

# Northern Sonoma County Air Pollution Control District

150 Matheson Street  
Healdsburg, CA 95448  
(707) 433-5911

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## TITLE V OPERATING PERMIT

Geysers Power Company, LLC  
Steam Gathering and Distribution, and Maintenance Support Facilities

### PLANT ADDRESS:

10350 Socrates Mine Road  
Middleton, CA 95461  
27 miles NE of Healdsburg, CA

### MAILING ADDRESS:

10350 Socrates Mine Road  
Middleton, CA

**Responsible Official – Mike Rogers**  
**Facility Contact- Kevin Petersen**

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Type of Facility: Geothermal Steamfield

Primary SIC: 4911

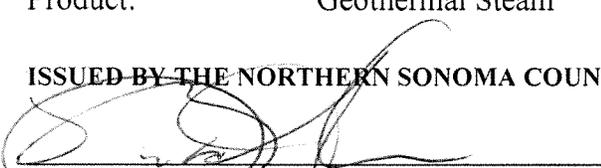
Product: Geothermal Steam

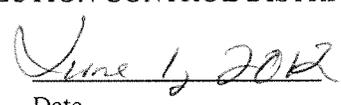
Issue Date: June 1, 2012

Effective Date: June 21, 2012

Expiration Date: June 20, 2017

**ISSUED BY THE NORTHERN SONOMA COUNTY AIR POLLUTION CONTROL DISTRICT**

  
Barbara A. Lee, Air Pollution Control Officer

  
Date

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## I. EQUIPMENT LIST

- A. PERMITTED SOURCE LIST** Each of the following sources has been issued a Permit to Operate pursuant to the requirements of NSCAPCD Regulation 1, Chapter II Permits. The equipment and capacities listed in Tables I.A and I.B are based on information provided by the permit holder. Routine maintenance, repair, or replacement with identical or equivalent equipment that does not result in an increase, or potential increase, in emissions of any air pollutant subject to District control does not require a permit modification. Replacement equipment that is within 5% of the listed capacity shall be considered equivalent for the purposes of this permit.

| <b>Geothermal Steam Transmission Lines</b> |  |             |              |                         |
|--|--|-------------|--------------|-------------------------|
| <b>UNIT 5 STEAM TRANSMISSION LINE</b>      |  |             |              |                         |
| <b>S-#</b>                                 | <b>Description</b>   | <b>Make</b> | <b>Model</b> | <b>Capacity</b>         |
| T-1  | Transmission Line connected to 20 or more wells with individual rock catchers/separators, shut-in valves, root valves, and throttling valves                 | Custom      |              | 1.1 million lb steam/hr |
| T-2  | Main Separators, Particulate and Condensate  | Custom      |              |                         |
| T-3  | Condensate Collection System with condensate knockout pots, wellhead vent systems, collection lines, in-line condensate pumps and rock muffler/pump stations | Custom      |              |                         |
| T-4  | Main Stacking Mufflers, Rock   | Custom      |              |                         |
| T-5  | Condensate Storage Tank(s) and associated injection wells  | Custom      |              |                         |
| T-6  | Pipeline Rupture Discs   | Custom      |              |                         |
| T-7  | Intertie system to adjoining Steam Transmission Lines  | Custom      |              |                         |

| <b>Geothermal Steam Transmission Lines</b> |  |             |              |                         |
|--|--|-------------|--------------|-------------------------|
| <b>UNIT 6 STEAM TRANSMISSION LINE</b>      |  |             |              |                         |
| <b>S-#</b>                                 | <b>Description</b>   | <b>Make</b> | <b>Model</b> | <b>Capacity</b>         |
| T-1  | Transmission Line connected to 20 or more wells with individual rock catchers/separators, shut-in valves, root valves, and throttling valves                 | Custom      |              | 1.1 million lb steam/hr |
| T-2  | Main Separators, Particulate and Condensate  | Custom      |              |                         |
| T-3  | Condensate Collection System with condensate knockout pots, wellhead vent systems, collection lines, in-line condensate pumps and rock muffler/pump stations | Custom      |              |                         |
| T-4  | Main Stacking Mufflers, Rock   | Custom      |              |                         |
| T-5  | Condensate Storage Tank(s) and associated injection wells  | Custom      |              |                         |
| T-6  | Pipeline Rupture Discs   | Custom      |              |                         |
| T-7  | Intertie system to adjoining Steam Transmission Lines  | Custom      |              |                         |

| <b>Geothermal Steam Transmission Lines</b> |  |             |              |                         |
|--|--|-------------|--------------|-------------------------|
| <b>UNIT 7 STEAM TRANSMISSION LINE</b>      |  |             |              |                         |
| <b>S-#</b>                                 | <b>Description</b>   | <b>Make</b> | <b>Model</b> | <b>Capacity</b>         |
| T-1  | Transmission Line connected to 20 or more wells with individual rock catchers/separators, shut-in valves, root valves, and throttling valves                 | Custom      |              | 1.1 million lb steam/hr |
| T-2  | Main Separators, Particulate and Condensate  | Custom      |              |                         |
| T-3  | Condensate Collection System with condensate knockout pots, wellhead vent systems, collection lines, in-line condensate pumps and rock muffler/pump stations | Custom      |              |                         |
| T-4  | Main Stacking Mufflers, Rock   | Custom      |              |                         |
| T-5  | Condensate Storage Tank(s) and associated injection wells  | Custom      |              |                         |
| T-6  | Pipeline Rupture Discs   | Custom      |              |                         |
| T-7  | Intertie system to adjoining Steam Transmission Lines  | Custom      |              |                         |

| <b>Geothermal Steam Transmission Lines</b> |  |             |              |                         |
|--|--|-------------|--------------|-------------------------|
| <b>UNIT 8 STEAM TRANSMISSION LINE</b>      |  |             |              |                         |
| <b>S-#</b>                                 | <b>Description</b>   | <b>Make</b> | <b>Model</b> | <b>Capacity</b>         |
| T-1  | Transmission Line connected to 20 or more wells with individual rock catchers/separators, shut-in valves, root valves, and throttling valves                 | Custom      |              | 1.1 million lb steam/hr |
| T-2  | Main Separators, Particulate and Condensate  | Custom      |              |                         |
| T-3  | Condensate Collection System with condensate knockout pots, wellhead vent systems, collection lines, in-line condensate pumps and rock muffler/pump stations | Custom      |              |                         |
| T-4  | Main Stacking Mufflers, Rock   | Custom      |              |                         |
| T-5  | Condensate Storage Tank(s) and associated injection wells  | Custom      |              |                         |
| T-6  | Pipeline Rupture Discs   | Custom      |              |                         |
| T-7  | Intertie system to adjoining Steam Transmission Lines  | Custom      |              |                         |

| <b>Geothermal Steam Transmission Lines</b> |  |             |              |                         |
|--|--|-------------|--------------|-------------------------|
| <b>UNIT 9 STEAM TRANSMISSION LINE</b>      |  |             |              |                         |
| <b>S-#</b>                                 | <b>Description</b>   | <b>Make</b> | <b>Model</b> | <b>Capacity</b>         |
| T-1  | Transmission Line connected to 20 or more wells with individual rock catchers/separators, shut-in valves, root valves, and throttling valves                 | Custom      |              | 1.1 million lb steam/hr |
| T-2  | Main Separators, Particulate and Condensate  | Custom      |              |                         |
| T-3  | Condensate Collection System with condensate knockout pots, wellhead vent systems, collection lines, in-line condensate pumps and rock muffler/pump stations | Custom      |              |                         |
| T-4  | Main Stacking Mufflers, Rock   | Custom      |              |                         |
| T-5  | Condensate Storage Tank(s) and associated injection wells  | Custom      |              |                         |
| T-6  | Pipeline Rupture Discs   | Custom      |              |                         |
| T-7  | Intertie system to adjoining Steam Transmission Lines  | Custom      |              |                         |

| <b>Geothermal Steam Transmission Lines</b> |  |             |              |                         |
|--|--|-------------|--------------|-------------------------|
| <b>UNIT 10 STEAM TRANSMISSION LINE</b>     |  |             |              |                         |
| <b>S-#</b>                                 | <b>Description</b>   | <b>Make</b> | <b>Model</b> | <b>Capacity</b>         |
| T-1  | Transmission Line connected to 20 or more wells with individual rock catchers/separators, shut-in valves, root valves, and throttling valves                 | Custom      |              | 1.1 million lb steam/hr |
| T-2  | Main Separators, Particulate and Condensate  | Custom      |              |                         |
| T-3  | Condensate Collection System with condensate knockout pots, wellhead vent systems, collection lines, in-line condensate pumps and rock muffler/pump stations | Custom      |              |                         |
| T-4  | Main Stacking Mufflers, Rock   | Custom      |              |                         |
| T-5  | Condensate Storage Tank(s) and associated injection wells  | Custom      |              |                         |
| T-6  | Pipeline Rupture Discs   | Custom      |              |                         |
| T-7  | Intertie system to adjoining Steam Transmission Lines  | Custom      |              |                         |

| <b>Geothermal Steam Transmission Lines</b> |  |             |              |                         |
|--|--|-------------|--------------|-------------------------|
| <b>UNIT 11 STEAM TRANSMISSION LINE</b>     |  |             |              |                         |
| <b>S-#</b>                                 | <b>Description</b>   | <b>Make</b> | <b>Model</b> | <b>Capacity</b>         |
| T-1  | Transmission Line connected to 30 or more wells with individual rock catchers/separators, shut-in valves, root valves, and throttling valves                 | Custom      |              | 2.2 million lb steam/hr |
| T-2  | Main Separators, Particulate and Condensate  | Custom      |              |                         |
| T-3  | Condensate Collection System with condensate knockout pots, wellhead vent systems, collection lines, in-line condensate pumps and rock muffler/pump stations | Custom      |              |                         |
| T-4  | Main Stacking Mufflers, Rock   | Custom      |              |                         |
| T-5  | Condensate Storage Tank(s) and associated injection wells  | Custom      |              |                         |
| T-6  | Pipeline Rupture Discs   | Custom      |              |                         |
| T-7  | Intertie system to adjoining Steam Transmission Lines  | Custom      |              |                         |

