0.0	727
5.05	Calcium	107		725
	Chromium			739
	Chromium, Hex. as Cr		00	739
	Copper		00	732
	Iron		00	733
	Lead		00	734
2.79	Magnesium	34		737
	Manganese		350	738
	Mercury, Total		00	739
	Nickel		200	740
0.08	Potassium	3		742
	Selenium		08	743
	Silver		0.0	744
0.22	Sodium	5		745
8.14	Zinc		2000	749
	TOTAL CATIONS	143		
	Turbidity, as JTU		75	757
	Sampling Depth, m			609
	Specific Gravity			608
	Specific Cond. @ 25° C, μ mhos/cm		720	762

mg/l	ANIONS	mg/l	
	Bicarbonate	434	758
	Carbon Dioxide	218	759
	Carbonate	0	760
0.25	Chloride	9	763
7.12	CO ₃ Solids	214	
	Fluoride	0.31	765
	Hydroxide	0.00	767
	Nitrate as N	00	605
	Nitrite as N	00	606
	Phosphorus, Ortho as P	01	607
	Silica, dissolved as SiO ₂	10	750
1.19	Sulphate	57	772
8.56	TOTAL ANIONS	290	
	GRAND TOTAL	433	
	pH	65	782
	TDS @ 180° C	416	786
	Phosphorus, Tot.		785
	Sufactant as MBAS		773
	Total Alk. as CaCO ₃	356	752
	Total Hardness as CaCO ₃	3920	754
	Iron, Total	0.45	755

Rebaku 6/21/76

PESTICIDES (ug/l)

Aldrin		641
Chlordane (cis and trans)		612
DDT (Total)		642
Dieldrin		643
Endrin		613
Heptachlor		614
Heptachlor Epoxide		615
Lindane		616
Methoxychlor		617
Toxaphene		618
Other		644
2,4-D		619
2,4,5-T		645
2 & 4-TP (Silvex)		620

RADIOLOGICS

	pc/l		Sp. Act.
Alpha, gross		621	622
Beta, gross		623	624
Tritium, 3H		625	626
226Radium		627	628
228Radium		629	630
90Sr		631	632
89Sr		633	634
131I		635	636
134Cs		637	638
137Cs		639	640

91-200 12?
71-5400 10265

Copied MV 2-25-54
 Exam. & Recorded MV 10-8-53
 Exam. for filing MV 10-8-53
 Final Copy checked
 Indexed MV 2-25-54
 Well No. (D-13-7)8dccc-1

PAGE
 (Leave Blank)

Report No. 10265
 Filed Sept. 14 19 53
 Rec. By M.V.
 Ret'd

Report of Well and Tunnel Driller STATE OF UTAH

(Separate report shall be filed for each well or tunnel)

GENERAL INFORMATION:

Report of well or tunnel driller is hereby made and filed with the State Engineer, in compliance with Sec. 100-3-22, Utah Code Annotated, 1943. (This report shall be filed with the State Engineer within 30 days after the completion or abandonment of well or tunnel. Failure to file such report constitutes a misdemeanor.)

- Name and address of ~~person~~ ~~company~~ ~~incorporation~~ ~~partner~~ ~~or~~ ~~drilling well or tunnel~~
(Strike words not needed)
J. S. Lee & Sons 4091 So. State St., S.L.C., Utah
- Name and address of owner of well or tunnel
(Strike Words not needed)
Utah Natural Gas Co.
Provo, Utah
- Source of supply is in ~~Utah~~ Carbon County;
(Leave blank) drainage area: (Leave blank) artesian basin
- The number of approved application to appropriate water is 25082
- Location of well ~~on north of town~~ is situated at a point
N. 450 ft. and E. 500 ft. from S. Cor. Sec. 8, T13S, R7E, SLB&M.
(Describe by rectangular co-ordinates or by one course and distance with reference to U. S. Government Survey Corner - Copy description from well owner's approved application)
- Date on which work on well or tunnel was begun Aug. 8, 1953
(Strike words not needed)
- Date on which work on well or tunnel was completed ~~or abandoned~~ Aug. 30, 1953
(Strike words not needed)
- Maximum quantity of water measured as ~~flowing~~ flowing, pumped or
(Strike words not needed)
~~well on one in one day~~; or in gals. per minute 50 Date

DETAIL OF COLLECTING WORKS:

- WELL: It is drilled, ~~not flowing~~ not flowing pump well. Temperature of water °F.
(Strike words not needed)
 - Total depth of well is 280 ft. below ground surface.
 - If flowing well, give water pressure (hydrostatic head) above ground surface ft.
 - If pump well, give depth from ground surface to water surface before pumping 100 ft.
 ; during pumping 147 ft.
 - Size and kind of casing 10"
(If only partially cased, give details)
 - Depth to water-bearing stratum 100 ft.
(If more than one stratum, give depth to each)
 - If casing is perforated, give depth from ground surface to perforations.....
- Log of well 0 to 7' top soil, 7 to 189 sand clay, 189 to 192 sand stone water, 192 to 201 sandy clay, 201 to 213 shale, 213 to 228 sand stone water, 228 to 233 sandy clay, 233 to 249 shale, 249 to 251 Limestone, 251 to 280 shale
- Well was equipped with cap, valve, or to control flow.
(Strike words not needed)

(Over)

10. TUNNEL: It is timbered, tiled, piped, open, bulkheaded, covered or.....
(Strike words not needed)

(a) Dimensions.....; total length.....; temperature of water.....°F.

(b) Position of water bearing stratum or strata with reference to mouth of tunnel.....
.....
.....

(c) Log of tunnel.....
.....
.....
.....

11. GENERAL REMARKS: (Note any general or detailed information not covered above).

STATE OF UTAH, }
COUNTY OF Salt Lake } ss.

I, J. G. Lee, being first duly sworn, do hereby certify that I am the driller of the aforesaid well or tunnel who furnished the foregoing statement of facts; that I have read said statement and each and all of the items therein contained are true to the best of my knowledge and belief.

/s/ J.S. Lee & Sons by J.G. Lee
Driller

Subscribed and sworn to before me this 14 day of Sept., 19 53
(SEAL)

(SEAL) /s/ L. C. Monson
Notary Public

My Commission Expires:
.....July 18, 1956.....

Examined
Recorded: B. C. 1/29/73 T. B. Rom
Inspection Sheet
Copied 1-30-73 R.M.

REPORT OF WELL DRILLER
STATE OF UTAH

Application No. 452 54-87
Claim No.
Coordinate N 12-13-75 cbc

GENERAL STATEMENT: Report of well driller is hereby made and filed with the State Engineer, in accordance with the laws of Utah. (This report shall be filed with the State Engineer within 30 days after the completion or abandonment of the well. Failure to file such reports constitutes a misdemeanor.)

(1) WELL OWNER:
Name Robert Radocovich
Address 340 N. W. E. Grice, Utah

(2) LOCATION OF WELL:
County CAYENNE Ground Water Basin
(leave blank)
North 970 feet East 60 feet from NE Corner
South West
of Section 5 T. 13 S. R. 7 E SLBM (strike out words not needed) USM

(3) NATURE OF WORK (check):
New Well
Replacement Well Deepening Repair Abandon
If abandonment, describe material and procedure:

(4) NATURE OF USE (check):
Domestic Industrial Municipal Stockwater
Irrigation Mining Other Test Well

(5) TYPE OF CONSTRUCTION (check):
Rotary Dug Jetted
Cable Driven Bored

(6) CASING SCHEDULE: Threaded Welded
6 5/8" Diam. from 0 feet to 60 feet Gage 40
5 1/2" Diam. from 60 feet to 140 feet Gage 70
New Reject Used

(7) PERFORATIONS: Perforated? Yes No
Type of perforator used Mills
Size of perforations 4 inches by 3/8 inches
40 perforations from 210 feet to 137 feet

(8) SCREENS: Well screen installed? Yes No
Manufacturer's Name
Type Model No.
Diam. Slot size Set from ft. to
Diam. Slot size Set from ft. to

(9) CONSTRUCTION:
Was well gravel packed? Yes No Size of gravel:
Gravel placed from feet to feet
Was a surface seal provided? Yes No
To what depth? 20 feet
Material used in seal: Cement
Did any strata contain unusable water? Yes No
Type of water: Depth of strata
Method of sealing strata off:

Was surface casing used? Yes No
Was it cemented in place? Yes No

(10) WATER LEVELS:
Water level 105 feet below land surface Date 12-2-72
Water preparation feet above land surface Date

RECEIVED: JAN 11 1973

(11) FLOWING WELL:
Controlled by (check) Valve
Cap Plug No Control
Does well leak around casing? Yes No

(12) WELL TESTS: Drawdown is the distance in feet the water level is lowered below static level.
Was a pump test made? Yes No If so, by whom?
Yield: 50 gal./min. with NO feet drawdown after 1/2 hours

(13) WELL LOG: Diameter of well inches
Depth drilled feet. Depth of completed well feet.

NOTE: Place an "X" in the space or combination of spaces needed to designate the material or combination of materials encountered in each depth interval. Under REMARKS make any desirable notes as to occurrence of water and the color, size, nature, etc., of material encountered in each depth interval. Use additional sheet if needed.

