



July 23, 2025

Mr. Albert Chang  
Oil Conservation Division  
New Mexico Energy, Minerals and Natural Resources Department  
1220 S. Saint Francis Drive  
Santa Fe, New Mexico 87505

**Re: Stage 2 Abatement Plan (AP) for the Former Reverse Osmosis (RO) Reject Discharge Fields at the HF Sinclair Navajo Refining LLC (HFNSR)  
Quarterly Status Report #4 – April through June 2025  
Incident #nRM2022559242, GW-028**

Dear Mr. Chang:

HF Sinclair Navajo Refining LLC (HFSNR) is submitting this quarterly status report number 4 for the Stage 2 Abatement Plan (AP) for the Former Reverse Osmosis (RO) Reject Discharge Fields (RO Fields) at the HF Sinclair Navajo Refining LLC (HFSNR) Refinery (Refinery) located in Artesia, New Mexico (**Figure 1**). The Oil Conservation Division (OCD) approved the Stage 2 AP on July 11, 2024. The former RO Fields are located within the northern portion of the active Refinery (**Figure 2**).

This quarterly status covers the period of April through June 2025.

**Work Performed During January through March 2025**

April 2025:

- April 1 to 18: Field preparation continued, including ripping the soil to a depth of 2 feet and removal of existing vegetation.
- April 21 to 29: Excavated trenches for irrigation piping, floated field surfaces, removed mesquite trees, performed hydro-excavation across the natural gas line located in the North RO field for the irrigation piping crossing.
- April 30: Irrigation system installation began.

May 2025:

- May 1 to 29: Irrigation distribution piping and risers were installed and the trenches were backfilled. Installation of rolling irrigation systems was performed in both the North and South RO fields.
- May 30: Request for approval of herbicide to control mesquite growth was submitted to OCD.

HF Sinclair Navajo Refining LLC  
501 East Main, Artesia, NM 88210  
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June 2025:

- June 2 to 6: Irrigation system installation was completed and systems were tested.
- June 3: Approval of notification of intent to apply herbicide for mesquite control was provided by OCD.
- June 9 to 10: East side of North RO field seeded using Tall Wheatgrass.
- June 11: West side of North RO field seeded using Western Wheatgrass.
- June 12: Adjusted irrigation system in North RO field and began irrigating.
- June 16 to 17: West side of South RO field seeded using Sudangrass. Began irrigation in South RO field.
- June 18: Continued adjusting irrigation system. Seeding halted due to high winds.
- June 19: East side of South RO field seeded with Indiangrass. Continued irrigating South RO field.
- June 20: Adjust irrigation systems to allow 3 zones to be irrigated simultaneously.
- June 23: Finished seeding Indiangrass in South RO field (east side). Additional seeding of select areas in North RO field, western side with Western Wheatgrass. Irrigated both fields.
- June 24: Additional seeding of select areas in North RO field, specifically between City of Artesia sanitary sewer manholes. Irrigated both fields.

**Work Planned for July through September 2025**

July 2025:

- Prepare and submit quarterly status report.
- Mow weeds within the fields and along the outer boundaries of the fields.
- Continue irrigation of both fields, optimizing the irrigation schedule.
- Apply herbicide to mesquites growing within planted areas.
- Monitor growth in each field, including collection of plants per square foot counts in each portion of the fields.

August 2025:

- Continue irrigation of both fields, as needed.
- Monitor growth in each field.
- Continue with weed control (mesquite herbicide application and mowing on outer boundaries).

August 2025:

- Continue irrigation of both fields, as needed.
- Monitor growth in each field.



- Continue with weed control (mesquite herbicide application and mowing on outer boundaries).

### **Planting and Irrigation Details**

The two fields were divided into two sections each and four separate species were planted, one per section, as follows:

- North RO field, west was planted with Western Wheatgrass “Arriba” at a rate of approximately 10 pounds of seed per acre (lb/ac).
- North RO field, east was planted with Tall Wheatgrass “Jose” at a rate of approximately 25 lb/ac in the northern third of the area and at a rate of approximately 10 lb/ac in the southern two-thirds of the area. The difference in the seed rate was due to calibration of the seeding equipment.
- South RO field, west was planted with Hybrid Sorghum “Sudangrass” at a rate of approximately 19 lb/ac.
- South RO field, east was planted with Indiangrass “Cheyenne” at a rate of approximately 15 lb/ac.