| <b>Geothermal Steam Transmission Lines</b> |  |             |              |                         |
|--|--|-------------|--------------|-------------------------|
| <b>UNIT 12 STEAM TRANSMISSION LINE</b>     |  |             |              |                         |
| <b>S-#</b>                                 | <b>Description</b>   | <b>Make</b> | <b>Model</b> | <b>Capacity</b>         |
| T-1  | Transmission Line connected to 20 or more wells with individual rock catchers/separators, shut-in valves, root valves, and throttling valves                 | Custom      |              | 2.2 million lb steam/hr |
| T-2  | Main Separators, Particulate and Condensate  | Custom      |              |                         |
| T-3  | Condensate Collection System with condensate knockout pots, wellhead vent systems, collection lines, in-line condensate pumps and rock muffler/pump stations | Custom      |              |                         |
| T-4  | Main Stacking Mufflers, Rock   | Custom      |              |                         |
| T-5  | Condensate Storage Tank(s) and associated injection wells  | Custom      |              |                         |
| T-6  | Pipeline Rupture Discs   | Custom      |              |                         |
| T-7  | Intertie system to adjoining Steam Transmission Lines  | Custom      |              |                         |

| <b>Geothermal Steam Transmission Lines</b> |  |             |              |                          |
|--|--|-------------|--------------|--------------------------|
| <b>UNIT 14 STEAM TRANSMISSION LINE</b>     |  |             |              |                          |
| <b>S-#</b>                                 | <b>Description</b>   | <b>Make</b> | <b>Model</b> | <b>Capacity</b>          |
| T-1  | Transmission Line connected to 20 or more wells with individual rock catchers/separators, shut-in valves, root valves, and throttling valves                 | Custom      |              | 2.28 million lb steam/hr |
| T-2  | Main Separators, Particulate and Condensate  | Custom      |              |                          |
| T-3  | Condensate Collection System with condensate knockout pots, wellhead vent systems, collection lines, in-line condensate pumps and rock muffler/pump stations | Custom      |              |                          |
| T-4  | Main Stacking Mufflers, Rock   | Custom      |              |                          |
| T-5  | Condensate Storage Tank(s) and associated injection wells  | Custom      |              |                          |
| T-6  | Pipeline Rupture Discs   | Custom      |              |                          |
| T-7  | Intertie system to adjoining Steam Transmission Lines  | Custom      |              |                          |

| <b>Geothermal Steam Transmission Lines</b> |  |             |              |                          |
|--|--|-------------|--------------|--------------------------|
| <b>UNIT 17 STEAM TRANSMISSION LINE</b>     |  |             |              |                          |
| <b>S-#</b>                                 | <b>Description</b>   | <b>Make</b> | <b>Model</b> | <b>Capacity</b>          |
| T-1  | Transmission Line connected to 20 or more wells with individual rock catchers/separators, shut-in valves, root valves, and throttling valves                 | Custom      |              | 2.38 million lb steam/hr |
| T-2  | Main Separators, Particulate and Condensate  | Custom      |              |                          |
| T-3  | Condensate Collection System with condensate knockout pots, wellhead vent systems, collection lines, in-line condensate pumps and rock muffler/pump stations | Custom      |              |                          |
| T-4  | Main Stacking Mufflers, Rock   | Custom      |              |                          |
| T-5  | Condensate Storage Tank(s) and associated injection wells  | Custom      |              |                          |
| T-6  | Pipeline Rupture Discs   | Custom      |              |                          |
| T-7  | Intertie system to adjoining Steam Transmission Lines  | Custom      |              |                          |

| <b>Geothermal Steam Transmission Lines</b> |  |             |              |                          |
|--|--|-------------|--------------|--------------------------|
| <b>UNIT 18 STEAM TRANSMISSION LINE</b>     |  |             |              |                          |
| <b>S-#</b>                                 | <b>Description</b>   | <b>Make</b> | <b>Model</b> | <b>Capacity</b>          |
| T-1  | Transmission Line connected to 20 or more wells with individual rock catchers/separators, shut-in valves, root valves, and throttling valves                 | Custom      |              | 2.38 million lb steam/hr |
| T-2  | Main Separators, Particulate and Condensate  | Custom      |              |                          |
| T-3  | Condensate Collection System with condensate knockout pots, wellhead vent systems, collection lines, in-line condensate pumps and rock muffler/pump stations | Custom      |              |                          |
| T-4  | Main Stacking Mufflers, Rock   | Custom      |              |                          |
| T-5  | Condensate Storage Tank(s) and associated injection wells  | Custom      |              |                          |
| T-6  | Pipeline Rupture Discs   | Custom      |              |                          |
| T-7  | Intertie system to adjoining Steam Transmission Lines  | Custom      |              |                          |

| <b>Geothermal Steam Transmission Lines</b> |  |             |              |                          |
|--|--|-------------|--------------|--------------------------|
| <b>UNIT 20 STEAM TRANSMISSION LINE</b>     |  |             |              |                          |
| <b>S-#</b>                                 | <b>Description</b>   | <b>Make</b> | <b>Model</b> | <b>Capacity</b>          |
| T-1  | Transmission Line connected to 20 or more wells with individual rock catchers/separators, shut-in valves, root valves, and throttling valves                 | Custom      |              | 2.38 million lb steam/hr |
| T-2  | Main Separators, Particulate and Condensate  | Custom      |              |                          |
| T-3  | Condensate Collection System with condensate knockout pots, wellhead vent systems, collection lines, in-line condensate pumps and rock muffler/pump stations | Custom      |              |                          |
| T-4  | Main Stacking Mufflers, Rock   | Custom      |              |                          |
| T-5  | Condensate Storage Tank(s) and associated injection wells  | Custom      |              |                          |
| T-6  | Pipeline Rupture Discs   | Custom      |              |                          |
| T-7  | Intertie system to adjoining Steam Transmission Lines  | Custom      |              |                          |

| <b>Geothermal Steam Transmission Lines</b>        |  |             |              |                          |
|---|--|-------------|--------------|--------------------------|
| <b>SONOMA POWER PLANT STEAM TRANSMISSION LINE</b> |  |             |              |                          |
| <b>S-#</b>  | <b>Description</b>   | <b>Make</b> | <b>Model</b> | <b>Capacity</b>          |
| T-1   | Transmission Line connected to 60 or more wells with individual rock catchers/separators, shut-in valves, root valves, and throttling valves                 | Custom      |              | 1.44 million lb steam/hr |
| T-2   | Main Separators, Particulate and Condensate  | Custom      |              |                          |
| T-3   | Condensate Collection System with condensate knockout pots, wellhead vent systems, collection lines, in-line condensate pumps and rock muffler/pump stations | Custom      |              |                          |
| T-4   | Main Stacking Mufflers, Rock   | Custom      |              |                          |
| T-5   | Condensate Storage Tank(s) and associated injection wells  | Custom      |              |                          |
| T-6   | Pipeline Rupture Discs   | Custom      |              |                          |
| T-7   | Intertie system to adjoining Steam Transmission Lines  | Custom      |              |                          |

## Individual Steam Wells

### UNIT 5 & 6 AREA STEAM WELLS

| S-#  | Description | Make   | Model | Capacity |
|------|-------------|--------|-------|----------|
| W-1  | CURRY 1     | Custom |       |          |
| W-2  | CURRY 3     | Custom |       |          |
| W-3  | CURRY 85-15 | Custom |       |          |
| W-4  | GDC 12      | Custom |       |          |
| W-5  | GDC 26      | Custom |       |          |
| W-6  | GDC 32A-13  | Custom |       |          |
| W-7  | GDC 53-13   | Custom |       |          |
| W-8  | GDC 53A-13  | Custom |       |          |
| W-9  | GDC 66-12   | Custom |       |          |
| W-10 | GDC 77-12   | Custom |       |          |
| W-11 | GDC 85-12   | Custom |       |          |
| W-12 | GDC 86-12   | Custom |       |          |
| W-13 | GDC 88-12   | Custom |       |          |
| W-14 | GGC 02      | Custom |       |          |
| W-15 | GGC 04      | Custom |       |          |
| W-16 | GGC 05      | Custom |       |          |
| W-17 | GGC 06      | Custom |       |          |
| W-18 | GGC 08      | Custom |       |          |
| W-19 | HJ 01       | Custom |       |          |
| W-20 | HJ 04       | Custom |       |          |
| W-21 | HJ 05       | Custom |       |          |
| W-22 | HJ 10       | Custom |       |          |
| W-23 | HJ 11       | Custom |       |          |
| W-24 | M1          | Custom |       |          |
| W-25 | OF 52-11    | Custom |       |          |
| W-26 | OF 52B-11   | Custom |       |          |
| W-27 | SB 07       | Custom |       |          |
| W-28 | SB 08       | Custom |       |          |
| W-29 | SB 09       | Custom |       |          |
| W-30 | SB 10       | Custom |       |          |
| W-31 | SB 11       | Custom |       |          |
| W-32 | SB 14       | Custom |       |          |
| W-33 | SB 15       | Custom |       |          |
| W-34 | SB 17       | Custom |       |          |
| W-35 | SB 19       | Custom |       |          |
| W-36 | SB 20       | Custom |       |          |
| W-37 | SB 21       | Custom |       |          |
| W-38 | SB 22       | Custom |       |          |
| W-39 | SB 23       | Custom |       |          |

|      |             |        |  |  |
|------|-------------|--------|--|--|
| W-40 | SB 24       | Custom |  |  |
| W-41 | SB 25       | Custom |  |  |
| W-42 | SB 26       | Custom |  |  |
| W-43 | SB 27       | Custom |  |  |
| W-44 | SB 28       | Custom |  |  |
| W-45 | SB 29       | Custom |  |  |
| W-46 | SB 30       | Custom |  |  |
| W-47 | SB 31       | Custom |  |  |
| W-48 | TH 07       | Custom |  |  |
| W-49 | TH 10       | Custom |  |  |
| W-50 | TH 11       | Custom |  |  |
| W-51 | TH 15       | Custom |  |  |
| W-52 | GDC-31      | Custom |  |  |
| W-53 | HJ 12       | Custom |  |  |
| W-54 | Curry 85-13 | Custom |  |  |