DEPTH		MATERIAL										REMARKS
From	To	Clay	Silt	Sand	Gravel	Cobbles	Boulders	Hardpan	Conglomerate	Bedrock	Other	
0	10	X	X									TOP SOIL
10	60	X	X			X						TAN to yellow
60	80	X	X			X						gray
80	85				X		X					yellow
85	105	X	X									II
105	140				X							TAN MED HARD
110	125			X	X							LINE GRAIN
125	140			X								TAN - SDET YEILDING DUFFY LIGHT YELLOW

Work started 11-28-1972 Completed 12-2-1972

(14) PUMP:
Manufacturer's Name
Type H. P.
Depth to pump or bowles feet

Well Driller's Statement:
This well was drilled under my supervision, and this report is true to the best of my knowledge and belief.
Name CORTES CONST & DRILLING CO (Type or print)
Address 7700 S. 4000 E.
(Signed) Jay Coates (Well Driller)
License No. 294 Date 12-3-1972



APPENDIX R614-301-728

Spring Depletion Curves

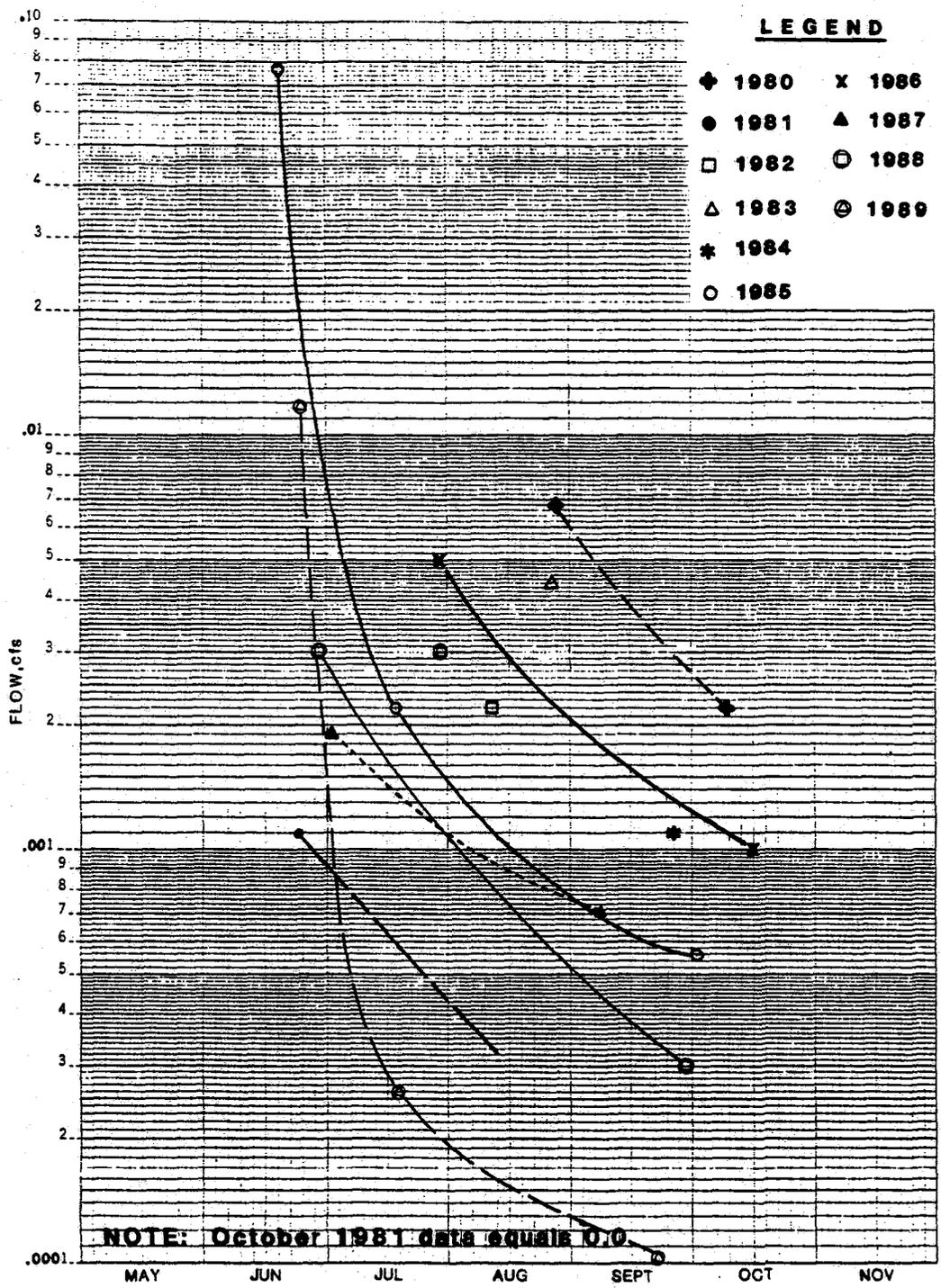


Figure 2. Spring S7-11 Depletion Curve

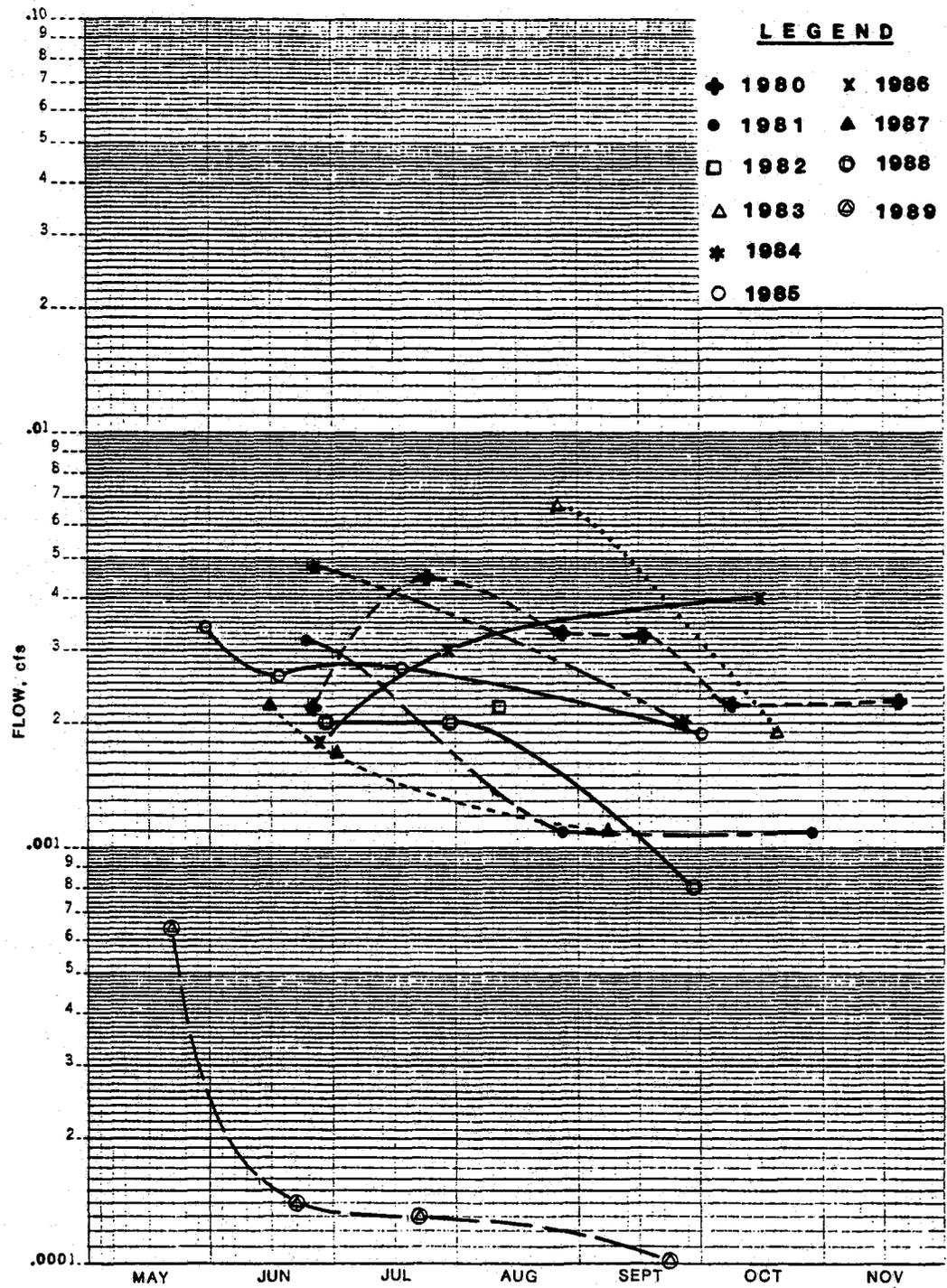


Figure 3. Spring S24-12 Depletion Curve

HANSEN
ALLEN
& LUCE^{INC}

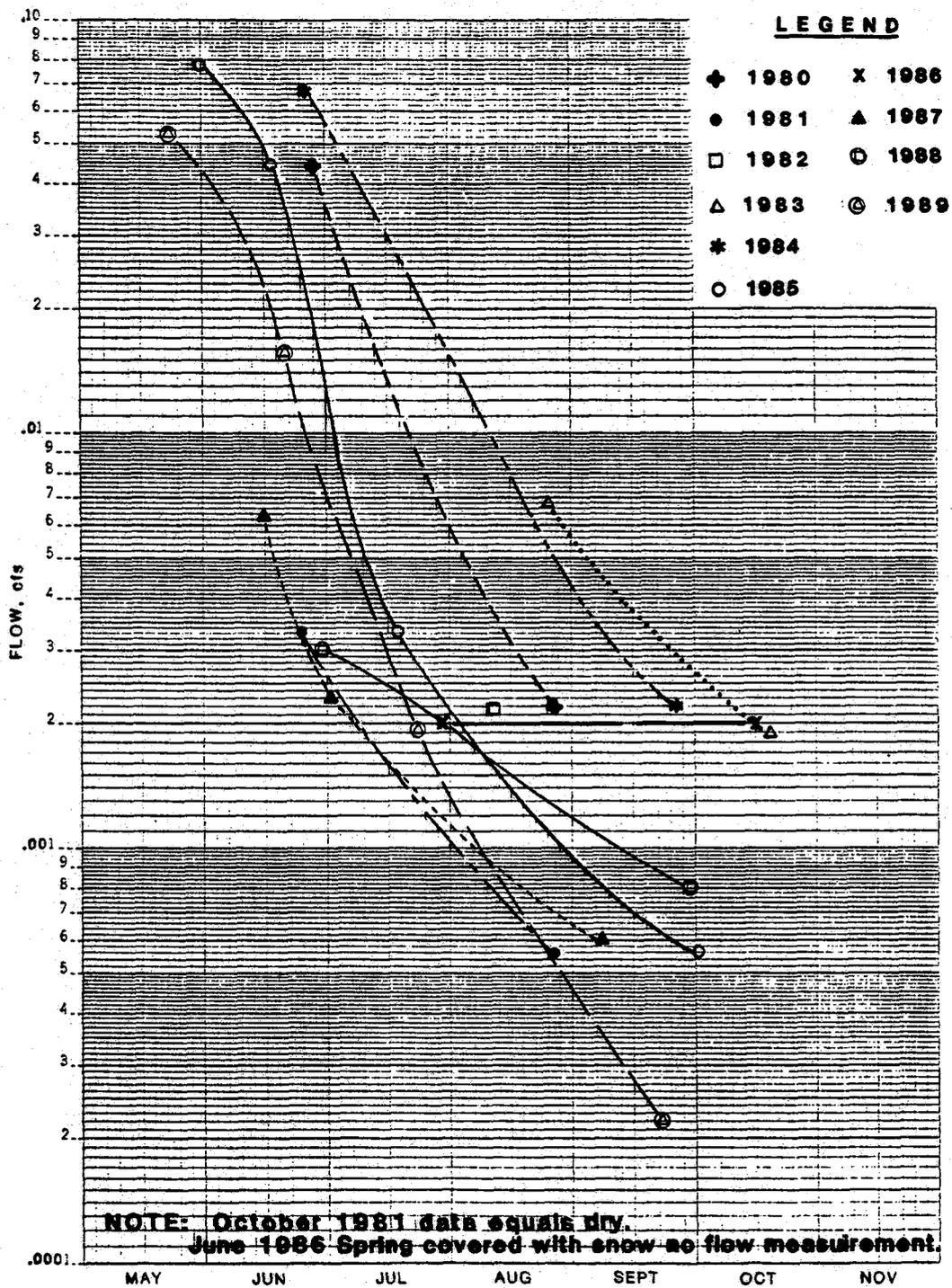


Figure 4. Spring S25-13 Depletion Curve

HANSEN
ALLEN
& LUCE inc

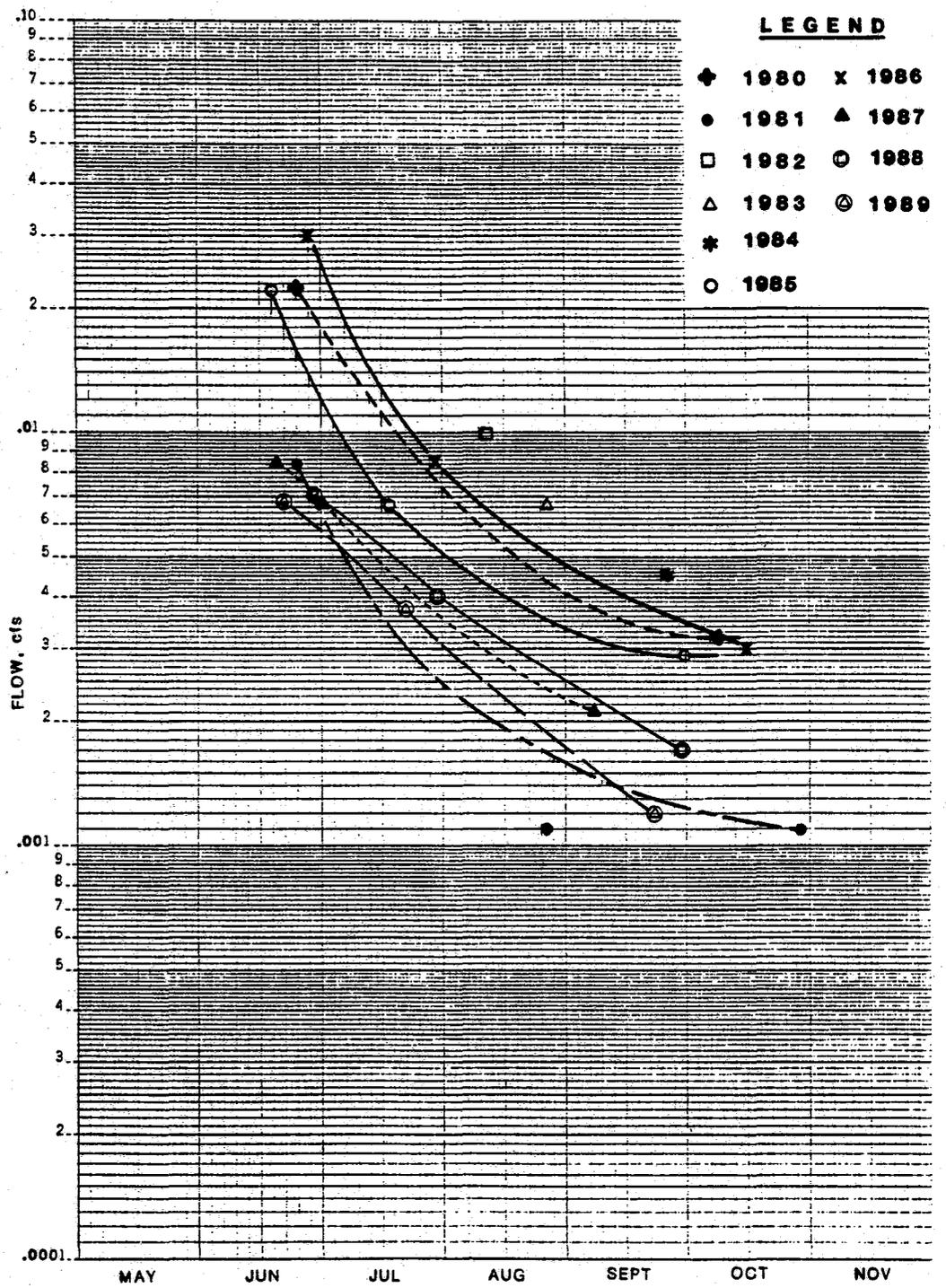


Figure 5. Spring S31-13 Depletion Curve

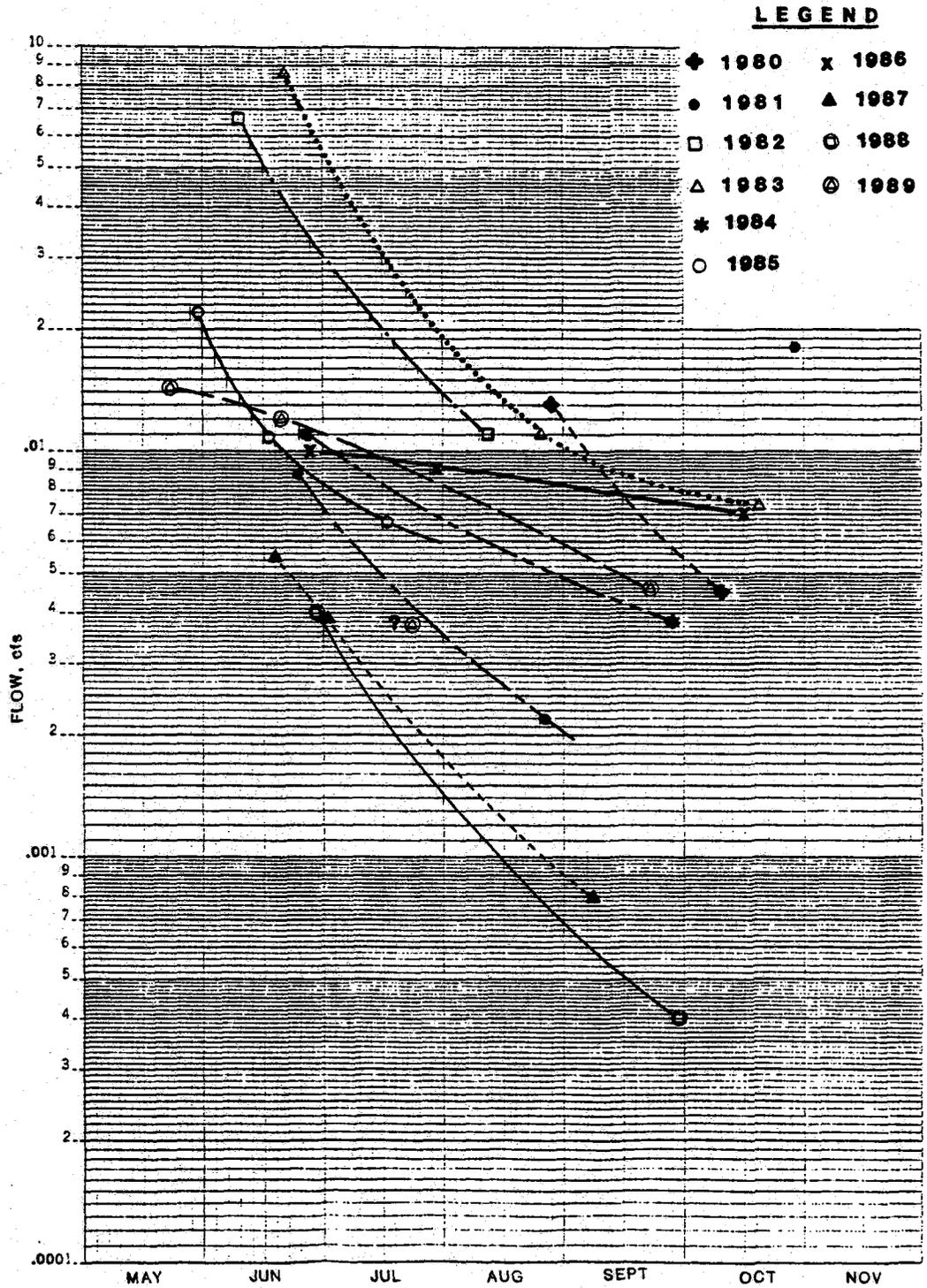


Figure 6. Spring S36-17 Depletion Curve

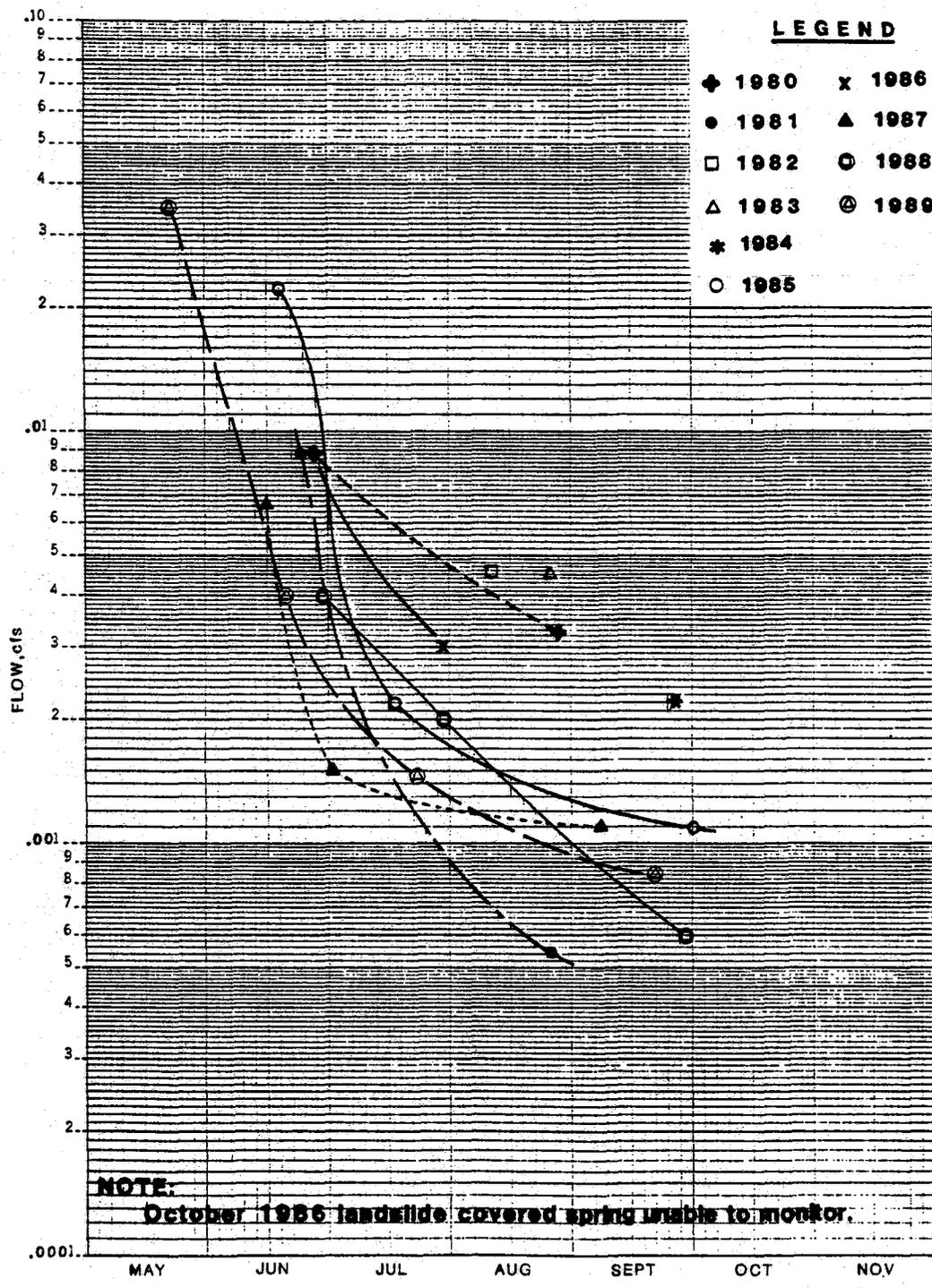


Figure 7. Spring S36-19 Depletion Curve

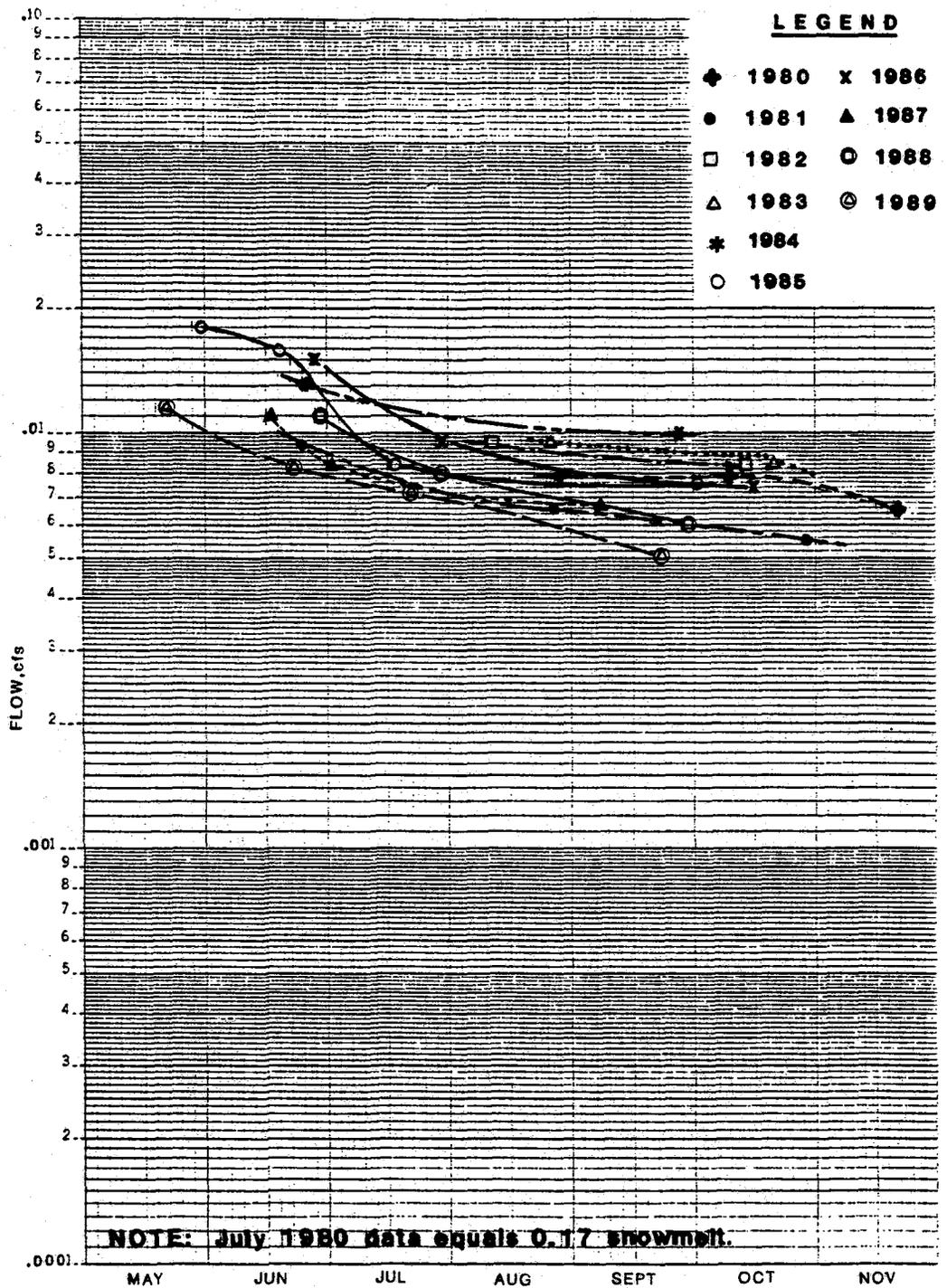


Figure 8. Spring S36-23 Depletion Curve



APPENDIX R614-301-731.111
Spill Prevention Control Plan

SPILL PREVENTION
CONTROL AND COUNTERMEASURE PLAN
(SPCC PLAN)

Valley Camp of Utah, Inc.
Scofield Route
Helper, Utah 84526

December 1980

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SPILL PREVENTION
CONTROL AND COUNTERMEASURE PLAN
(SPCC PLAN)

for

Valley Camp of Utah, Inc.
Scofield Route
Helper, Utah 84526

1.0 INTRODUCTION

The Federal Water Pollution Control Act of 1972 requires the Administrator of the Environmental Protection Agency ("EPA"), with other Federal and State agencies, to enter into programs designed to prevent, reduce, or eliminate pollution of the navigable waters of the United States. On December 11, 1973, the EPA published regulations for the prevention of pollution of waters of the United States by oil emanating from non-transportation related onshore facilities. The regulations are identified as Title 40, Code of Federal Regulations, Part 112, (40 CFR, Part 112), "Oil Pollution Prevention - Non-Transportation Related Onshore and Offshore Facilities," and became effective on January 10, 1974.