The irrigation systems installed in the two RO fields consist of underground distribution piping, risers, and rolling irrigation systems. The systems for each field are as follows:

- North RO field:
  - 8 risers, numbered from 1 near the southern boundary to 8 near the northern boundary.
  - 3 rolling irrigation systems:
    - 1 in the eastern section that covers the full extent of this section;
    - 1 on the northern portion of the western section that covers from near the northern boundary to the northern line of large power poles; and
    - 1 on the southern portion of the western section that covers from near the southern boundary to the southern line of large power poles.
- South RO field:
  - 16 risers, numbered from 1 near the southeastern corner west of the firewater pond (outside of the South RO field) to 6 northwest of the firewater pond, and from 7 approximately 150 feet east of riser 6 and just north of the southern boundary on the north side of the firewater pond to 16 near the northern boundary of the field.
  - 2 rolling irrigation systems:
    - 1 in the eastern section that covers the full extent of this section; and
    - 1 in the western section that covers the full extent of this section from the northern boundary to riser 7. This system can then be separated to be connected to risers 1 through 6 to cover the southern portion of the western section.



**Figure 3** depicts the two fields, the areas planted with each of the four species, and the irrigation risers by number. Optimization of the irrigation systems is being conducted and changes to the system will be discussed in the next quarterly status report. An irrigation log will be maintained and the volume of water applied to each of the four sections will be provided.

**Closing**

The two former RO reject discharge fields have been plowed and seeded, and irrigation systems have been installed. Irrigation and plant monitoring has begun and will continue throughout the next quarter.

If you have any questions, please feel free to contact Teresa Alba at 575-746-5391 or Mike Holder at 575-308-1115.

Sincerely,

A handwritten signature in black ink, appearing to read "Case Hinkins".

Case Hinkins  
Environmental Manager  
HF Sinclair Navajo Refining LLC

c:      OCD: C. Smith  
          HFSNR: M. Holder, T. Alba

**Figures**

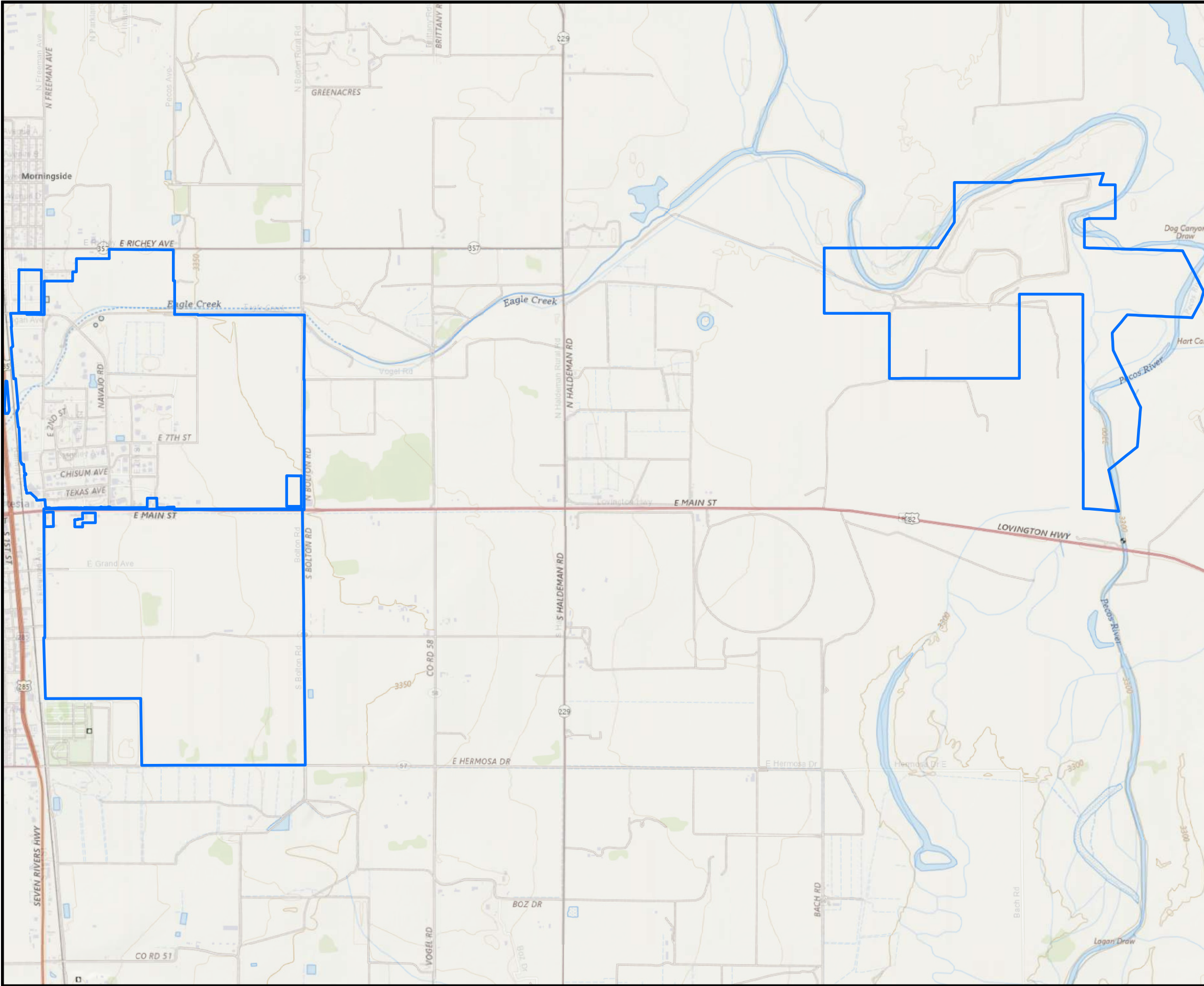
- 1 – Site Location
- 2 – Location of Former RO Reject Discharge Fields
- 3 – Former RO Reject Discharge Fields Phytoremediation Project