## Individual Steam Wells

### UNIT 7 & 8 AREA STEAM WELLS

| S-#  | Description | Make   | Model | Capacity              |
|------|-------------|--------|-------|-----------------------|
| W-1  | ABRIL 2     | Custom |       |                       |
| W-2  | DX 02       | Custom |       |                       |
| W-3  | DX 03       | Custom |       |                       |
| W-4  | DX 04       | Custom |       |                       |
| W-5  | DX 05       | Custom |       |                       |
| W-6  | DX 10       | Custom |       |                       |
| W-7  | DX 21       | Custom |       |                       |
| W-8  | DX 29       | Custom |       |                       |
| W-9  | DX 40       | Custom |       |                       |
| W-10 | DX 41       | Custom |       |                       |
| W-11 | DX 42       | Custom |       |                       |
| W-12 | DX 44       | Custom |       |                       |
| W-13 | HBS1        | Custom |       |                       |
| W-14 | OF 21-12    | Custom |       |                       |
| W-15 | OF 21A-12   | Custom |       |                       |
| W-16 | OF 21B-12   | Custom |       |                       |
| W-17 | OF 21C-12   | Custom |       |                       |
| W-18 | OF 21D-12   | Custom |       |                       |
|      |             |        |       | Plugged and Abandoned |
| W-20 | OF 32-12    | Custom |       |                       |
| W-21 | OF 32A-12   | Custom |       |                       |
| W-22 | OF 32B-12   | Custom |       |                       |
| W-23 | OF 32C-12   | Custom |       |                       |
| W-24 | OF 32D-12   | Custom |       |                       |
| W-25 | OF 45-12    | Custom |       |                       |
| W-26 | OF 45A-12   | Custom |       |                       |
| W-27 | OF 45B-12   | Custom |       |                       |
| W-28 | OF 48-2     | Custom |       |                       |
| W-29 | OF48A-2     | Custom |       |                       |
| W-30 | OF 51-11    | Custom |       |                       |
| W-31 | OF 51A-11   | Custom |       |                       |
| W-32 | OF 73-12    | Custom |       |                       |
| W-33 | OF 73A-12   | Custom |       |                       |
| W-34 | OF 73B-12   | Custom |       |                       |
| W-35 | OF 87A-2    | Custom |       |                       |
| W-36 | OS 01       | Custom |       |                       |
| W-37 | OS 02       | Custom |       |                       |
| W-38 | OS 03       | Custom |       |                       |
| W-39 | OS 04       | Custom |       |                       |

|      |       |        |  |  |
|------|-------|--------|--|--|
| W-40 | OS 05 | Custom |  |  |
| W-41 | OS 06 | Custom |  |  |
| W-42 | OS 07 | Custom |  |  |
| W-43 | OS 08 | Custom |  |  |
| W-44 | OS 11 | Custom |  |  |
| W-45 | OS 21 | Custom |  |  |
| W-46 | OS 22 | Custom |  |  |
| W-47 | OS 23 | Custom |  |  |
| W-48 | OS 24 | Custom |  |  |

## Individual Steam Wells

### UNIT 9 & 10 AREA STEAM WELLS

| S-#  | Description | Make   | Model | Capacity |
|------|-------------|--------|-------|----------|
| W-1  | ANG 2       | Custom |       |          |
| W-2  | ANG 3       | Custom |       |          |
| W-3  | ANG 4       | Custom |       |          |
| W-4  | GDCF 123-19 | Custom |       |          |
| W-5  | LF 01       | Custom |       |          |
| W-6  | LF 02       | Custom |       |          |
| W-7  | LF 03       | Custom |       |          |
| W-8  | LF 04       | Custom |       |          |
| W-9  | LF 05       | Custom |       |          |
| W-10 | LF 06       | Custom |       |          |
| W-11 | LF 08       | Custom |       |          |
| W-12 | LF 09       | Custom |       |          |
| W-13 | LF 10       | Custom |       |          |
| W-14 | LF 12       | Custom |       |          |
| W-15 | LF 13       | Custom |       |          |
| W-16 | LF 14       | Custom |       |          |
| W-17 | LF 15       | Custom |       |          |
| W-18 | LF 16       | Custom |       |          |
| W-19 | LF 17       | Custom |       |          |
| W-20 | LF 18       | Custom |       |          |
| W-21 | LF 20       | Custom |       |          |
| W-22 | LF 23       | Custom |       |          |
| W-23 | LF 24       | Custom |       |          |
| W-24 | LF 30       | Custom |       |          |
| W-25 | LF 31       | Custom |       |          |
| W-26 | LF 35       | Custom |       |          |
| W-27 | LF 37       | Custom |       |          |
| W-28 | LF 38       | Custom |       |          |
| W-29 | LF 39       | Custom |       |          |
| W-30 | LF 40       | Custom |       |          |
| W-31 | LF 41       | Custom |       |          |
| W-32 | LF 42       | Custom |       |          |
| W-33 | LF 48       | Custom |       |          |
| W-34 | LF 49       | Custom |       |          |
| W-35 | LF-36       | Custom |       |          |

## Individual Steam Wells

### UNIT 11 AREA STEAM WELLS

| S-#  | Description | Make   | Model | Capacity |
|------|-------------|--------|-------|----------|
| W-1  | DX 11       | Custom |       |          |
| W-2  | DX 13       | Custom |       |          |
| W-3  | DX 14       | Custom |       |          |
| W-4  | DX 15       | Custom |       |          |
| W-5  | DX 19       | Custom |       |          |
| W-6  | DX 31       | Custom |       |          |
| W-7  | DX 38       | Custom |       |          |
| W-8  | DX 39       | Custom |       |          |
| W-9  | DX 56       | Custom |       |          |
| W-10 | DX 61       | Custom |       |          |
| W-11 | DX 62       | Custom |       |          |
| W-12 | DX 80       | Custom |       |          |
| W-13 | DX 81       | Custom |       |          |
| W-14 | DX 82       | Custom |       |          |
| W-15 | OS 12       | Custom |       |          |
| W-16 | OS 13       | Custom |       |          |
| W-17 | OS 14       | Custom |       |          |
| W-18 | OS 15       | Custom |       |          |
| W-19 | OS 16       | Custom |       |          |
| W-20 | OS 17       | Custom |       |          |
| W-21 | OS 19       | Custom |       |          |
| W-22 | OS 25       | Custom |       |          |
| W-23 | OS 27       | Custom |       |          |
| W-24 | OS 29       | Custom |       |          |
| W-25 | OS-18       | Custom |       |          |
| W-26 | PS-54       | Custom |       |          |
| W-27 | P-9         | Custom |       |          |
|      |             |        |       |          |
|      |             |        |       |          |

## Individual Steam Wells

### UNIT 12 AREA STEAM WELLS

| S-#  | Description | Make   | Model | Capacity |
|------|-------------|--------|-------|----------|
| W-1  | CMHC 02     | Custom |       |          |
| W-2  | CMHC 04     | Custom |       |          |
| W-3  | CMHC 05     | Custom |       |          |
| W-4  | CMHC 07     | Custom |       |          |
| W-5  | CHMC 65-18  | Custom |       |          |
| W-6  | DX 12       | Custom |       |          |
| W-7  | DX 24       | Custom |       |          |
| W-8  | DX 25       | Custom |       |          |
| W-9  | DX 26       | Custom |       |          |
| W-10 | DX 27       | Custom |       |          |
| W-11 | DX 33       | Custom |       |          |
| W-12 | GDC 36-18   | Custom |       |          |
| W-13 | GDCF 94-19  | Custom |       |          |
| W-14 | GDCF 94A-19 | Custom |       |          |
| W-15 | GDCF 94B-19 | Custom |       |          |
| W-16 | LF 25       | Custom |       |          |
| W-17 | LF 26       | Custom |       |          |
| W-18 | LF 27       | Custom |       |          |
| W-19 | LF 28       | Custom |       |          |
| W-20 | LF 29       | Custom |       |          |
| W-21 | LF 34       | Custom |       |          |
| W-22 | OCF 56-18   | Custom |       |          |
| W-23 | OCF 96-18   | Custom |       |          |
| W-24 | GMCH-06     | Custom |       |          |