The objective of these regulations is to prevent the discharge of oil in harmful quantities into the navigable waters of the United States or adjoining shorelines. The accomplishments of this objective requires an assessment of each facility for the possibility of any discharge of oil.

Where such potential exists, the regulations urge that (a) employees be adequately trained to reduce the number of human errors that often cause spills; (b) inspection procedures be implemented; (c) when appropriate, pollution prevention equipment be installed and maintained; and (d) secondary containment, if practical, be provided to contain any oil that may be spilled.

The facilities described in this plan are those of the Valley Camp of Utah, Inc. ("Valley Camp"), and are non-transportation related on-shore coal mining operations located in the State of Utah. Oil and gas products are transferred, stored, distributed and consumed in the operation and maintenance of equipment, machinery and vehicles associated with the mining of bituminous coal. A discharge or spill of oil from specific storage tanks located within these facilities, in sufficient quantities as defined in the federal regulations, might result in a harmful discharge into a navigable water of the United States. Accordingly, a Spill Prevention Control and Countermeasure Plan (SPCC Plan) has been prepared and implemented to minimize the potential for oil discharges and is included in this document.

2.0 SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN

2.1 Description of Oil Storage Tanks

Oil storage tanks at Valley Camp, Inc., facilities are shown on Figure 2-1, Valley Camp, Inc., - Oil Storage Tanks Inventory.

All tanks are in good condition and constructed of (Enter type of construction; ie, welded steel, riveted steel, etc.) welded steel

2.2 Design of Control and Countermeasure Structures

Oil storage tanks at Valley Camp, Inc., facilities will be located, when practical, in such a position that any potential oil discharge will be contained in an impoundment whose capacity is at least 25% greater than the maximum capacity of the tank or at least 25% greater than the maximum capacity of the largest tank in a group of tanks. A discharge device such as a gate valve may be installed at the lower end of the enclosure to periodically drain rainwater and snowmelt.

