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Hydrogen Sulfide (H_2S) and Carbon Dioxide (CO_2).

Safety Plan

For

West Jal B Deep Salt Water Disposal #1

Sec-18 T-25S R-36E
1980’ FNL & 660’FEL

Lea County NM

1. INTRODUCTION

The West Jal B Deep Salt Water Disposal #1 is a Salt Water Disposal (SWD) well located in Lea County, New Mexico. The produced water is a byproduct of oil and natural gas operations which occur in the area. This water typically contains industrial compounds, trace hydrocarbons and salt which makes it extremely hazardous to the public and to the environment. Its primary purpose is to inject the saltwater deep into the ground below the groundwater table(s) and production zones. This is generally performed under tremendous pressure.

2. RISKS AND HAZARDS

2.1. High Pressure systems can fail caused by metal fatigue, corrosion or improper maintenance. A sudden release of high-pressure can result in flying product and debris resulting in injury or death.

2.2. Carbon Dioxide (CO_2) gas is colorless, odorless (mostly) and non-flammable. It is an asphyxiant.

- CO_2 is heavier than air and may travel along the ground and collect in low-lying areas. However, it can be picked up by a breeze and carried downwind.
- 5-10% in air mixture: A sharp odor is noticeable. Very labored breathing, headache, and visual impairment. Judgement may be impaired followed within minutes by loss of consciousness.
- 10% and greater. Unconsciousness occurs rapidly. Prolonged exposure to high concentrations may eventually result in death from asphyxiation.

2.3. Hydrogen Sulfide (H_2S) is a colorless, flammable, extremely hazardous gas with a "rotten egg" smell at low concentrations. High concentrations are odorless, can cause shock, unconsciousness, and death.

- Is heavier than air and may travel along the ground and collect in low-lying areas. It can be picked up by a breeze and carried downwind.
- Is a highly flammable gas and gas/air mixtures can be explosive. It may travel to sources of ignition and flash back.
- Entering dangerous H2S atmospheres at or above 100 ppm is Immediately Dangerous to Life and Health (IDLH).

3. NORMAL OPERATING PROCEDURES

1. Approach the wellsite with caution. Listen for hissing or roaring which might indicate a release. Look for pooling or running water and pay attention for the "rotten egg" smell of H_2S in lower concentrations.
2. Always attempt to approach the well site upwind paying attention to the direction of the wind socks.
3. Park upwind of the well site.
4. Wear appropriate PPE.
5. Communicate with peers. Let them know when you enter the facility grounds and when you leave the facility grounds.

4. CO_2 SURFACE MONITORING

Due to its proximity to the Enterprise Dark Horse Gas Treatment Plant and its two injection wells, Independence AGI#1 & AGI#2, the West Jal B Deep Salt Water Disposal #1 has been installed with surface soil flux monitoring equipment for CO_2. The Enterprise CO_2 Monitoring Program mandates that any significant increases in CO_2 readings requires immediate notification to the New Mexico Oil Conservation Division.

5. EMERGENCY PROCEDURES

If an emergency event occurs, leave the well site immediately traveling upwind from the location if at all possible. Never attempt to rectify an issue by yourself and never attempt to put out a fire beyond the incipient state. Notify BC&D Operating and call 911 if necessary.