## Individual Steam Wells

### UNIT 13 AREA (SONOMA COUNTY) STEAM WELLS

| <b>S-#</b> | <b>Description</b> | <b>Make</b> | <b>Model</b> | <b>Capacity</b> |
|------------|--------------------|-------------|--------------|-----------------|
| W-1        | CA-956 A2          | Custom      |              |                 |
| W-2        | CA-956 A6          | Custom      |              |                 |
| W-3        | CA-958 2           | Custom      |              |                 |
| W-4        | CA-958 3           | Custom      |              |                 |
| W-5        | CA 958 3A          | Custom      |              |                 |
| W-6        | CA 958 8           | Custom      |              |                 |
| W-7        | CA 958 12          | Custom      |              |                 |
| W-8        | CA 958 14          | Custom      |              |                 |

## Individual Steam Wells

### UNIT 14 AREA STEAM WELLS

| S-#  | Description  | Make   | Model | Capacity |
|------|--------------|--------|-------|----------|
| W-1  | GDC 01       | Custom |       |          |
| W-2  | GDC 02       | Custom |       |          |
| W-3  | GDC 05       | Custom |       |          |
| W-4  | GDC 06       | Custom |       |          |
| W-5  | GDC 07       | Custom |       |          |
| W-6  | GDC 08       | Custom |       |          |
| W-7  | GDC 09       | Custom |       |          |
| W-8  | GDC 10       | Custom |       |          |
| W-9  | GDC 11       | Custom |       |          |
| W-10 | GDC 18       | Custom |       |          |
| W-11 | GDC 19       | Custom |       |          |
| W-12 | GDC 20       | Custom |       |          |
| W-13 | GDC 2029     | Custom |       |          |
| W-14 | GDC 24       | Custom |       |          |
| W-15 | GDC 25       | Custom |       |          |
| W-16 | GDC 30       | Custom |       |          |
| W-17 | GDC 7230     | Custom |       |          |
| W-18 | GDCF 117-19  | Custom |       |          |
| W-19 | GDCF 117A-19 | Custom |       |          |

## Individual Steam Wells

### UNIT 17 AREA STEAM WELLS

| S-#  | Description | Make   | Model | Capacity |
|------|-------------|--------|-------|----------|
| W-1  | DX 22A      | Custom |       |          |
| W-2  | DX 23       | Custom |       |          |
| W-3  | DX 28       | Custom |       |          |
| W-4  | DX 45       | Custom |       |          |
| W-5  | DX 46       | Custom |       |          |
| W-6  | DX 47       | Custom |       |          |
| W-7  | DX 48       | Custom |       |          |
| W-8  | DX 50       | Custom |       |          |
| W-9  | DX 58       | Custom |       |          |
| W-10 | DX 59       | Custom |       |          |
| W-11 | DX 60       | Custom |       |          |
| W-12 | DX 63       | Custom |       |          |
| W-13 | DX 64       | Custom |       |          |
| W-14 | DX 67       | Custom |       |          |
| W-15 | DX 68       | Custom |       |          |
| W-16 | DX 72       | Custom |       |          |
| W-17 | DX 73       | Custom |       |          |
| W-18 | DX 74       | Custom |       |          |
| W-19 | DX 75       | Custom |       |          |
| W-20 | DX 76       | Custom |       |          |
| W-21 | DX 77       | Custom |       |          |
| W-22 | DX 85       | Custom |       |          |
| W-23 | GDH 02      | Custom |       |          |
| W-24 | DX-69       | Custom |       |          |

## Individual Steam Wells

### UNIT 18 AREA STEAM WELLS

| S-#  | Description | Make   | Model | Capacity |
|------|-------------|--------|-------|----------|
| W-1  | BEF 53-33   | Custom |       |          |
| W-2  | D&V 01      | Custom |       |          |
| W-3  | D&V 02      | Custom |       |          |
| W-4  | D&V 03      | Custom |       |          |
| W-5  | D&V 04      | Custom |       |          |
| W-6  | D&V 05      | Custom |       |          |
| W-7  | D&V 06      | Custom |       |          |
| W-8  | D&V 11      | Custom |       |          |
| W-9  | D&V 12      | Custom |       |          |
| W-10 | D&V 13      | Custom |       |          |
| W-11 | D&V 15      | Custom |       |          |
| W-12 | D&V 16      | Custom |       |          |
| W-13 | D&V 23      | Custom |       |          |
| W-14 | D&V 24      | Custom |       |          |
| W-15 | D&V 25      | Custom |       |          |
| W-16 | D&V 73-33   | Custom |       |          |
| W-17 | GDCF 14-27  | Custom |       |          |
| W-18 | GDCF 14A-27 | Custom |       |          |
| W-19 | MOD 01      | Custom |       |          |
| W-20 | MOD 02      | Custom |       |          |
| W-21 | MOD 03      | Custom |       |          |
| W-22 | MOD 04      | Custom |       |          |
| W-23 | TOCH 01     | Custom |       |          |

## Individual Steam Wells

### UNIT 20 AREA STEAM WELLS

| S-#  | Description | Make   | Model | Capacity |
|------|-------------|--------|-------|----------|
| W-1  | BIEGEL 1    | Custom |       |          |
| W-2  | BIEGEL 2    | Custom |       |          |
| W-3  | BF 42-33    | Custom |       |          |
| W-4  | BF 42B-33   | Custom |       |          |
| W-5  | BF 85-28    | Custom |       |          |
| W-6  | BF 85A-28   | Custom |       |          |
| W-7  | GDC 17-28   | Custom |       |          |
| W-8  | GDC 21      | Custom |       |          |
| W-9  | GDC 23      | Custom |       |          |
| W-10 | GDC 29      | Custom |       |          |
| W-11 | GDCF 15-28  | Custom |       |          |
| W-12 | GDCF 15A-28 | Custom |       |          |
| W-13 | GDCF 15B-28 | Custom |       |          |
| W-14 | GDCF 15C-28 | Custom |       |          |
| W-15 | GDCF 15D-28 | Custom |       |          |
| W-16 | GDCF 36-28  | Custom |       |          |
| W-17 | GDCF 44-28  | Custom |       |          |
| W-18 | GDCF 44A-28 | Custom |       |          |
| W-19 | GDCF 44B-28 | Custom |       |          |
| W-20 | GDCF 63A-29 | Custom |       |          |
| W-21 | GDCF 63B-29 | Custom |       |          |
| W-22 | GDCF 65-29  | Custom |       |          |
| W-22 | GDCF 36A-28 | Custom |       |          |

| <b>Individual Steam Wells</b>              |                    |             |              |                 |
|--|--------------------|-------------|--------------|-----------------|
| <b>SONOMA POWER PLANT AREA STEAM WELLS</b> |                    |             |              |                 |
| <b>S-#</b>                                 | <b>Description</b> | <b>Make</b> | <b>Model</b> | <b>Capacity</b> |
| W-1  | CA 1862-06         | Custom      |              |                 |
| W-2  | CA 1862-07         | Custom      |              |                 |
| W-3  | CA 1862-08         | Custom      |              |                 |
| W-4  | CA 1862-09         | Custom      |              |                 |
| W-5  | CA 1862-10         | Custom      |              |                 |
| W-6  | CA 1862-11A        | Custom      |              |                 |
| W-7  | CA 1862-12         | Custom      |              |                 |
| W-8  | CA 1862-13         | Custom      |              |                 |
| W-9  | CA 1862-14         | Custom      |              |                 |
| W-10                                       | CA 1862-15         | Custom      |              |                 |
| W-11                                       | CA 1862-16         | Custom      |              |                 |
| W-12                                       | CA 1862-18         | Custom      |              |                 |
| W-13                                       | CA 1862-19         | Custom      |              |                 |
| W-14                                       | CA 1982-20         | Custom      |              |                 |
| W-15                                       | CA 1862-21         | Custom      |              |                 |
| W-16                                       | CA 1862-22         | Custom      |              |                 |
| W-17                                       | CA 1862-23         | Custom      |              |                 |
| W-18                                       | CA 1862-24         | Custom      |              |                 |
| W-19                                       | CA 1862-26         | Custom      |              |                 |

| <b>Individual Steam Wells</b> |                    |             |              |                 |
|-------------------------------|--------------------|-------------|--------------|-----------------|
| <b>THERMAL 4 STEAM WELL</b>   |                    |             |              |                 |
| <b>S-#</b>                    | <b>Description</b> | <b>Make</b> | <b>Model</b> | <b>Capacity</b> |
| W-1                           | Thermal 4          | Custom      |              |                 |

**B. WEST ADMINISTRATION CENTER**

| <b>West Administration Center</b> |  |                               |
|-----------------------------------|--|-------------------------------|
| <b>S-#</b>                        | <b>Description</b>   | <b>Nominal Capacity</b>       |
| 1                                 | Sand Blasting Booth  | 22'W x 40'L x 20' H           |
| 2                                 | Baghouse, Pulsed Jet Cleaning Type   | 4506 ft <sup>2</sup> Bag Area |
| 3                                 | Final Filters Consisting of:   |                               |
|                                   | A Pre-Filter   |                               |
|                                   | B Final Filter   |                               |
| 4                                 | Exhaust System with a Blower venting one sand blasting booth, sand hopper and air tight dumpster | 150 HP                        |
|                                   | Paint Booth  |                               |
|                                   | Emergency Diesel Engine  | 51 Hp                         |
|                                   | Gasoline Fuel Tank   | 5,000 gallon                  |
|                                   | Unit 12 Inj Pond Diesel Engine   | 230 Hp                        |

**C. GEYSERS ADMINISTRATION CENTER**

| <b>Geysers Administration Center</b> |                         |                         |
|--------------------------------------|-------------------------|-------------------------|
| <b>S-#</b>                           | <b>Description</b>      | <b>Nominal Capacity</b> |
|                                      | Emergency Diesel Engine | 340 Hp                  |
|                                      | Gasoline Fuel Tank      | 5,000 gallon            |

**D. GEYSERS WEST FIELD OFFICE**

| <b>Geysers West Field Office</b> |                         |                         |
|----------------------------------|-------------------------|-------------------------|
| <b>S-#</b>                       | <b>Description</b>      | <b>Nominal Capacity</b> |
|                                  | Emergency Diesel Engine | 195 Hp                  |

**E. SATELITE FUEL TANKS Satellite Fuel Tanks**

| <b>S-#</b> | <b>Description</b>         | <b>Nominal Capacity</b> |
|------------|----------------------------|-------------------------|
|            | Unit 17 Gasoline Fuel Tank | 1,000 gallon            |
|            | SPP Gasoline Fuel Tank     | 4,500 gallon            |

## II. PERMIT CONDITIONS

Permit conditions are designated federally (F), state (S), and/or locally (L) enforceable. Where a condition references a specific District regulation, the text of the referenced regulation can be found in Appendix A.