In the event it becomes necessary to drain rainwater and snowmelt from the enclosure, this will be done as follows:

- The run-off will be inspected to ensure compliance with applicable water quality standards and will not cause a harmful discharge into a stream;

Figure 2-1

Oil Storage Tanks Inventory
Valley Camp of Utah, Inc.

Tank Name & I.D. No.	Location	Capacity (Gal.)	Type
V.C. No. 1	Belina	10,000	Steel
V.C. No. 2	Utah #2	10,000	Steel
V.C. No. 3	Administra- tive office	10,000	Steel
V.C. No. 4	Utah #2	8,000	Steel
V.C. No. 5	Utah #2	4,000	Steel

- The discharge device will be opened and then closed following the drainage by the Installation's Mine Superintendent, Shift Foreman, or other responsible personnel;
- The date and estimated volume of rainwater released will be recorded.

Where an impoundment exists which is also used for water quality control and has an overflow pipe which can or does discharge into a stream, the overflow pipe for such an impoundment will have an oil skimmer to prevent oil from discharging from the impoundment into a stream.

Where an impoundment is not practical, the oil storage tank(s) will be:

- Buried, only if the total facility aggregate capacity is less than 42,000 gallon or
- Relocated to a non-critical area, or
- Provided with a suitable enclosure around or under the tank, such as impervious dikes or metal drip pans.

All delivery of oil to the storage tank is by motor tank vehicle. Standard operating procedures are designed to prevent over-filling tanks. These include:

- Gauging of tank prior to unloading incoming product to ensure sufficient tank capacity to accept delivery.
- Motor tank vehicle drivers stand by unloading vehicles ready to shut down the unloading operation in case of malfunction.

Air escaping from the storage tank vent provides an audible indication that the tank is being filled. Cessation of this audible indication is a signal to shut down the unloading operation as either:

- The unloading tank is empty, or
- The tank is being overfilled.

Any small amount of oil discharge by overfilling a tank will be contained.

All gate valves will be equipped with a padlock. The areas where tanks are located are lighted during the dark hours. Supervisory personnel are on duty twenty-four (24) hours a day.