**Attachments:**

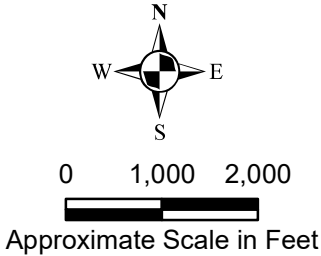
- A – Photolog



## **FIGURES**



**Legend**  
 Property Boundary



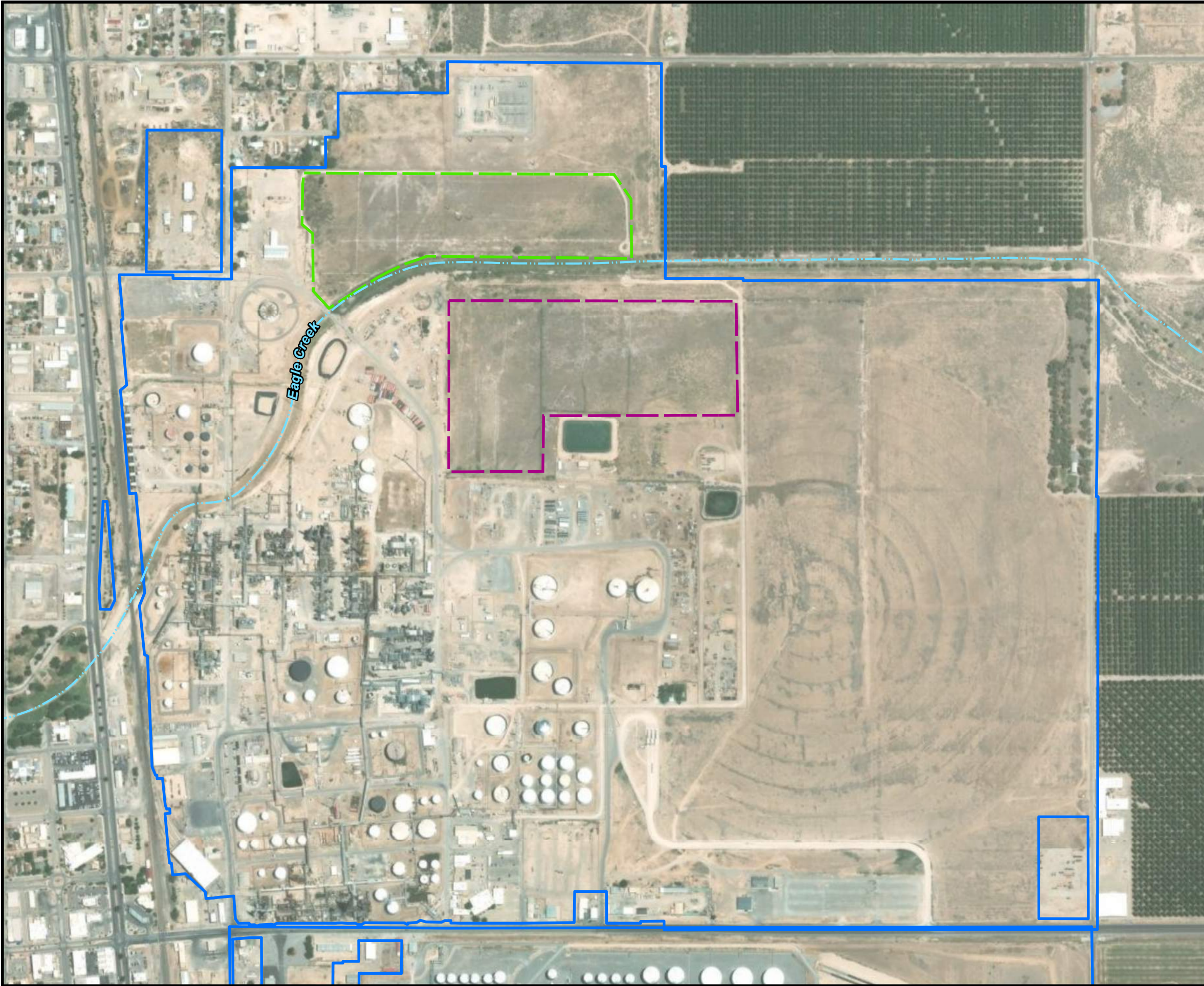
Source: USGS 7.5 Minute Series, Artesia and Spring Lake, New Mexico, 2019.

**SITE LOCATION**  
**HF SINCLAIR NAVAJO REFINING LLC**  
**ARTESIA REFINERY, EDDY COUNTY, NEW MEXICO**

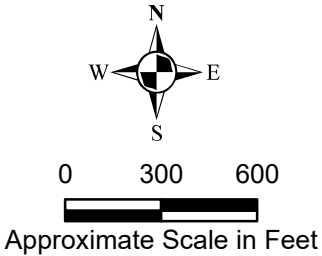


**FIGURE**  
**1**





- Legend**
- Property Boundary
  - North RO Reject Field
  - South RO Reject Field
  - Eagle Creek