### A. STEAM TRANSMISSION LINE PERMIT CONDITIONS (Units 5,6,7,8,9,10,11,12,14,17,18 and 20)

#### I. Emission Limits

##### *Emission Limits for H2S*

1. Stacking of steam to the atmosphere shall comply with the requirements of Rule 455 (b) Table III. *ref. Representative PTO 82-12 Cond. 15.* S L

##### *Emission Limits for Particulate Matter*

2. Particulate emissions from the transmission line shall not exceed the limitations of Rule 420 (d) or Rule 420 Table I, whichever is the most restrictive. *ref. Representative PTO 82-12 Cond. 17.* F S L

#### II. Operational Limits and Requirements

1. Rock muffler/pump stations associated with condensate collection systems will be operated and maintained in such a manner so as to comply with the emission limitations of Rule 455. In the event aspirators are utilized to dilute fugitive H2S emissions from the condensate pump stations, the District must be notified in writing at least 15 days prior to installation of such aspirators with an estimate of emissions. Within 5 working days of installation such aspirators will be tested and, if necessary, adjusted for compliance with Rule 455. The results shall be forwarded to the District within 21 days of installation. *ref. Representative PTO 82-12 Cond. 12.* S L
2. Valves, flanges, drip legs, threaded fittings and seals on pipelines and condensate collection systems shall be maintained to prevent or reduce the emission of steam, non-condensable gases and condensate to the atmosphere. S L
- The permit holder shall check the transmission lines for fugitive leaks on an ongoing basis as described in Appendix II. *ref. Representative PTO 82-12 Cond. 13.*
3. Fugitive steam and non-condensable gas sources shall be inspected, repaired, and maintained such that H2S fugitive emissions comply with the emission limitations of Rule 455. The permit holder shall check the transmission lines for fugitive leaks on an ongoing basis as described in Appendix II. *ref. Representative PTO 82-12 Cond. 11.* S L
4. Condensate storage tanks shall be operated and maintained to prevent the release of H2S in excess of the limitations of Rule 455. *Ref. Representative PTO 82-12 Cond. 14.* S L
5. Condensate collection system bleeds shall be opened and utilized only as necessary during cold startup and shut down of the geothermal transmission line and during freeze protection S L

and integrity testing. Other bleeds necessitated by continuous normal operation of this line shall not exceed the small source limitations of Rule 455. Emissions from condensate collection systems, pipeline bleeds, on and offsite rock mufflers, including maintenance venting shall comply with the Steam Transmission Line Emissions Management Protocol *ref. Representative PTO 82-12 Cond. 16.*

- 6. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall be at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollution emissions. . *ref. Representative PTO 82-12 Cond. 3.* S L
- 7. The permit holder shall fund or supply any special protective clothing or safety equipment which is required for the District's on site inspection or sampling activity. Training shall be provided as required for proper use of equipment. *ref. Representative PTO 82-12 Cond. 9* S L
- 8. All areas in the immediate vicinity and under the permit holder's responsibility shall be properly treated to control fugitive dust per requirements of Rule 430. *Ref. Representative PTO 82-12 Cond. 10.* S L

**III. Monitoring, Testing and Analysis**

- 1. At such times as specified by the Control Officer, the permit holder shall conduct District approved source tests for particulate (including composition) emissions from the stacking muffler or other pipeline segments and for H2S and other compounds (listed under NESHAPS, AB 2588) and furnish the District a written report of the results of such tests. The Control Officer shall be notified at least 5 days prior to such tests to allow time to arrange for an observer to be present at the test. *ref. Representative PTO 82-12 Cond. 17.* S L
- 2. The permit holder shall conduct the emissions source test for H2S on aspirator equipped condensate pump stations, as described in Appendix I, on an annual basis and shall provide the District results in writing. Total annual H2S and TOG emissions (measured as methane) from these aspirators shall be reported to the District in a format acceptable to the District. *ref. Representative PTO 82-12 Cond. 12.* S L
- 3. The permit holder can be required to recommence CEM development and installation at this facility upon the Control Officer's determination that air quality data as measured in Lake County show additional exceedences of the hydrogen sulfide ambient air quality standard and such exceedences are caused by the stacking of steam through the permitted equipment. Such development and installation will be in accordance with Appendix IV. *ref. Representative PTO 82-12 Cond. 18.* S L
- 4. The permit holder shall maintain and operate one H2S/meteorological monitoring station, PM-10 high volume station at a location approved in advance by the Control Officer for the life of the facility. Participation by the permit holder in a joint air monitoring program, such as the Geysers Air Quality Monitoring Program (GAMP), shall be deemed to satisfy all ambient air quality monitoring requirements of this permit provided the term of monitoring is equivalent. The Control Officer can alter, suspend, or cancel this requirement provided no ambient air quality standard applicable to this facility is threatened or that sufficient other monitoring is available by the District, Lake County AQMD or other third party. *ref. Representative PTO 82-12 Cond. 19.* S L

**IV. Recordkeeping**

- 1. All records and logs shall be retained for a period of at least 5 years from the date the record or log was made and shall be submitted to the NSCAPCD upon request. *ref. Rule* S L

5.615 (b) &(c).

2. Any valve, flange, drip leg threaded fitting or seal on a pipeline or condensate collection system with a leak in excess of the limitations of condition II.2 which has been detected by the permit holder and is awaiting repair shall be identified, recorded and repaired as described in Appendix II. These records shall be made available to the District for inspection upon request. *ref. Representative PTO 82-12 Cond. 13aa.* S L

3. The permit holder shall maintain a log of stacking events and shall allow the District to inspect the logs to verify the total number of stacking events *ref. Representative PTO 82-12 Cond. 15aa.* S L

**V. Reporting**

1. A quarterly report shall be submitted to the District which contains the following information: F S L

- a. Stacking event hours.
- b. Cause of stacking event.
- c. Emissions from pipeline bleeds, freeze protection and well pad bleeds (including maintenance venting).

The quarterly report shall be submitted to the District within 60 days of the end of each quarter. The reports are due by June 1, September 1, October 1 and March 1 for each corresponding quarter. *ref. Representative PTO 82-12 Cond. 15.*

2. The permit holder shall adhere to the requirements set forth in the H2S Sampling and Reporting Protocol currently in effect between the District and the permit holder. The permit holder shall inform the District when a stacking event exceeds the limitations of Rule 455(b) Table III per the time limitations of Rule 540. The permit holder shall allow the District to inspect all operating logs and computer records to verify compliance with Rule 455(b) Table III. These requirements are in addition to the applicable requirements of Rule 540. *ref. Representative PTO 82-12 Cond. 15.* S L

**B. STEAM TRANSMISSION LINE PERMIT CONDITIONS**  
(Sonoma Power Plant)

**I. Emission Limits**

*Emission Limits for H2S*

1. Stacking of steam to the atmosphere, which is in excess of 5 pounds H2S and/or 50,000 pounds of steam in an hour, resulting from unscheduled power plant outages shall be limited to 3 outages per calendar year. *ref. PTO 81-19 Cond. 16.* **F S L**

*Emission Limits for Particulate Matter*

2. Particulate emissions from the transmission line shall not exceed the limitations of Rule 420 (d) or Rule 420 Table I, whichever is the most restrictive. *ref. PTO 81-19 Cond. 17.* **F S L**

**II. Operational Limits and Requirements**

1. Valves, flanges, drip legs, threaded fittings and seals on pipelines and condensate collection systems shall be maintained to prevent or reduce the emission of steam, non-condensable gases and condensate to the atmosphere. **F S L**

The permit holder shall check the transmission lines on an ongoing basis as described in Appendix II. *ref. PTO 81-19 Cond. 13 & 14.*

2. Fugitive steam and non-condensable gas sources shall be inspected, repaired, and maintained such that H2S fugitive emissions comply with the emission limitations of Rule 455. The permit holder shall check the transmission lines for fugitive leaks on an ongoing basis as described in Appendix II. *ref. PTO 81-19 Cond. 12.* **F S L**

3. Condensate storage tanks shall be operated and maintained to prevent the release of H2S in excess of the limitations of Rule 455. *ref. PTO 81-19 Cond. 14.* **F S L**

4. All areas in the immediate vicinity and under the permit holder's responsibility shall be properly treated to control fugitive dust. *ref. PTO 81-19 Cond. 11.* **F S L**

**III. Monitoring, Testing and Analysis**

1. At such times as specified by the Control officer, the permit holder shall conduct District approved source tests for particulate (including composition) emissions from the stacking muffler or other pipeline segments and for H2S and other compounds (listed under NESHAPS, AB 2588) and furnish the District a written report of the results of such tests. The Control Officer shall be notified at least 5 days prior to such tests to allow time to arrange for an observer to be present at the test. *ref. PTO 81-19 Cond. 15.* **S L**

**IV. Recordkeeping**

1. All records and logs shall be retained for a period of at least 5 years from the date the record or log was made and shall be submitted to the NSCAPCD upon request. *ref. Rule 5.615.* **F S L**

2. Any valve, flange, drip leg threaded fitting or seal on a pipeline or condensate collection system with a leak in excess of the limitations of condition II.2 which has been detected by **F S L**

the permit holder and is awaiting repair shall be identified, recorded and repaired as described in Appendix II. These records shall be made available to the District for inspection upon request. *ref. PTO 81-19 Cond. 13.*

- 3. The permit holder shall maintain a log of stacking events and shall allow the District to inspect the logs to verify the total number of stacking events. *ref. PTO 81-19 Cond. 16.* F S L

**V. Reporting**

- 1. A quarterly report shall be submitted to the District which contains the following information: F S L
  - a. Stacking event hours.
  - b. Cause of stacking event.
  - c. Balance of remaining allowable stacking events.
  - d. Emissions from pipeline bleeds, well pad bleeds (including maintenance venting).