2.3 Inspection

All tanks, piping, valves, loading, unloading equipment, impoundments, skimmers, enclosures and/or dikes will be inspected by supervisory personnel quarterly, and routinely by operating personnel. If necessary, any corrective action will be promptly undertaken. A "Facilities Inspection Form" (See Figure 2-2) will be used for inspections made by supervisory personnel. A copy of each report will be filed with the SPCC Plan and maintained for three (3) years.

The Environmental Manager
 Title, _____ Name

will be accountable for oil spill prevention.

2.4 Training

The following training procedures will be provided:

- The SPCC Plan will be reviewed with plant-operating personnel by supervisory personnel as a part of the plant inspection procedure.
- New employees will be instructed in spill prevention procedures as part of their training.

April, 1986

Figure 2-2

Facilities Inspection Form
for
Valley Camp of Utah, Inc.
SPCC Plan

Inspection Date _____

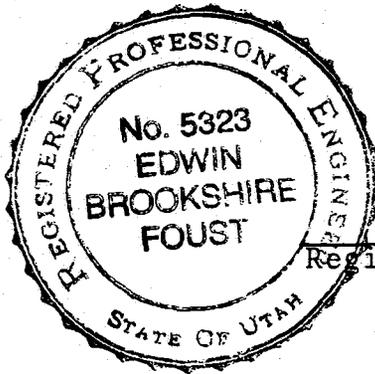
Facility Name and/or I.D. Number	Facility Location	Facility Capacity (Gal.)	Facility Type	Facility Inspection Comments

Inspected By _____

NOTE: Inspections will be performed quarterly and the inspection form filed with the SPCC Plan.

The original copy of the SPCC Plan will be kept in the Valley Camp of Utah, Inc., office located at Scofield Route, Helper, Utah 84526.

The above Plan has been reviewed by and certified by



Edwin Brookshire Foust
Registered Professional Engineer

Final Report
to the
President
of the
United States
Environmental
Protection
Agency

TUESDAY, DECEMBER 11, 1973
WASHINGTON, D.C.

Volume 38 ■ Number 237

PART II



ENVIRONMENTAL PROTECTION AGENCY

■

OIL POLLUTION PREVENTION

Non-Transportation Related Onshore
and Offshore Facilities

Title 40—Protection of the Environment
 CHAPTER I—ENVIRONMENTAL
 PROTECTION AGENCY
 SUBCHAPTER D—WATER PROGRAMS
 PART 112—OIL POLLUTION PREVENTION
 Non-transportation Related Onshore and
 Offshore Facilities

Notice of proposed rule making was published on July 19, 1973, containing proposed regulations, required by an pursuant to section 311(j)(1)(C) of the Federal Water Pollution Control Act, as amended (86 Stat. 868, 33 U.S.C. 1251 et seq.), (FWPCA), to prevent discharges of oil into the navigable waters of the United States and to contain such discharges if they occur. The proposed regulations endeavor to prevent such spills by establishing procedures, methods and equipment requirements of owners or operators of facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, or consuming oil.

Written comments on the proposed regulations were solicited and received from interested parties. In addition, a number of verbal comments on the proposal were also received. The written comments are on file at the Division of Oil and Hazardous Materials, Office of Water Program Operations, U.S. Environmental Protection Agency, Washington, D.C.

All of the comments have been given careful consideration and a number of changes have been made in the regulation. These changes incorporate either suggestions made in the comments or ideas initiated by the suggestions.

Some comments reflected a misunderstanding of the fundamental principles of the regulation, specifically as they applied to older facilities and marginal operations. During the development of the regulation it was recognized that no single design or operational standard can be prescribed for all non-transportation related facilities, since the equipment and operational procedures appropriate for one facility may not be appropriate for another because of factors such as function, location, and age of each facility. Also, new facilities could achieve a higher level of spill prevention than older facilities by the use of fail-safe design concepts and innovative spill prevention methods and procedures. It was concluded that older facilities and marginal operations could develop strong spill contingency plans and commit manpower, oil containment devices and removal equipment to compensate for inherent weaknesses in the spill prevention plan.

Appropriate changes were made in the regulation to simplify, clarify or correct deficiencies in the proposal.

A discussion of these changes, section by section follows:

A. Section 112.1—General applicability. Section 112.1(b), the "foreseeability provision", contained in 112.1(d)(4) was added to paragraph 112.1(b). As modified, the regulation applies to non-transportation-related onshore and offshore facilities which, due to their loca-

tion, could reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines.

Sections 112.1(b), 112.1(d)(4) and 112.3 are now consistent.

Section 112.1(d)(1) was expanded to further clarify the respective authorities of the Department of Transportation and the Environmental Protection Agency by referring to the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency (Appendix).

Section 112.1(d)(2), the figure for barrels was converted to gallons, a unit of measure more familiar to the public, and now reads "42000 gallons."

Section 112.1(d)(3), exemption for facilities with nonburied tankage was extended to 1320 gallons in aggregate with no single tank larger than 660 gallons and applies to all oils, not just heating oil and motor fuel. Tanks of 660 gallons are the normal domestic code size for nonburied heating oil tanks. Buildings may have two such tanks. Facilities containing small quantities of oil other than motor fuel or heating oil would also be exempt, thus making this consistent with the definition of oil in §112.2.

B. Section 112.2—Definitions. Section 112.2(1), the term "navigable waters" was expanded to the more descriptive definition used by the National Pollutant Discharge Elimination System.

Section 112.2(m), the U.S. Coast Guard definition of the term "vessel" was included. This term is used in the regulation and the definition is consistent with the Department of Transportation regulations.

C. Section 112.3—Requirements for the preparation and implementation of spill prevention control and countermeasure plans. A new paragraph (c) was added to §112.3 which applies to mobile or portable facilities subject to the regulation. These facilities need not prepare a new Spill Prevention Control and Countermeasure Plan (SPCC Plan) each time the facility is moved to a new site, but may prepare a general plan, identifying good spill prevention engineering practices (as outlined in the guidelines, §112.7), and implement these practices at each new location.

Section 112.3(a), (b) and (f) (which was §112.3(e) in the proposed rule making) have been modified to allow extensions of time beyond the normally specified periods to apply to the preparation of plans as well as to their implementation and to remove the time limitation of one year for extensions. Extensions may be allowed for whatever period of time considered reasonable by the Regional Administrator.

Section 112.3(e) (which was §112.3(d) in the proposed rule making) was modified to require the maintenance of the SPCC Plan for inspection at the facility only if the facility was normally manned. If the facility is unmanned, the Plan may be kept at the nearest field office.

Section 112.3(f)(1) (§112.3(e)(1) in the proposed regulation) was changed to include the nonavailability of qualified personnel as a reason for the Regional Administrator granting an extension of time.

D. Section 112.4—Amendment of spill prevention control and countermeasure plans by Regional Administrator. Section 112.4(a)(11), permits the Regional Administrator to require that the owner or operator furnish additional information to EPA after one or more spill events have occurred. The change limits the request for additional information to that pertinent to the SPCC Plan or to the pollution incident.

Section 112.4(b) now reads "Section 112.4 . . .", not "This subsection . . ."

Section 112.4(e) allowed the Regional Administrator to require amendment to SPCC Plans and specifies that the amendment must be incorporated in the Plan within 30 days unless the Regional Administrator specifies an earlier effective date. The change allows the Regional Administrator to specify any appropriate date that is reasonable.

Section 112.4(f). A new §112.4(f) has been added which provides for an appeal by an owner or operator from a decision rendered by the Regional Administrator on an amendment to an SPCC Plan. The appeal is made to the Administrator of EPA and the paragraph outlines the procedures for making such an appeal.

E. Section 112.5—Amendment of spill prevention control and countermeasure plans by owners or operators. Section 112.5(b) required the owner or operator to amend the SPCC Plan every three years. The amendment required the incorporation of any new, field-proven technology and had to be certified by a Professional Engineer.

The change requires that the owner or operator review the Plan every three years to see if it needs amendment. New technology need be incorporated only if it will significantly reduce the likelihood of a spill. The change will prevent frivolous retrofitting of equipment to facilities whose prevention plans are working successfully, and will not require engineering certification unless an amendment is necessary.

Section 112.5(c), this paragraph required that the owner or operator amend his SPCC Plan when his facility became subject to §112.4 (amendment by the Regional Administrator). This paragraph has been removed. It is inconsistent to require the owner or operator to independently amend the Plan while the Regional Administrator is renewing it for possible amendment.

F. Section 112.6—Civil penalties. There are no changes in this section.

G. Section 112.7—Guidelines for the preparation and implementation of spill prevention control and countermeasure plan. Numerous changes have been made in the guidelines section; the changes have been primarily:

1. To correct the use of language inconsistent with guidelines. For example, the word "shall" has been changed to "should" in §112.7(a) through (e).

2. To give the engineer preparing the Plan greater latitude to use alternative methods better suited to a given facility or local conditions.

3. To cover facilities subject to the regulation, but for which no guidelines were previously given. This category includes such things as mobile facilities, and drilling and workover rigs.

In addition wording was changed to differentiate between periodic observations by operating personnel and formal inspections with attendant record keeping.

These regulations shall become effective January 10, 1974.

Dated: November 27, 1973.

JOHN QUARLES,
Acting Administrator.

A new Part 112 would be added to subchapter D, Chapter I of Title 40, Code of Federal Regulations as follows:

- Sec. 112.1 General applicability.
- 112.2 Definitions.
- 112.3 Requirements for preparation and implementation of Spill Prevention Control and Countermeasure plans.
- 112.4 Amendment of Spill Prevention Control and Countermeasure Plans by Regional Administrator.
- 112.5 Amendment of Spill Prevention Control and Countermeasure Plans by owners or operators.
- 112.6 Civil penalties.
- 112.7 Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.

Appendix Memorandum of Understanding Between the Secretary of the Department of Transportation and the Administrator of the Environmental Protection Agency. Section II—Definitions.

AUTHORITY: Secs. 311(j)(1)(C), 311(j)(2), 501(a), Federal Water Pollution Control Act (Sec. 2, Pub. L. 92-500, 86 Stat. 816 et seq. (33 U.S.C. 1251 et seq.)); Sec. 4(b), Pub. L. 92-500, 86 Stat. 897; 5 U.S.C. Reorg. Plan of 1970 No. 3 (1970), 35 FR 15623, 3 CFR 1966-1970 Comp.; E.O. 11735, 38 FR 21243, 3 CFR.

§ 112.1 General applicability.

(a) This part establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or adjoining shorelines.

(b) Except as provided in paragraph (d) of this section, this part applies to owners or operators of non-transportation-related onshore and offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing or consuming oil and oil products, and which, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in Part 110 of this chapter, into or upon the navigable waters of the United States or adjoining shorelines.

(c) As provided in sec. 313 (86 Stat. 875) departments, agencies, and instrumentalities of the Federal government

are subject to these regulations to the same extent as any person, except for the provisions of § 112.6.

