Job Safety Analysis

JSA-2026-0006 — Generated Nov 27, 2026, 9:03 PM CST

OWNER Redpine Midstream	LOCATION Cedar Flats gas plant
UNIT Unit 4	EQUIPMENT WORKED ON Steam header
SERVICE Hot insulation (Insulation)	DATE / CREW SIZE November 28, 2026 — 3 crew

BRIEF DESCRIPTION OF WORK
Wrap the steam header.

WEATHER
91°F, Moderate Humidity (59%), Heat Index 103°F, Wind S 15 mph

OVERALL RISK SCORE	AI SAFETY GRADE
62/100	**0.5/10**

Crew Roster

IE	Isla Ernst	# VAL-CM-03
JF	Jorge Flores	# VAL-CM-04
TT	Taylor Test (Crew Leader)	Not linked to roster

Task-by-Task Breakdown

Task 1: Job Setup and Area Preparation

Identified Risks

- Hot insulation work near process piping can involve elevated surface temperatures and potential ignition sources. **(AI Added)**
- Starting hot work without a documented, discussed JSA leaves hazards unidentified and unmitigated. **(AI Added)**

Mitigation Steps

Verify permit-to-work and hot work permit are in place and posted at the job site prior to mobilization. **(AI Added)**

Conduct a formal pre-job JSA briefing covering all tasks before any insulation work begins, with sign-off from every crew member. **(AI Added)**

AI Suggested Enhancements

> Establish and mark exclusion zones around the work area to prevent uninvolved personnel from entering. (not added to JSA)
> Why it matters: Barricading reduces the chance of bystander injury from falling insulation material, hot surfaces, or tool drops.
> Regulation/Standard: OSHA 29 CFR 1926.202
> Energy Source: Mechanical

> Conduct a formal pre-job JSA briefing covering all tasks before any insulation work begins, with sign-off from every crew member. (added to JSA)
> Why it matters: Without a structured hazard review, crew members may be unaware of nearby energized equipment, hot surfaces, or confined spaces, increasing injury risk during the job.
> Regulation/Standard: OSHA 29 CFR 1910.132; API RP 2220
> Energy Source: Mechanical

> **[Life-critical]** Verify permit-to-work and hot work permit are in place and posted at the job site prior to mobilization. (added to JSA)
> Why it matters: Hot surfaces and insulation removal/installation near hydrocarbon-handling equipment at a gas plant can create burn hazards or ignition risk if permits and isolations aren't verified.
> Regulation/Standard: OSHA 29 CFR 1910.119; API RP 2009
> Energy Source: Temperature

Task 2: Hot Surface Insulation Installation

Identified Risks

- Direct or incidental contact with hot process piping surfaces during insulation work can cause severe burns. **(AI Added)**
- Insulation work often requires elevated access to piping and vessels, creating fall hazards. **(AI Added)**

Mitigation Steps

Require heat-resistant gloves and long-sleeve FR clothing rated for the expected surface temperatures before contacting insulated piping. **(AI Added)**

Use fall protection and secure scaffolding/ladders when installing insulation at elevation on vessels or piping runs. **(AI Added)**

AI Suggested Enhancements

> **[Life-critical]** Verify thermal insulation materials are free of asbestos or other hazardous fibers before handling, per material data sheets. (not added to JSA)
> Why it matters: Disturbing asbestos-containing insulation without proper controls can cause long-term respiratory disease from fiber inhalation.
> Regulation/Standard: OSHA 29 CFR 1910.1001
> Energy Source: Chemical

> **[Life-critical]** Require heat-resistant gloves and long-sleeve FR clothing rated for the expected surface temperatures before contacting insulated piping. (added to JSA)
> Why it matters: Insulation work often requires close-contact handling near uninsulated hot spots; without proper PPE, contact burns can cause serious tissue damage.
> Regulation/Standard: OSHA 29 CFR 1910.138; NFPA 70E
> Energy Source: Temperature

> **[Life-critical]** Use fall protection and secure scaffolding/ladders when installing insulation at elevation on vessels or piping runs. (added to JSA)
> Why it matters: A fall from height while handling insulation materials can result in fatal injury, especially if scaffolding or ladder stability is not verified beforehand.
> Regulation/Standard: OSHA 29 CFR 1926.451
> Energy Source: Gravity

Task 3: Material Handling and Housekeeping

Identified Risks

- Loose insulation batts, wrap, and metal cladding sheets can become trip hazards or wind-blown projectiles. **(AI Added)**

Mitigation Steps

Stage insulation materials and cladding away from walkways and secure against wind to prevent trip and struck-by hazards. **(AI Added)**

AI Suggested Enhancements

> Stage insulation materials and cladding away from walkways and secure against wind to prevent trip and struck-by hazards. (added to JSA)
> Why it matters: Disorganized material staging is a common contributor to slips, trips, and falls on plant job sites.
> Regulation/Standard: OSHA 29 CFR 1910.22
> Energy Source: Mechanical

> Use proper lifting techniques or mechanical aids when moving heavy insulation jacketing or metal cladding sections. (not added to JSA)
> Why it matters: Repetitive manual handling of awkward, heavy materials is a leading cause of soft-tissue injury in insulation trades.
> Regulation/Standard: OSHA General Duty Clause; ANSI Z365
> Energy Source: Mechanical

Task 4: Job Close-Out and Area Restoration

Identified Risks

- Improperly secured cladding or insulation jacketing can detach and fall, striking personnel below. **(AI Added)**

Mitigation Steps

Inspect completed insulation and cladding for secure fastening before demobilizing from elevated or process areas. **(AI Added)**

AI Suggested Enhancements

> Remove all debris, tools, and waste insulation material from the work area and verify permit close-out with area operations. (not added to JSA)
> Why it matters: Proper close-out ensures no residual hazards are left for others entering the area after the insulation crew departs.
> Regulation/Standard: OSHA 29 CFR 1910.119(l)
> Energy Source: Mechanical

> **[Life-critical]** Inspect completed insulation and cladding for secure fastening before demobilizing from elevated or process areas. (added to JSA)
> Why it matters: Loose cladding sections left unsecured at height can become dislodged by wind or vibration after the crew has left.
> Regulation/Standard: OSHA 29 CFR 1926.20
> Energy Source: Gravity

Work Area Visual Assessment (1 of 1 hazards acknowledged)



A solid blue-toned image with no discernible work area, personnel, or equipment visible for hazard assessment.

[LOW] Insufficient Image Detail for Hazard Identification — The image consists of a uniform blue color field with no visible workers, equipment, structures, or site features, preventing any meaningful hazard identification for the hot insulation job at Cedar Flats Gas Plant. (Entire frame) — Acknowledged

Team Member Signatures

IE	Isla Ernst	Signed Oct 13, 2026, 1:16 PM CDT
JF	Jorge Flores	Signed Oct 13, 2026, 1:17 PM CDT
TT	Taylor Test (Lead)	Signed Oct 13, 2026, 1:17 PM CDT
	Supervisor: Petra Lang	Certified Oct 13, 2026, 1:17 PM CDT