The quarterly report shall be submitted to the District within 60 days of the end of each quarter. The reports are due by June 1, September 1, October 1 and March 1 for each corresponding quarter. *ref. PTO 81-19 Cond. 16.*

**C. STEAM WELL PERMIT CONDITIONS**

**I. Emission Limits**

*Emission Limits for H2S*

- 1. Wellhead H2S bleed emissions are not to exceed the limitations of Rule 455, except as allowed under II.1. *ref. Representative PTO 88-54, Cond. A.1 and A.2.* F S L

*Emission Limits for Particulate Matter*

- 2. Fugitive dust emissions from this well pad and access roads under the operator's responsibility are to be controlled to meet the requirements of Rule 430 and 410(a). *ref. Representative PTO 88-54, Cond. A.3.* F S L

**II. Operational Limits and Requirements**

- 1. The permit holder shall notify the District prior to initiating any planned venting of this geothermal well which is associated with testing, wellhead or wellbore maintenance. The operator shall also present to the Control Officer and receive approval of, an emissions release protocol governing emissions and notifications for such operations. Until such time as this protocol is approved the Operator shall obtain permission from the District for each event at least 24 hours prior to starting the venting operation. Operations resulting in an excess of 15 pounds per hour of H2S shall be subject to a meteorological forecast, by a meteorological consultant acceptable to the District, and shall only proceed after approval by the Control Officer. *ref. Representative PTO 88-54 Cond. B.1.* F S L
- 2. The permit holder shall apply for and receive an Authority to Construct/Temporary Permit to Operate for an air pollution control device prior to reworking or redrilling this well, unless a valid well maintenance permit is held by the permit holder. *ref. Representative PTO 88-54 Cond. B.2.* S L

3. The permit holder shall properly maintain the wellhead, its associated valves, flanges, threaded fittings, liquid lines and other components including the wellhead muffler so as to eliminate leakage of steam, condensate and non-condensable gases as noted below: **F S L**

Liquid leak rate shall not exceed 20 ml in 3 min. Liquid leak rates in excess of 20 ml in 3 min. shall be repaired or replaced within 15 calendar days.

Non-condensable gas leaks shall not (i) exceed (as measured within 1 cm of such leak) 1000 ppm(vol) H<sub>2</sub>S nor 10,000 ppm(vol) methane nor (ii) exceed emission limits of Rule 455. Non-condensable gas leak rates in excess of 1000 ppm (vol) H<sub>2</sub>S or 10,000 ppm (vol) TOG shall be repaired with 24 hrs. *ref. Representative PTO 88-54 Cond. B.3.*

4. All wells shall be identified in a manner acceptable to the Control Officer. *ref. Representative PTO 88-54 Cond. B.4.* **F S L**

**III. Monitoring, Testing and Analysis**

1. At the request of the Control Officer and per Rule 240, the Operator will perform, or have performed, source test(s) for air contaminants as specified. District concurrence with test procedure and method(s) is to be obtained prior to testing. The operator shall provide the District 48 hours notification prior to any sampling requested by the Control Officer. The Operator shall provide adequate facilities for District sampling. *ref. Representative PTO 88-54 Cond. C.1.* **F S L**

2. If this well employs an aspirator as allowed under rule 455(aa) it shall be source tested annually to determine H<sub>2</sub>S mass emissions and exit concentration. If an aspirator is utilized for less than 24 consecutive hours the well shall be source tested for H<sub>2</sub>S once every 5 years. *ref. Representative PTO 88-54 Cond. C.2.* **F S L**

3. Any instrument used for the measurement of H<sub>2</sub>S or Total Organic Gases shall be approved by the Control Officer. *ref. Representative PTO 88-54 Cond. C.3.* **F S L**

**IV. Recordkeeping**

1. All records and logs shall be retained for a period of at least 5 years from the date the record or log was made and shall be submitted to the NSCAPCD upon request. **F S L**

2. The permit holder shall maintain a record of information needed to provide the District under Condition V.1. **F S L**

**V. Reporting**

1. A quarterly report shall be submitted to the District which contains the following information: F S L

*Well Bleeds*

- a. Source name.
- b. Hours of bleed emissions.
- c. Amount of H<sub>2</sub>S, ammonia and total organic gases, expressed as methane, released during bleeding.
- d. Reason for bleeding.

*Wells employing an aspirator*

- e. Hours of bleeding through aspirator, if applicable.
- f. H<sub>2</sub>S emission rate expressed as lb/hr, H<sub>2</sub>S exit concentration and date tested.

*Wellbore maintenance*

- g. Emissions event associated with wellbore maintenance (blowdown).
- h. Time and date of event.
- i. Duration of event.
- j. Emissions rate during event, steam and H<sub>2</sub>S, expressed as pounds per hour.
- k. Total mass of H<sub>2</sub>S, ammonia and TOG, expressed as methane, released during event.
- l. Reason for event.

The quarterly report shall be submitted to the District within 60 days of the end of each quarter. The reports are due by June 1, September 1, December 1 and March 1 for each corresponding quarter. *ref. PTO 88-54 Cond. D.1.*

**D. STEAM WELL PERMIT CONDITIONS (Thermal 4)**

**I. Emission Limits**

- 1. Visible emissions from Thermal 4 shall not equal or exceed an opacity of Ringlemann 2, or forty percent (40%). *ref. PTO 01-09 Cond. A.1.* F S L
- 2. Emissions from Thermal 4 shall not result in fallout of particulate matter on adjacent (or other non-contiguous) property, and shall not cause a public nuisance, per District Rule 400. *ref. PTO 01-09 Cond. A.2.* F S L
- 3. Emissions from Thermal 4 shall not cause off site odors sufficient to result in a public nuisance, per District Rule 400. *ref. PTO 01-09 Cond. A.3.* F S L

**II. Operational Limits and Requirements**

- 1. Back-pressure line pressure at the emissions control equipment (ECE) as specified in this Permit to Operate shall not drop below 8 psig unless the steam flow is less than 15,000 pounds per hour, except as provided during testing and maintenance under Condition III.6, or during other District approved tests or maintenance. Equipment shall be equipped with a low pressure alarm as described in Condition III.1. If the performance of ECE at Thermal 4 as measured under Condition III.6 deteriorates significantly, the District may require the S L

owner/operator to modify the ECE. *Ref. PTO 01-09 Cond. B.1.*

- |    |  |     |
|----|--|-----|
| 2. | The owner/operator of this source shall not operate the emissions control equipment at back-pressures resulting in an unsafe condition which could cause or contribute to a well blowout. <i>ref. PTO 01-09 Cond. B.2.</i>   | S L |
| 3. | The owner/operator of Thermal 4 shall maintain the wellhead, its associated valves and piping, and condensate control tank, so as to minimize steam and condensate leakage. Well operation shall be conducted in accordance with the Operating Guidelines submitted with the application. <i>ref. PTO 01-09 Cond. B.3.</i> | S L |

### III. Monitoring, Testing and Analysis

- |    |   |     |
|----|---|-----|
| 1. | The Emissions Control equipment shall be equipped with a continuous line pressure monitor set to alarm at 1 psig below the well operating line pressure. <i>ref. PTO 01-09 Cond. C.1.</i>   | S L |
| 2. | The Emissions Control equipment shall be equipped with a continuous steam flow meter. <i>ref. PTO 01-09 Cond. C.2.</i>  | S L |
| 3. | The owner/operator shall conduct periodic monitoring of H <sub>2</sub> S concentration no less frequently than once per quarter. <i>ref. PTO 01-09 Cond. C.3.</i>   | S L |
| 4. | All monitoring equipment shall be properly maintained and operated in accordance with Condition III.1 through III.3. <i>ref. PTO 01-09 Cond. C.4.</i>   | S L |
| 5. | As often as necessary, and no less frequently than once per month, the owner/operator shall visually inspect the wellhead, associated valves and piping, and the condensate control tank, to verify that none of the following physical conditions exists:<br>a. visibly leaking valves and other pipe fittings;<br>b. corrosion of the wellhead, associated valves and piping, or the condensate control tank to such an extent that the integrity of the components is breached;<br>c. blockage of piping to such an extent that the proper functioning of the control equipment could be impaired;<br>d. manually operated valves set in positions other than as specified in the Operating Guidelines.<br><i>ref. PTO 01-09 Cond. C.5</i> | S L |
| 6. | As often as necessary, but no less often than once per year, the owner/operator shall conduct a performance test of the emissions control equipment. Such test shall measure steam flow at different back-pressures; at minimum, steam shall be measured at four back-pressure points, to be determined in the Performance Test Protocol. <i>ref. PTO 01-09 Cond. C.6.</i>  | S L |
| 7. | As often as necessary, but no less often than once per quarter, the owner/operator shall conduct a test of the low back-pressure alarm specified in Condition III.1. <i>ref. PTO 01-09 Cond. D.7.</i>   | S L |
| 8. | At least thirty days prior to the first instance of testing in accordance with either Condition III.6 or III.7, the owner/operator shall submit a testing protocol for District review and comment. <i>ref. PTO 01-09 Cond. D.8.</i>  | S L |
| 9. | At the request of the Control Officer and per Rule 240, the owner/operator shall perform, or  | S L |

have performed, source test(s) for air contaminants as specified. District concurrence with test procedures and methods shall be obtained prior to testing. *ref. PTO 01-09 Cond. D.9.*

10. The owner/operator shall provide written notification at least three working days in advance of any testing required by Conditions III.6 or III.7. *ref. PTO 01-09 Cond. D.10.* S L

**IV. Recordkeeping**

1. The owner or operator shall maintain a record of inspection that contains the following information: S L

- a. date of monthly inspection, per Condition III.5, and the name of the person conducting the inspection;
- b. any physical condition identified pursuant to Condition III.5(a) through (d), the corrective action taken, and the date such action was taken.