(d) This part does not apply to:

(1) Equipment or operations of vessels or transportation-related onshore and offshore facilities which are subject to authority and control of the Department of Transportation, as defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24000.

(2) Facilities which have an aggregate storage of 1320 gallons or less of oil, provided no single container has a capacity in excess of 660 gallons.

(3) Facilities which have a total storage capacity of 42000 gallons or less of oil and such total storage capacity is buried underground.

(4) Non-transportation-related onshore and offshore facilities, which, due to their location, could not reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines.

(e) This part provides for the preparation and implementation of Spill Prevention Control and Countermeasure Plans prepared in accordance with § 112.7, designed to complement existing laws, regulations, rules, standards, policies and procedures pertaining to safety standards, fire prevention and pollution prevention rules, so as to form a comprehensive balanced Federal/State spill prevention program to minimize the potential for oil discharges. Compliance with this part does not in any way relieve the owner or operator of an onshore or an offshore facility from compliance with other Federal, State or local laws.

§ 112.2 Definitions.

For the purposes of this part:

(a) "Oil" means oil of any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil.

(b) "Discharge" includes but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping. For purposes of this part, the term "discharge" shall not include any discharge of oil which is authorized by a permit issued pursuant to Section 13 of the River and Harbor Act of 1899 (30 Stat. 1121, 33 U.S.C. 407), or Sections 402 or 405 of the FWPCA Amendments of 1972 (86 Stat. 816 et seq., 33 U.S.C. 1251 et seq.).

(c) "Onshore facility" means any facility of any kind located in, on, or under any land within the United States, other than submerged lands, which is not a transportation-related facility.

(d) "Offshore facility" means any facility of any kind located in, on, or under any of the navigable waters of the United States, which is not a transportation-related facility.

(e) "Owner or operator" means any person owning or operating an onshore facility or an offshore facility, and in the

case of any abandoned offshore facility the person who owned or operated such facility immediately prior to such abandonment.

(f) "Person" includes an individual, firm, corporation, association, and partnership.

(g) "Regional Administrator" means the Regional Administrator of the Environmental Protection Agency, or his designee, in and for the Region in which the facility is located.

(h) "Transportation-related" and "non-transportation-related" as applied to an onshore or offshore facility are defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24080.

(i) "Spill event" means a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities, as defined at 40 CFR Part 110.

(j) "United States" means the State, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands.

(k) The term "navigable waters" of the United States means "navigable waters" as defined in section 502(7) of the FWPCA, and includes:

(1) all navigable waters of the United States, as defined in judicial decisions prior to passage of the 1972 Amendments to the FWPCA (Pub. L. 92-500), and tributaries of such waters;

(2) interstate waters;

(3) intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and

(4) intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce.

(l) "Vessel" means every description of watercraft or other artificial contrivance used, or capable of being used as a means of transportation on water, other than a public vessel.

§ 112.3 Requirements for preparation and implementation of Spill Prevention Control and Countermeasure Plans.

(a) Owners or operators of onshore and offshore facilities in operation on or before the effective date of this part that have discharged or could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines shall prepare a Spill Prevention Control and Countermeasure Plan (hereinafter "SPCC Plan"), in accordance with § 112.7. Except as provided in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the effective date of this part and shall be fully implemented as soon as possible, but not later than one year after the effective date of this part.

(b) Owners or operators of onshore and offshore facilities that become operational after the effective date of this part, and that have discharged or could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare an SPCC Plan in accordance with § 112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the date such facility begins operations and shall be fully implemented as soon as possible, but not later than one year after such facility begins operations.

(c) Onshore and offshore mobile or portable facilities such as onshore drilling or workover rigs, barge mounted offshore drilling or workover rigs, and portable fueling facilities shall prepare and implement an SPCC Plan as required by paragraphs (a), (b) and (d) of this section. The owner or operator of such facility need not prepare and implement a new SPCC Plan each time the facility is moved to a new site. The SPCC Plan for mobile facilities should be prepared in accordance with § 112.7, using good engineering practice, and when the mobile facility is moved it should be located and installed using spill prevention practices outlined in the SPCC Plan for the facility. The SPCC Plan shall only apply while the facility is in a fixed (non transportation) operating mode.

(d) No SPCC Plan shall be effective to satisfy the requirements of this part unless it has been reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. By means of this certification the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the SPCC Plan has been prepared in accordance with good engineering practices. Such certification shall in no way relieve the owner or operator of an onshore or offshore facility of his duty to prepare and fully implement such Plan in accordance with § 112.7, as required by paragraphs (a), (b) and (c) of this section.

(e) Owners or operators of a facility for which an SPCC Plan is required pursuant to paragraphs (a), (b) or (c) of this section shall maintain a complete copy of the Plan at such facility if the facility is normally attended at least 8 hours per day, or at the nearest field office if the facility is not so attended, and shall make such Plan available to the Regional Administrator for on-site review during normal working hours.

(f) Extensions of time.

(1) The Regional Administrator may authorize an extension of time for the preparation and full implementation of an SPCC Plan beyond the time permitted for the preparation and implementation of an SPCC Plan pursuant to paragraphs (a), (b) or (c) of this section where he finds that the owner or operator of a facility subject to paragraphs (a), (b) or (c) of this section cannot fully com-

ply with the requirements of this part as a result of either nonavailability of qualified personnel, or delays in construction or equipment delivery beyond the control and without the fault of such owner or operator or their respective agents or employees.

(2) Any owner or operator seeking an extension of time pursuant to paragraph (f) (1) of this section may submit a letter of request to the Regional Administrator. Such letter shall include:

(i) A complete copy of the SPCC Plan, if completed;

(ii) A full explanation of the cause for any such delay and the specific aspects of the SPCC Plan affected by the delay;

(iii) A full discussion of actions being taken or contemplated to minimize or mitigate such delay;

(iv) A proposed time schedule for the implementation of any corrective actions being taken or contemplated, including interim dates for completion of tests or studies, installation and operation of any necessary equipment or other preventive measures.

In addition, such owner or operator may present additional oral or written statements in support of his letter of request.

(3) The submission of a letter of request for extension of time pursuant to paragraph (f) (2) of this section shall in no way relieve the owner or operator from his obligation to comply with the requirements of § 112.3 (a), (b) or (c). Where an extension of time is authorized by the Regional Administrator for particular equipment or other specific aspects of the SPCC Plan, such extension shall in no way affect the owner's or operator's obligation to comply with the requirements of § 112.3 (a), (b) or (c) with respect to other equipment or other specific aspects of the SPCC Plan for which an extension of time has not been expressly authorized.

§ 112.4 Amendment of SPCC Plans by Regional Administrator.

(a) Notwithstanding compliance with § 112.3, whenever a facility subject to § 112.3 (a), (b) or (c) has: Discharged more than 1,000 U.S. gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event, or discharged oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines in two spill events, reportable under section 311(b)(5) of the FWPCA, occurring within any twelve month period, the owner or operator of such facility shall submit to the Regional Administrator, within 60 days from the time such facility becomes subject to this section, the following:

(1) Name of the facility;

(2) Name(s) of the owner or operator of the facility;

(3) Location of the facility;

(4) Date and year of initial facility operation;

(5) Maximum storage or handling capacity of the facility and normal daily throughput;

(6) Description of the facility, including maps, flow diagrams, and topographical maps;

(7) A complete copy of the SPCC Plan with any amendments;

(8) The cause(s) of such spill, including a failure analysis of system or subsystem in which the failure occurred;

(9) The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements;

(10) Additional preventive measures taken or contemplated to minimize the possibility of recurrence;

(11) Such other information as the Regional Administrator may reasonably require pertinent to the Plan or spill event.

(b) Section 112.4 shall not apply until the expiration of the time permitted for the preparation and implementation of an SPCC Plan pursuant to § 112.3 (a), (b), (c) and (f).

(c) A complete copy of all information provided to the Regional Administrator pursuant to paragraph (a) of this section shall be sent at the same time to the State agency in charge of water pollution control activities in and for the State in which the facility is located. Upon receipt of such information such State agency may conduct a review and make recommendations to the Regional Administrator as to further procedures, methods, equipment and other requirements for equipment necessary to prevent and to contain discharges of oil from such facility.

(d) After review of the SPCC Plan for a facility subject to paragraph (a) of this section, together with all other information submitted by the owner or operator of such facility, and by the State agency under paragraph (c) of this section, the Regional Administrator may require the owner or operator of such facility to amend the SPCC Plan if he finds that the Plan does not meet the requirements of this part or that the amendment of the Plan is necessary to prevent and to contain discharge of oil from such facility.

(e) When the Regional Administrator proposes to require an amendment to the SPCC Plan, he shall notify the facility operator by certified mail addressed to, or by personal delivery to, the facility owner or operator, that he proposes to require an amendment to the Plan, and shall specify the terms of such amendment. If the facility owner or operator is a corporation, a copy of such notice shall also be mailed to the registered agent, if any, of such corporation in the State where such facility is located. Within 30 days from receipt of such notice, the facility owner or operator may submit written information, views, and arguments on the amendment. After considering all relevant material presented, the Regional Administrator shall notify the facility owner or operator of any amendment required or shall rescind the notice. The amendment required by the Regional Administrator shall become part of the Plan 30 days

after such notice, unless the Regional Administrator, for good cause, shall specify another effective date. The owner or operator of the facility shall implement the amendment of the Plan as soon as possible, but not later than six months after the amendment becomes part of the Plan, unless the Regional Administrator specifies another date.

(f) An owner or operator may appeal a decision made by the Regional Administrator requiring an amendment to an SPCC Plan. The appeal shall be made to the Administrator of the United States Environmental Protection Agency and must be made in writing within 30 days of receipt of the notice from the Regional Administrator requiring the amendment. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It may also contain additional information which the owner or operator wishes to present in support of his argument. The Administrator or his designee may request additional information from the owner or operator, or from any other person. The Administrator or his designee may request additional information from the owner or operator, or from any other person. The Administrator or his designee shall render a decision within 60 days of receiving the appeal and shall notify the owner or operator of his decision.

§ 112.5 Amendment of Spill Prevention Control and Countermeasure Plans by owners or operators.

(a) Owners or operators of facilities subject to § 112.3 (a), (b) or (c) shall amend the SPCC Plan for such facility in accordance with § 112.7 whenever there is a change in facility design, construction, operation or maintenance which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shorelines. Such amendments shall be fully implemented as soon as possible, but not later than six months after such change occurs.