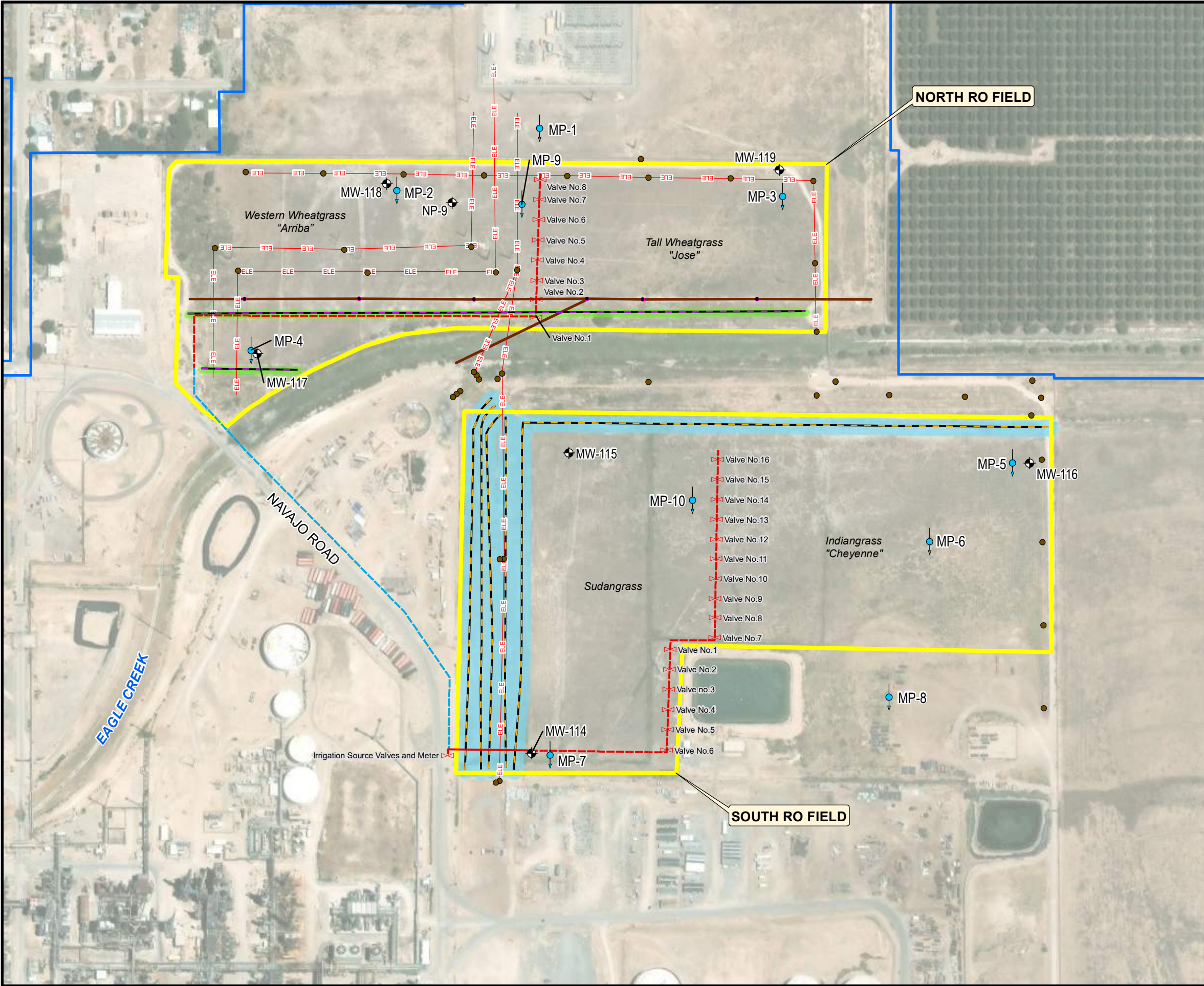


LOCATION OF FORMER RO REJECT  
DISCHARGE FIELDS  
HF SINCLAIR NAVAJO REFINING LLC  
ARTESIA REFINERY, EDDY COUNTY, NEW MEXICO



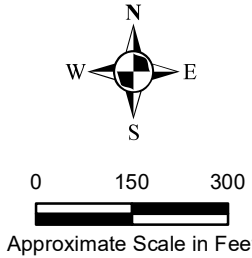
FIGURE  
2





**Legend**

- Property Boundary
- City Sanitary Sewer
- NMGC Pipeline
- Petroleum Pipeline
- Existing Underground Water Piping
- New Underground Irrigation Piping
- New Above Ground Irrigation Piping
- Overhead Electric Power Line
- City Sanitary Sewer Manhole Cover
- Large Overhead Power Pole
- Monitor Well
- Irrigation/Riser Valve
- Moisture Probe
- 10-Foot Buffer
- 25-Foot Buffer
- 2-Foot Buffer (From Edge of Manhole)



FORMER RO REJECT DISCHARGE FIELDS  
PHYTOREMEDIATION PROJECT  
HF SINCLAIR NAVAJO REFINING LLC  
ARTESIA REFINERY, EDDY COUNTY, NEW MEXICO



FIGURE  
3





## **ATTACHMENT A – PHOTOLOG**

## Photographic Log

### HF Sinclair Navajo Refining LLC



Photo 1: Field preparation in North RO field.



Photo 2: Connection of irrigation distribution piping to source in North RO field.



Photo 3: Trench for irrigation distribution piping in South RO field.




Photo 4: View of South RO field after "floating" of field to prepare for planting.



Photo 5: Backfilling irrigation distribution piping trench in South RO field.



Photo 6: Valve and meter run being constructed west of South RO field.