*ref. PTO 01-09 Cond. D.1.*

2. The owner/operator shall also maintain general records of the following information: S L

- a. the results of any tests performed in accordance with this permit;
- b. any incidents of low back-pressure (defined as pressure below 8 psig and flow greater than 15,000 pounds per hour), other than during testing in accordance with Condition III.7;
- c. average monthly steam flow rate in pounds per hour;
- d. average monthly H<sub>2</sub>S concentration in ppm(w);
- e. average monthly emissions of H<sub>2</sub>S in pounds;
- f. annual summary of steam flow (million pounds) and H<sub>2</sub>S emissions (pounds and tons).

*ref. PTO 01-09 Cond. D.2.*

3. All records shall be maintained in good condition in a District approved log, for a period of at least five years following the last date of entry in the log. All records shall be made available to District personnel upon request. *ref. PTO 01-09 Cond. D.3* S L

**V. Reporting**

1. The owner/operator shall submit to the District the results of any test conducted in accordance with Conditions III.6 and/or III.9 within thirty days of having conducted such test, unless otherwise specified in writing by the APCO. *ref. PTO 01-09 Cond. E.1.* S L

2. The owner/operator shall submit to the District at least once per year, all records specified in Condition IV.2. Any test results already submitted per Condition V.1 do not need to re-submitted. *ref. PTO 01-09 Cond. E.2.* S L

**E. STEAM WELL REWORK PERMIT CONDITIONS**

**I. Emission Limits**

*Emission Limits for H2S*

1. Emissions of H2S from the blooie line shall not exceed 5.5 pounds per hour unless a higher rate was determined by New Source Review. *ref. Rule 455(b).* S L

*Emission Limits for Particulate Matter*

2. Particulate emissions from the blooie line shall not exceed the limitations of Rule 420 (e). *ref. Rule 420(e).* S L

**II. Operational Limits and Requirements**

1. The permit holder shall comply with the operational requirements of the Authority to Construct/Temporary Permit to Operate or corresponding well maintenance permit issued for the steam well rework operation. *ref. Rule 240.* S L

**III. Monitoring, Testing and Analysis**

1. The permit holder shall measure the H2S concentration and emissions rate in the effluent well steam using wet chemistry methods outlined in the Abatement Plan submitted with the well redrill permit application. *ref. Rule 240.* S L

**IV. Recordkeeping**

1. All records and logs shall be retained for a period of at least 5 years from the date the record or log was made and shall be submitted to the NSCAPCD upon request. F S L
2. The permit holder shall maintain a record of information needed to provide the District under Condition V.1. S L

**V. Reporting**

1. A quarterly report shall be submitted to the District which contains the following information: F S L
- a. Steam well rework activities, if any.
  - b. Final production H2S concentration in ppmw and steam flow rate in lb/hr.
  - c. Total engine hours.
  - d. Total compressor hours.
  - e. Balance of remaining engine and compressor hours available for calendar year.
  - f. Total pounds of total organic gas, including methane, emitted during rig operations, including flow test.
  - g. An estimate of the total H2S, NOx and particulate matter released during the redrilling or workover operations.

The quarterly report shall be submitted to the District within 60 days of the end of each quarter. The reports are due by June 1, September 1, December 1 and March 1 for each corresponding quarter. *ref. PTO 79-21 Cond. 15.*

**F. WEST GEYSERS ADMINISTRATION CENTER**

**I. Operational Limits and Requirements**

**Sandblasting Booth**

- 1. This equipment must not be used to vent more than one sandblasting booth, one sand hopper and one air tight dumpster at any one time. *ref. PTO 84-57 Cond. 3* S L
- 2. Dust collected in the baghouse must be discharged only into a closed container which is also vented to the baghouse *ref. PTO 84-57 Cond. 6* S L
- 3. Sandblasting conducted within the sandblasting booth shall be conducted only with the doors shut. *ref. PTO 84-57 Cond. 7* S L
- 4. The equipment must be properly maintained and kept in good operating conditions at all times. *ref. PTO 84-57 Cond. 2* S L

**Spray Booth**

- 5. Total coating usage at this facility shall not exceed 1,000 gallons during any consecutive 12 month period. *ref. PTO 06-10 Cond. A.1*
- 6. Total cleanup solvent usage shall not exceed 250 gallons during any consecutive 12 month period. *ref. PTO 06-10 Cond. A.2*
- 7. The maximum VOC content of the coatings shall not exceed 5.5 pounds per gallon. If the coating is a specialty use coating distributed in a container with a volume of one quart or less, the maximum VOC limit is not applicable. *ref. PTO 06-10 Cond. B.1*
- 8. Coatings containing hexavalent chrome and/or cadmium shall not be applied at this source. *ref. PTO 06-10 Cond. B.2*

**II. Monitoring, Testing and Analysis**

- 1. Gauges must be operated to indicate, in inches water column, the static pressure differential across the baghouse bags, prefilter, final filter and blower. *ref. PTO 84-57 Cond. 4* S L
- 2. An audible alarm shall be operated to signal the failure of the absolute filter (contaminated air getting through broken or torn filter element) or pre-failure situation of the absolute filter (excessively loaded filter). *ref. PTO 84-57 Cond. 5* S L

**G. STEAMFIELD WIDE PERMIT CONDITIONS**

F S L

The plant shall comply with the following District regulations. The text of thereferenced regulations can be found in Appendix A of this Title V Operating Permit.

- 1. Regulation 1 Rule 400-General Limitations
- 2. Regulation 1 Rule 410-Visible Emissions
- 3. Regulation 1 Rule 430-Fugitive Dust Emissions

4. Regulation 1 Rule 492 (40 CFR part 61 Subpart M)-Asbestos
5. Regulation 1 Rule 540-Equipment Breakdown
6. Regulation 2- Open Burning
7. If in the event this stationary source, as defined in 40CFR part 68.3, becomes subject to part 68, this stationary source shall submit a risk management plan (RMP) by the date specified in part 68.10. As specified in Parts 68, 70 and 71, this stationary source shall certify compliance with the requirements of part 68 as part of the annual compliance certification required by 40 CFR part 70 or 71.
8. 40 CFR Part 82- Chlorinated Fluorocarbons
9. If in the event this stationary source, as defined in 40 CFR part 63, becomes subject to part 63, this stationary source shall notify the District within 90 days of becoming subject to the regulation. The stationary source shall identify all applicable requirements of part 63 and submit a plan for complying with all applicable requirements.
10. California Air Resources Board's Airborne Toxic Control Measure S L  
For Diesel Particulate Matter From Portable Engines Rated at 50 Horsepower and Greater.

## H. ADMINISTRATIVE REQUIREMENTS

### Payment of Fees F S L

1. This Permit shall remain valid during the 5 year term as long as the annual renewal fees are paid in accordance with Regulation 1 Rule 300 and Rule 360 of the District. Failure to pay these fees will result in forfeiture of this permit. Operation without a permit subjects the source to potential enforcement action by the District and the EPA pursuant to section 502(a) of the Clean Air Act. *ref. Reg 5.670*

### Right to Entry and Inspection F S L

2. The Control Officer, the Chairman of the California Air Resources Board, The Regional Administrator of the EPA and/or their authorized representatives, upon the presentation of credentials, shall be permitted:
  - A. to enter upon the premises where the source is located or areas in which any records are required to be kept under the terms and conditions of this Permit; and
  - B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Permit; and
  - C. to inspect any equipment, operation, or method required in this Permit; and
  - D. to sample emissions from the source. *ref. Reg 5.610(e)*

### Compliance with Permit Conditions

3. This Title V Operating Permit expires on June 20, 2017. The permit holder shall submit a complete application for renewal of this Title V Operating Permit no later than 6 months prior to expiration and no earlier than one year prior to expiration. If a complete application for renewal has not been submitted in accordance with these deadlines, the facility may not operate after June 19, 2017. *ref Reg 5.660* F S L
4. The permit holder shall comply with all conditions of this permit. Any non-compliance F S L

with the terms and conditions of this permit will constitute a violation of the law and may be grounds for enforcement action, including monetary civil penalties, permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. *ref. Reg 5.610(f)(3)*