(b) Notwithstanding compliance with paragraph (a) of this section, owners and operators of facilities subject to § 112.3 (a), (b) or (c) shall complete a review and evaluation of the SPCC Plan at least once every three years from the date such facility becomes subject to this part. As a result of this review and evaluation, the owner or operator shall amend the SPCC Plan within six months of the review to include more effective prevention and control technology if: (1) Such technology will significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field-proven at the time of the review.

(c) No amendment to an SPCC Plan shall be effective to satisfy the requirements of this section unless it has been certified by a Professional Engineer in accordance with § 112.3(d).

§ 112.6 Civil penalties.

Owners or operators of facilities subject to § 112.3 (a), (b) or (c) who violate the requirements of this part by failing or refusing to comply with any of the provisions of § 112.3, § 112.4, or § 112.5 shall be liable for a civil penalty of not more than \$5,000 for each day that such violation continues. The Regional Administrator may assess and compromise such civil penalty. No penalty shall be assessed until the owner or operator shall have been given notice and an opportunity for hearing.

§ 112.7 Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.

The SPCC Plan shall be a carefully thought-out plan, prepared in accordance with good engineering practices, and which has the full approval of management at a level with authority to commit the necessary resources. If the plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, these items should be discussed in separate paragraphs, and the details of installation and operational start-up should be explained separately. The complete SPCC Plan shall follow the sequence outlined below, and include a discussion of the facility's conformance with the appropriate guidelines listed:

(a) A facility which has experienced one or more spill events within twelve months prior to the effective date of this part should include a written description of each such spill, corrective action taken and plans for preventing recurrence.

(b) Where experience indicates a reasonable potential for equipment failure (such as tank overflow, rupture, or leakage), the plan should include a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each major type of failure.

(c) Appropriate containment and/or diversionary structures or equipment to prevent discharged oil from reaching a navigable water course should be provided. One of the following preventive systems or its equivalent should be used as a minimum:

- (1) Onshore facilities.
 - (i) Dikes, berms or retaining walls sufficiently impervious to contain spilled oil
 - (ii) Curbing
 - (iii) Culverting, gutters or other drainage systems
 - (iv) Weirs, booms or other barriers
 - (v) Spill diversion ponds
 - (vi) Retention ponds
 - (vii) Sorbent materials
- (2) Offshore facilities.
 - (i) Curbing, drip pans
 - (ii) Sumps and collection systems

(d) When it is determined that the installation of structures or equipment listed in § 112.7(c) to prevent discharged oil from reaching the navigable waters

is not practicable from any onshore offshore facility, the owner or operator should clearly demonstrate such impracticability and provide the following:

(1) A strong oil spill contingency plan following the provision of 40 CFR Part 109.

(2) A written commitment of manpower, equipment and materials required to expeditiously control and remove any harmful quantity of oil discharged.

(e) In addition to the minimal prevention standards listed under § 112.7(c), sections of the Plan should include a complete discussion of conformance with the following applicable guidelines: other effective spill prevention and containment procedures (or, if more stringent, with State rules, regulations and guidelines):

(1) Facility drainage (onshore); (excluding production facilities). (i) Drainage from diked storage areas should be restrained by valves or other positive means to prevent a spill or other excessive leakage of oil into the drainage system or implant effluent treatment system, except where plan systems are designed to handle such leakage. Diked areas may be emptied by pumps or ejectors; however, these should be manually activated and the condition of the accumulation should be examined before starting to be sure no oil will be discharged into the water.

(ii) Flapper-type drain valves should not be used to drain diked areas. Valves used for the drainage of diked areas should, as far as practical, be of manual, open-and-closed design. When plant drainage drains directly into water courses and not into wastewater treatment plants, retained storm water should be inspected as provided in paragraph (e) (2) (iii) (B, C and D) before drainage.

(iii) Plant drainage systems from undiked areas should, if possible, flow into ponds, lagoons or catchment basins, designed to retain oil or return it to the facility. Catchment basins should not be located in areas subject to periodic flooding.

(iv) If plant drainage is not engineered as above, the final discharge of all in-plant ditches should be equipped with a diversion system that could, in the event of an uncontrolled spill, return the oil to the plant.

(v) Where drainage waters are treated in more than one treatment unit, natural hydraulic flow should be used. If pump transfer is needed, two "lift" pumps should be provided, and at least one of the pumps should be permanently installed when such treatment is continuous. In any event, whatever techniques are used facility drainage systems should be adequately engineered to prevent oil from reaching navigable waters in the event of equipment failure or human error at the facility.

(2) Bulk storage tanks (onshore); (excluding production facilities). (i) No

tank should be used for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

(ii) All bulk storage tank installations should be constructed so that a secondary means of containment is provided for the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation. Diked areas should be sufficiently impervious to contain spilled oil. Dikes, containment curbs, and pits are commonly employed for this purpose, but they may not always be appropriate. An alternative system could consist of a complete drainage trench enclosure arranged so that a spill could terminate and be safely confined in an in-plant catchment basin or holding pond.

(iii) Drainage of rainwater from the diked area into a storm drain or an effluent discharge that empties into an open water course, lake, or pond, and bypassing the in-plant treatment system may be acceptable if:

(A) The bypass valve is normally sealed closed.

(B) Inspection of the run-off rain water ensures compliance with applicable water quality standards and will not cause a harmful discharge as defined in 40 CFR 119.

(C) The bypass valve is opened, and resealed following drainage under responsible supervision.

(D) Adequate records are kept of such events.

(iv) Buried metallic storage tanks represent a potential for undetected spills. A new buried installation should be protected from corrosion by coatings, cathodic protection or other effective methods compatible with local soil conditions. Such buried tanks should at least be subjected to regular pressure testing.

(v) Partially buried metallic tanks for the storage of oil should be avoided, unless the buried section of the shell is adequately coated, since partial burial in damp earth can cause rapid corrosion of metallic surfaces, especially at the earth/air interface.

(vi) Aboveground tanks should be subject to periodic integrity testing, taking into account tank design (floating roof, etc.) and using such techniques as hydrostatic testing, visual inspection or a system of non-destructive shell thickness testing. Comparison records should be kept where appropriate, and tank supports and foundations should be included in these inspections. In addition, the outside of the tank should frequently be observed by operating personnel for signs of deterioration, leaks which might cause a spill, or accumulation of oil inside diked areas.

(vii) To control leakage through defective internal heating coils, the following factors should be considered and applied, as appropriate.

(A) The steam return or exhaust lines from internal heating coils which discharge into an open water course should be monitored for contaminant or passed through a settling tank, skimmer, or other separation or retention system.

(B) The feasibility of installing an external heating system should also be considered.

(viii) New and old tank installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to avoid spills. Consideration should be given to providing one or more of the following devices:

(A) High liquid level alarms with an audible or visual signal at a constantly manned operation or surveillance station; in smaller plants an audible air vent may suffice.

(B) Considering size and complexity of the facility, high liquid level pump cutoff devices set to stop flow at a predetermined tank content level.

(C) Direct audible or code signal communication between the tank gauger and the pumping station.

(D) A fast response system for determining the liquid level of each bulk storage tank such as digital computers, telepulse, or direct vision gauges or their equivalent.

(E) Liquid level sensing devices should be regularly tested to insure proper operation.

(ix) Plant effluents which are discharged into navigable waters should have disposal facilities observed frequently enough to detect possible system upsets that could cause an oil spill event.

(x) Visible oil leaks which result in a loss of oil from tank seams, gaskets, rivets and bolts sufficiently large to cause the accumulation of oil in diked areas should be promptly corrected.

(xi) Mobile or portable oil storage tanks (onshore) should be positioned or located so as to prevent spilled oil from reaching navigable waters. A secondary means of containment, such as dikes or catchment basins, should be furnished for the largest single compartment or tank. These facilities should be located where they will not be subject to periodic flooding or washout.

(3) Facility transfer operations, pumping, and in-plant process (onshore); (excluding production facilities). (i) Buried piping installations should have a protective wrapping and coating and should be cathodically protected if soil conditions warrant. If a section of buried line is exposed for any reason, it should be carefully examined for deterioration. If corrosion damage is found, additional examination and corrective action should be taken as indicated by the magnitude of the damage. An alternative would be the more frequent use of exposed pipe corridors or galleries.

(ii) When a pipeline is not in service, or in standby service for an extended time the terminal connection at the transfer point should be capped or blank-flanged, and marked as to origin.

(iii) Pipe supports should be properly designed to minimize abrasion and corrosion and allow for expansion and contraction.

(iv) All aboveground valves and pipelines should be subjected to regular examinations by operating personnel at which time the general condition of items, such as flange joints, expansion

joints, valve glands and bodies, caps, pipeline supports, locking of valves and metal surfaces should be ascertained. In addition, periodic pressure testing may be warranted for piping in areas where facility drainage is such that a failure might lead to a spill event.

(v) Vehicular traffic granted entry into the facility should be warned verbally or by appropriate signs to be sure that the vehicle, because of its size, will not endanger above ground piping.

(4) Facility tank car and tank truck loading/unloading rack (onshore). (i) Tank car and tank truck loading/unloading procedures should meet the minimum requirements and regulation established by the Department of Transportation.

(ii) Where rack area drainage does not flow into a catchment basin or treatment facility designed to handle spills, a quick drainage system should be used for tank truck loading and unloading areas. The containment system should be designed to hold at least maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded in the plant.

(iii) An interlocked warning light or physical barrier system, or warning signs, should be provided in loading/unloading areas to prevent vehicular departure before complete disconnection of flexible or fixed transfer lines.

(iv) Prior to filling and departure of any tank car or tank truck, the lower most drain and all outlets of such vehicles should be closely examined for leakage, and if necessary, tightened, adjusted, or replaced to prevent liquid leakage while in transit.

(5) Oil production facilities (onshore). (i) Definition. An onshore production facility may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) Oil production facility (onshore) drainage. (A) At tank batteries and central treating stations where an accidental discharge of oil would have a reasonable possibility of reaching navigable waters, the dikes or equivalent required under § 112.7(c)(1) should have drains closed and sealed at all times, except when rainwater is being drained. Prior to drainage, the diked area should be inspected as provided in paragraph (e)(2)(iii)(B), (C), and (D). Accumulated oil on the rainwater should be picked up and returned to storage or disposed of in accordance with approved methods.

(B) Field drainage ditches, road ditches, and oil traps, sumps or skimmers, if such exist, should be inspected at regularly scheduled intervals for accumulation of oil that may have escaped from small leaks. Any such accumulations should be removed.

(iii) Oil production facility (onshore) bulk storage tanks. (A) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.

(B) All tank battery and central treating plant installations should be provided with a secondary means of containment for the entire contents of the largest single tank if feasible, or alternate systems such as those outlined in § 112.7(c)(1). Drainage from undiked areas should be safely confined in a catchment basin or holding pond.