Date Taken	Job No.	Photographs Taken By:	Page No.	Client:	Site Name:	
April-June 2025	212C-HN-03200	Jorge Fernandez Velo / Miguel Flore	1 of 3	HFSNR	RO Fields	



## Photographic Log

### HF Sinclair Navajo Refining LLC



Photo 7: Initial backfill of piping run. Piping in foreground leads to process water tank. Note the firewater system is separate from the irrigation piping.

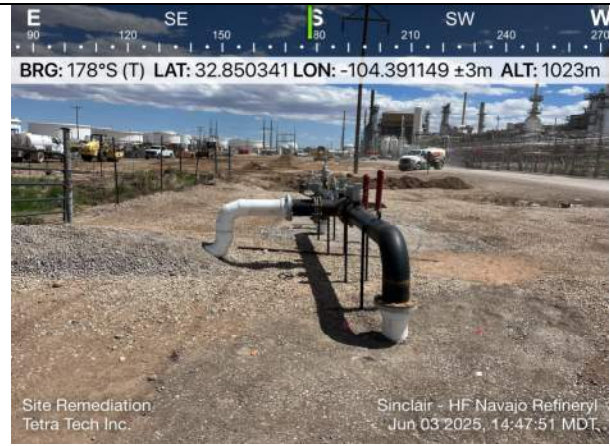


Photo 8: Valve and meter run west of South RO field. Valve and piping to left of photo leads to South RO field; valve and piping in foreground leads to North RO field.



Photo 9: Flowmeter on irrigation piping run.



Photo 10: View of one section of irrigation piping in North RO field.

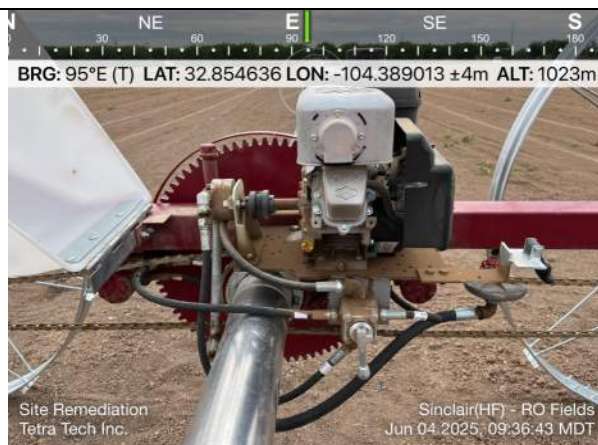


Photo 11: Irrigation system mover (motor and chains).