- 5. In the event any enforcement action is brought as a result of a violation of any term or condition of this permit, the fact that it would have been necessary for the permit holder to halt or reduce the permitted activity in order to maintain compliance with such term or condition shall not be a defense to such enforcement action. *ref. Reg 5.610(f)(4)* F S L
- 6. The filing of a request by the facility for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated non-compliance does not stay the applicability of any permit condition. *ref. Reg 5.610(f)(5)* F S L
- 7. This permit does not convey any property rights of any sort, nor any exclusive privilege. *ref. Reg 5.610(f)(2)* F S L
- 8. The permit holder shall supply within 30 days any information that the District requests in writing to determine whether cause exists, per Regulation 5.570, for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. *ref. Reg 1 Rule 200, Reg 5.430* F S L

**Reporting**

- 9. All deviations from permit requirements, including those attributable to upset conditions (as defined in the permit) must be reported to the District at least once every six months. For emissions of a hazardous air pollutant (HAP) or a toxic air pollutant (as identified in an applicable regulation) that continue for more than an hour in excess of the permit requirements, the report must be made within 24 hours of the occurrence. For emissions of any regulated air pollutant, excluding those HAP emission requirements listed above, that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours. All reports of deviation from permit requirements shall include the probable cause of the deviation and any preventative or corrective action taken. A progress report shall be made on a compliance schedule at least semi-annually and shall include the date when compliance will be achieved, an explanation of why compliance was not, or will not be, achieved by the scheduled date, and a log of any preventative or corrective action taken. The reports shall be certified by the responsible official as true, accurate and complete. *ref. Reg 5.625* F S L

**Severability**

10. In the event that any provision of this permit is held invalid all remaining portions of the permit shall remain in full force and effect. *ref. Reg 5.610(g)* F S L

**Transfer of Ownership**

11. In the event of any changes in control or ownership of facilities to be modified and/or operated, this Permit is transferable and shall be binding on all subsequent owners and operators. The permit holder shall notify the succeeding owner and operator of the existence of this Permit and its conditions by letter, a copy of which shall be forwarded to the Control Officer. *ref. Rule 240(j)* F S L

**Records**

12. Notwithstanding the specific wording in any requirement, all records for federally enforceable requirements shall be maintained for at least five years from the date of entry and shall include: date place and time of sampling, operating conditions at the time of sampling, date, place and method of analysis and the results of the analysis. *ref. Reg 5.615* F S L

**Emergency Provisions**

13. The permit holder may seek relief from enforcement action in the event of a breakdown, as defined by Regulation 1 Rule 540 of the District's Rules and Regulations, by following the procedures contained in Regulation 1, Rule 540 (b). The District will thereafter determine whether breakdown relief will be granted in accordance with Regulation 1, Rule 540 (b)(3). *ref. Reg 5.640* F S L
14. The permit holder may seek relief from enforcement action for a violation of any of the terms and conditions of this permit caused by conditions beyond permit holders reasonable control by applying to the District's Hearing Board for a variance pursuant to Health and Safety Code Section 42350. The Hearing Board will determine after notice and hearing whether variance relief should be granted in accordance with the procedures and standards set forth in Health and Safety Code Section 42350 et seq. Any variance granted by the Hearing Board from any term or condition of this permit which lasts longer than 90 days will be subject to EPA approval. *ref. Reg 1 Rule 600* S L
15. Notwithstanding the foregoing, the granting by the District of breakdown relief or the issuance by the Hearing Board of a variance will not provide relief from federal enforcement unless the Title V Operating Permit has been modified pursuant to Regulation 5 or other EPA approved process. *ref. Reg 1 Rule 600* F S L

**Permit Posting**

16. Operation under this permit must be conducted in compliance with all data specifications included in the application which attest to the operator's ability to comply with District rules and regulations. This permit must be posted in such a manner as to be clearly visible and accessible at a location near the source. In the event that the permit cannot be so placed, the permit shall be maintained readily available at all times on the operating premises. *ref. Rule 240(i)* F S L

**Compliance Certification**

- 17. Compliance certifications shall be submitted annually by the responsible official of this facility to the Northern Sonoma County Air Pollution Control District and to the EPA. Each compliance certification shall be accompanied by a written statement from the responsible official which certifies the truth, accuracy, and completeness of the report. *ref. Reg 5.650* **F S L**
  
- 18. This Permit does not authorize the emission of air contaminants in excess of those allowed by the Health & Safety Code of the State of California or the Rules and Regulations of the Northern Sonoma County Air Pollution Control District. This Permit cannot be considered as permission to violate existing laws, ordinances, regulations or statutes of other governmental agencies. *ref. Rule 240(d)* **F S L**

**Permit Modification**

- 19. The permit holder shall comply with all applicable requirements in NSCAPCD Regulation 1 Chapter II- Permits and New Source Review. *ref. Regulation 1 Rule 200* **F S L**

### III. APPLICABLE EMISSION LIMITS & COMPLIANCE MONITORING REQUIREMENTS SUMMARY

The following table provides an informational summary of the permit terms and conditions specified in Part II, Permit Conditions.

| <b>Pollutant</b>        | <b>Emission Limit</b>                              | <b>Emission Limit/<br/>Citation</b>             | <b>Monitoring<br/>Type</b> | <b>Monitoring<br/>Frequency</b> | <b>Monitoring<br/>Requirement<br/>Citation</b> | <b>FE<br/>Y/N</b> |
|-------------------------|--|---|----------------------------|---------------------------------|--|-------------------|
| Hydrogen Sulfide        | 1000 ppm   | Regulation 1<br>Rule 455(a)                     | Source Test                | Monthly                         | N/A  | Y                 |
| Particulate Matter (PM) | More restrictive of<br>0.20 grains/scf or 40 lb/hr | Regulation 1<br>Rule 420(d)<br>Rule 420 Table I | Source Test                | As Requested                    | N/A  | Y                 |
| Visible Emissions       | Ringlemann 2                                       | Regulation 1<br>Rule 410                        | VEE                        | As Requested                    | N/A  | Y                 |

## **IV. GLOSSARY**

### **Abatement Solution**

Iron chelate or any other District approved compound used to chemically treat H<sub>2</sub>S in the steam condensate

### **ACP**

Alternative Compliance Plan. A list of all parametric monitoring data to be collected and recorded as a means of determining compliance with the H<sub>2</sub>S emission limits.

### **APCO**

Air Pollution Control Officer

### **BACT**

Best Available Control Technology

### **CAA**

The federal Clean Air Act

### **CCM**

Continuous Compliance Monitor

### **CCM Availability**

Hours CCM is in operation divided by the hours the primary abatement system is in service.

### **CEQA**

California Environmental Quality Act

### **CFR**

The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

### **District**

The Northern Sonoma County Air Pollution Control District

### **EPA**

The federal Environmental Protection Agency

### **Federally Enforceable, FE**

All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR Part 51, subpart I (NSR), Part 52.21 (PSD), Part 60, (NSPS), Part 61, (NESHAPs), Part 63 (HAP), and Part 72 (Permits Regulation, Acid Rain).

### **GPH**

Gallons per hour

**HAP**

Hazardous Air Pollutant. Any pollutant listed pursuant to Section 112(b) of the Act. Also refers to the program mandated by Title I, Section 112, of the Act and implemented by both 40 CFR Part 63, and District Regulation 2, Rule 5.

**Irregularity**

Period of time a CCM monitor reading is not consistent with other verifiable data or information.

**Major Facility**

A facility with potential emissions of regulated air pollutants greater than or equal to 100 tons per year, greater than or equal to 10 tons per year of any single hazardous air pollutant, and/or greater than or equal to 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity as determined by the EPA administrator.

**MW**

Megawatts

**N/A**

Not Applicable

**NESHAPs**

National Emission Standards for Hazardous Air Pollutants contained in 40 CFR Part 61

**NSCAPCD**

Northern Sonoma County Air Pollution Control District

**NMHC**

Non-methane Hydrocarbons

**NSR**

New Source Review. A federal program for preconstruction review and permitting of new and modified sources of air pollutants for which the District is classified "non-attainment". Mandated by Title I of the Clean Air Act and implemented by 40 CFR Parts 51 and 52 as well as District Regulation 1, Rule 220.

**PM**

Total Particulate Matter

**PM10**

Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns.

**Primary Pressure Gauges and Flowmeters**

All pressure gauges and flow meters used for parametric compliance verification.

**Prolonged Outage**

The scheduled shutdown of a unit lasting longer than 1 week.

**PSD**

Prevention of Significant Deterioration. A federal program for permitting new and modified sources of air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 1, Rule 220.

**SIP**

State Implementation Plan. State and District programs and regulations approved by EPA and developed in order to attain the National Ambient Air Quality Standards. Mandated by Title I of the Act.

**Standby Spare**

A back-up piece of equipment available for use in the event the primary piece of equipment fails.

**Title V**

Title V of the federal Clean Air Act. Requires a federally enforceable operating permit program for major and certain other facilities.

**TOG**

Total Organic Gasses

**TDS**

Total Dissolved Solids

**TSS**

Total Suspended Solids

**Units of Measure:**

|                 |   |                                  |
|-----------------|---|----------------------------------|
| ft <sup>3</sup> | = | cubic feet                       |
| g               | = | grams                            |
| gal             | = | gallon                           |
| hr              | = | hour                             |
| lb              | = | pound                            |
| in              | = | inches                           |
| psia            | = | pounds per square inch, absolute |
| ppmv            | = | parts per million, volume        |
| scfm            | = | standard cubic feet per minute   |
| yr              | = | year                             |

**VEE**

Visible Emissions Evaluation

## **VI. Appendix A**

The following applicable regulations are referenced in Section II; Permit Conditions.

**VII. Appendix B** Protocol Agreements