(C) All tanks containing oil should be visually examined by a competent person for condition and need for maintenance on a scheduled periodic basis. Such examination should include the foundation and supports of tanks that are above the surface of the ground.

(D) New and old tank battery installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to prevent spills. Consideration should be given to one or more of the following:

(1) Adequate tank capacity to assure that a tank will not overflow should a pumper/gauger be delayed in making his regular rounds.

(2) Overflow equalizing lines between tanks so that a full tank can overflow to an adjacent tank.

(3) Adequate vacuum protection to prevent tank collapse during a pipeline run.

(4) High level sensors to generate and transmit an alarm signal to the computer where facilities are a part of a computer production control system.

(iv) Facility transfer operations, oil production facility (onshore). (A) All above ground valves and pipelines should be examined periodically on a scheduled basis for general condition of items such as flange joints, valve glands and bodies, drip pans, pipeline supports, pumping well polish rod stuffing boxes, bleeder and gauge valves.

(B) Salt water (oil field brine) disposal facilities should be examined often, particularly following a sudden change in atmospheric temperature to detect possible system upsets that could cause an oil discharge.

(C) Production facilities should have a program of flowline maintenance to prevent spills from this source. The program should include periodic examinations, corrosion protection, flowline replacement, and adequate records, as appropriate, for the individual facility.

(6) Oil drilling and workover facilities (onshore) (i) Mobile drilling or workover equipment should be positioned or located so as to prevent spilled oil from reaching navigable waters.

(ii) Depending on the location, catchment basins or diversion structures may be necessary to intercept and contain spills of fuel, crude oil, or oily drilling fluids.

(iii) Before drilling below any casing string or during workover operations, a blowout prevention (BOP) assembly and well control system should be installed that is capable of controlling any well head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(7) Oil drilling, production, or workover facilities (offshore). (i) Definition: "An oil drilling, production or workover facility (offshore)" may include all drilling or workover equipment, wells, flowlines, gathering lines, platforms, and auxiliary nontransportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) Oil drainage collection equipment should be used to prevent and control small oil spillage around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and allied equipment. Drains on the facility should be controlled and directed toward a central collection sump or equivalent collection system sufficient to prevent discharges of oil into the navigable waters of the United States. Where drains and sumps are not practicable oil contained in collection equipment should be removed as often as necessary to prevent overflow.

(iii) For facilities employing a sump system, sump and drains should be adequately sized and a spare pump or equivalent method should be available to remove liquid from the sump and assure that oil does not escape. A regular scheduled preventive maintenance inspection and testing program should be employed to assure reliable operation of the liquid removal system and pump start-up device. Redundant automatic sump pumps and control devices may be required on some installations.

(iv) In areas where separators and treaters are equipped with dump valves whose predominant mode of failure is in the closed position and pollution risk is high, the facility should be specially equipped to prevent the escape of oil. This could be accomplished by extending the flare line to a diked area if the separator is near shore, equipping it with a high liquid level sensor that will automatically shut-in wells producing to the separator, parallel redundant dump valves, or other feasible alternatives to prevent oil discharges.

(v) Atmospheric storage or surge tanks should be equipped with high liquid level sensing devices or other acceptable alternatives to prevent oil discharges.

(vi) Pressure tanks should be equipped with high and low pressure sensing devices to activate an alarm and/or control the flow or other acceptable alternatives to prevent oil discharges.

(vii) Tanks should be equipped with suitable corrosion protection.

(viii) A written procedure for inspecting and testing pollution prevention equipment and systems should be prepared and maintained at the facility. Such procedures should be included as part of the SPCC Plan.

(ix) Testing and inspection of the pollution prevention equipment and systems at the facility should be conducted by the owner or operator on a scheduled periodic basis commensurate with the complexity, conditions and circumstances of the facility or other appropriate regulations.

(x) Surface and subsurface well shut-in valves and devices in use at the facility should be sufficiently described to determine method of activation or control, e.g., pressure differential, change fluid or flow conditions, combination pressure and flow, manual or remote control mechanisms. Detailed records of each well, while not necessarily part of the plan should be kept by the owner or operator.

(xi) Before drilling below any casing string, and during workover operations a blowout preventer (BOP) assembly and well control system should be installed that is capable of controlling any well head pressure that is expected to be countered while that BOP assembly is on the well. Casing and BOP installation should be in accordance with State regulatory agency requirements.

(xii) Extraordinary well control measures should be provided should emergency conditions, including fire, loss of control and other abnormal conditions occur. The degree of control system redundancy should vary with hazard exposure and probable consequences of failure. It is recommended that surface shut-in systems have redundant or "close" valving. Subsurface safety valves may not be needed in producing wells that will not flow but should be installed as required by applicable State regulations.

(xiii) In order that there will be no misunderstanding of joint and separate duties and obligations to perform work in a safe and pollution free manner, written instructions should be prepared by the owner or operator for contractors and subcontractors to follow whenever contract activities include servicing well or systems appurtenant to a well pressure vessel. Such instructions and procedures should be maintained at the offshore production facility. Under certain circumstances and conditions such contractor activities may require the presence at the facility of an authorized representative of the owner or operator who would intervene when necessary to prevent a spill event.

(xiv) All manifolds (headers) should be equipped with check valves on individual flowlines.

(xv) If the shut-in well pressure is greater than the working pressure of the flowline and manifold valves up to and including the header valves associated with that individual flowline, the flowline should be equipped with a high pressure sensing device and shut-in valve at the wellhead unless provided with a pressure relief system to prevent overpressuring.

(xvi) All pipelines appurtenant to the facility should be protected from corrosion. Methods used, such as protective coatings or cathodic protection, should be discussed.

(xvii) Sub-marine pipelines appurtenant to the facility should be adequately protected against environmental stresses and other activities such as fishing operations.

(xviii) Sub-marine pipelines appurtenant to the facility should be in good

operating condition at all times and inspected on a scheduled periodic basis for failures. Such inspections should be documented and maintained at the facility.

(8) Inspections and records. Inspections required by this part should be in accordance with written procedures developed for the facility by the owner or operator. These written procedures and a record of the inspections, signed by the appropriate supervisor or inspector, should be made part of the SPCC Plan and maintained for a period of three years.

(9) Security (excluding oil production facilities). (i) All plants handling, processing, and storing oil should be fully fenced, and entrance gates should be locked and/or guarded when the plant is not in production or is unattended.

(ii) The master flow and drain valves and any other valves that will permit direct outward flow of the tank's content to the surface should be securely locked in the closed position when in non-operating or non-standby status.

(iii) The starter control on all oil pumps should be locked in the "on" position or located at a site accessible only to authorized personnel when the pumps are in a non-operating or non-standby status.

(iv) The loading/unloading connections of oil pipelines should be securely capped or blank-flanged when not in service or standby service for an extended time. This security practice should also apply to pipelines that are emptied of liquid content either by draining or by inert gas pressure.

(v) Facility lighting should be commensurate with the type and location of the facility. Consideration should be given to: (A) Discovery of spills occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local police, etc.) and (B) prevention of spills occurring through acts of vandalism.

(10) Personnel, training and spill prevention procedures. (i) Owners or operators are responsible for properly instructing their personnel in the operation and maintenance of equipment to prevent the discharges of oil and applicable pollution control laws, rules and regulations.

(ii) Each applicable facility should have a designated person who is accountable for oil spill prevention and who reports to line management.

(iii) Owners or operators should schedule and conduct spill prevention briefings for their operating personnel at intervals frequent enough to assure adequate understanding of the SPCC Plan for that facility. Such briefings

should highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

APPENDIX

Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency.

SECTION II—DEFINITIONS

The Environmental Protection Agency and the Department of Transportation agree that for the purposes of Executive Order 11548, the term:

(1) "Non-transportation-related onshore and offshore facilities" means:

(A) Fixed onshore and offshore oil well drilling facilities including all equipment and appurtenances related thereto used in drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(B) Mobile onshore and offshore oil well drilling platforms, barges, trucks, or other mobile facilities including all equipment and appurtenances related thereto when such mobile facilities are fixed in position for the purpose of drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(C) Fixed onshore and offshore oil production structures, platforms, derricks, and rigs including all equipment and appurtenances related thereto, as well as completed wells and the wellhead separators, oil separators, and storage facilities used in the production of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(D) Mobile onshore and offshore oil production facilities including all equipment and appurtenances related thereto as well as completed wells and wellhead equipment, piping from wellheads to oil separators, oil separators, and storage facilities used in the production of oil when such mobile facilities are fixed in position for the purpose of oil production operations, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(E) Oil refining facilities including all equipment and appurtenances related thereto as well as in-plant processing units, storage units, piping, drainage systems and waste treatment units used in the refining of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(F) Oil storage facilities including all equipment and appurtenances related thereto as well as fixed bulk plant storage, terminal oil storage facilities, consumer storage, pumps and drainage systems used in the storage of oil, but excluding in-line or breakout storage tanks needed for the continuous operation of a pipeline system and any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(G) Industrial, commercial or public facilities which but excluding any terminal process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(H) Waste treatment facilities, in-plant pipelines, effluent discharge and storage tanks, but excluding terminal facilities located on vessels, internal storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels and associated systems for off-loading vessels.

(I) Loading racks, transfer hoses, loading arms and other equipment which are appurtenant to a nontransportation-related facility or terminal facility and which are used to transfer oil in bulk to or from highway vehicles or railroad cars.

(J) Highway vehicles and railroad cars which are used for the transport of oil exclusively within the confines of a nontransportation-related facility and which are not intended to transport oil in interstate or intrastate commerce.

(K) Pipeline systems which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce, but excluding pipeline systems used to transfer oil in bulk to or from a vessel.

(L) "Transportation-related onshore and offshore facilities" means:

(A) Onshore and offshore terminal facilities including transfer hoses, loading arms and other equipment and appurtenances used for the purpose of handling or transferring oil in bulk to or from a vessel as well as storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels, but excluding terminal waste treatment facilities and terminal oil storage facilities.

(B) Transfer hoses, loading arms and other equipment appurtenant to a nontransportation-related facility which is used to transfer oil in bulk to or from a vessel.

(C) Interstate and intrastate onshore and offshore pipeline systems including pumps and appurtenances related thereto as well as in-line or breakout storage tanks needed for the continuous operation of a pipeline system, and pipelines from onshore and offshore oil production facilities, but excluding onshore and offshore piping from wellheads to oil separators and pipelines which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce or to transfer oil in bulk to or from a vessel.

(D) Highway vehicles and railroad cars which are used for the transport of oil in interstate or intrastate commerce and the equipment and appurtenances related thereto, and equipment used for the fueling of locomotive units, as well as the right-of-way on which they operate. Excluded are highway vehicles and railroad cars and motive power used exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended for use in interstate or intrastate commerce.

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