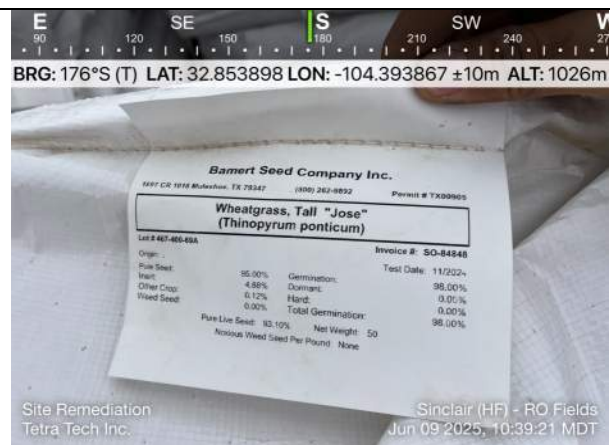

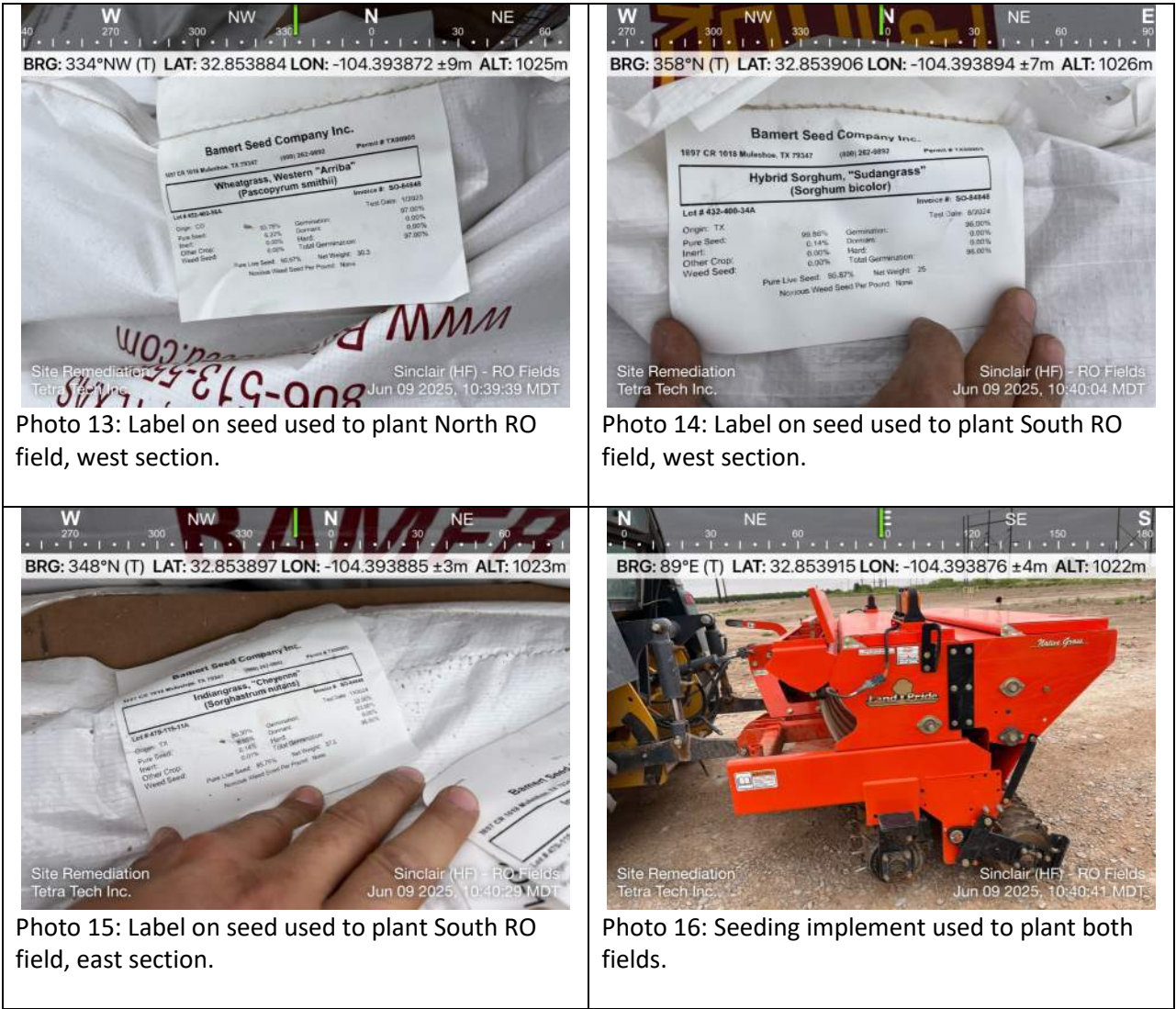


Photo 12: Label on seed used to plant North RO field, east section.

Date Taken	Job No.	Photographs Taken By:	Page No.	Client:	Site Name:	
April-June 2025	212C-HN-03200	Jorge Fernandez Velo / Miguel Flore	2 of 3	HFSNR	RO Fields	

Photographic Log

HF Sinclair Navajo Refining LLC



Date Taken	Job No.	Photographs Taken By:	Page No.	Client:	Site Name:	
April-June 2025	212C-HN-03200	Jorge Fernandez Velo / Miguel Flore	3 of 3	HFSNR	RO Fields	



Sante Fe Main Office  
Phone: (505) 476-3441

General Information  
Phone: (505) 629-6116

Online Phone Directory  
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico  
Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

CONDITIONS

Action 488273

CONDITIONS

Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID: 15694
	Action Number: 488273
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
shanna.smith	Review of the 4th Quarterly Status Report for the ST2 AP at the Former RO Discharge Fields at the HF Sinclair Navajo Refining LLC, April to June 2025.: content satisfactory 1. Proceed with plans to conduct semi-annual groundwater monitoring, facility-wide 2. Continue monitoring of vegetation growth. 4. Submit the next quarterly update as scheduled in October 2025.	9/8/2025