

**GW - 28**

**Spill Response  
Plan Review  
Request**

**2021**

**From:** [McDill, Teresa L, EMNRD](#)  
**To:** [Barr, Leigh P EMNRD](#); [Bratcher, Mike, EMNRD](#)  
**Subject:** RE: HollyFrontier Navajo Refinery - DRAFT Release Response and Characterization Plan  
**Date:** Friday, June 18, 2021 2:37:00 PM  
**Attachments:** [HFNR Release Response and Char Plan DRAFT.docx](#)  
[image001.png](#)

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Hello Mike and Leigh,

Mike, I'm transferring this response plan to you to review. I understand HFNR staff was hoping to streamline the procedures and reduce confusion on reporting/abating releases, and would welcome any suggestions that we might have. Also, we don't necessarily have to "approve" this plan but just say we have no comments at this time. However, if the Incidents Group will not review, please let me know and I will inform HFNR.

Leigh, there is permit language that addresses how the permittee is required to report a release. So whatever management decides, we can add that language. HFNR will not be sending in an application until December 2021, so there is plenty of time to sort it out.

Thank you,  
Terry

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**From:** Barr, Leigh P EMNRD <[leighp.barr@state.nm.us](mailto:leighp.barr@state.nm.us)>  
**Sent:** Friday, June 18, 2021 11:20 AM  
**To:** McDill, Teresa L, EMNRD <[TeresaL.McDill@state.nm.us](mailto:TeresaL.McDill@state.nm.us)>  
**Subject:** FW: HollyFrontier Navajo Refinery - DRAFT Release Response and Characterization Plan

Terry,

If this is document is about spill clean-up then Mike's team needs to review. Forward to him if appropriate. As for asking HFNR for a contingency plan in the discharge permit renewal package, please hold off. As I have mentioned in the past, management is discussing when to use WQCC versus Parts 29 and 30.

Take Care,

Leigh

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**From:** McDill, Teresa L, EMNRD <[TeresaL.McDill@state.nm.us](mailto:TeresaL.McDill@state.nm.us)>  
**Sent:** Friday, June 18, 2021 10:42 AM  
**To:** Barr, Leigh P EMNRD <[leighp.barr@state.nm.us](mailto:leighp.barr@state.nm.us)>  
**Subject:** FW: HollyFrontier Navajo Refinery - DRAFT Release Response and Characterization Plan

Good morning Leigh,

Attached is the Release Response Plan as submitted to us from HFNR. They are requesting our review. Please let me know if you would like me to conduct the review.

Our current permit for HFNR does not appear to include a contingency plan for failure of the discharge system. The HFNR renewal is due in December 2021; I recommend that we include such a plan in this next round.

**20.6.2.3107 MONITORING, REPORTING, AND OTHER REQUIREMENTS:**

- A.** Each discharge plan shall provide for the following as the secretary may require:...
- (10) contingency plans to cope with failure of the discharge permit or system;

Terry

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**From:** Leik, Jason <[Jason.Leik@HollyFrontier.com](mailto:Jason.Leik@HollyFrontier.com)>

**Sent:** Friday, June 18, 2021 9:52 AM

**To:** McDill, Teresa L, EMNRD <[TeresaL.McDill@state.nm.us](mailto:TeresaL.McDill@state.nm.us)>

**Cc:** Tupou, Kawika <[Kawika.Tupou@HollyFrontier.com](mailto:Kawika.Tupou@HollyFrontier.com)>; Holder, Mike <[Michael.Holder@hollyfrontier.com](mailto:Michael.Holder@hollyfrontier.com)>

**Subject:** [EXT] HollyFrontier Navajo Refinery - DRAFT Release Response and Characterization Plan

Terry,

As we discussed on Tuesday, I have attached the Release Response and Characterization that was submitted to Carl Chavez in draft format for OCD consideration in June of 2020.

During previous telephone discussions with OCD, OCD acknowledged that 19.15.29 technically does not apply to the refinery, as the refinery is not engaged in oil & gas production as defined in the rules. However, in the absence of any other guidance or program to direct spill response activities, OCD must fall upon some governing document or guidance to evaluate cleanup and ensure HFNR is protecting the environment. To that end, we developed the attached plan.

The intent of the plan is to provide an agreed-upon document that can be used by HollyFrontier Navajo Refinery (HFNR) and OCD to guide spill response, characterization and cleanup activities at the Navajo Refinery in Artesia. The plan is needed, as the OCD spill rules (NMAC 19.15.29) are intended for oil and gas development sites. The objective of NMAC 19.15.29 is to restore these oil & gas spill sites to pre-spill (i.e. uncontaminated) conditions. In a fixed refinery that has been in operation for more than 50 years like Navajo, it is often impractical to delineate COCs to the levels in NMAC 19.15.29. More importantly, the cleanup goals in NMAC 19.15.29 do not take into account the restricted access, industrial exposure scenarios, and requirements of the RCRA regulations that are in place within the refinery. Under RCRA, a groundwater monitoring and recovery system has been implemented by the refinery, and requirements for financial assurance and eventual cleanup of the facility are included in the Refinery's RCRA permit.

The attached draft plan is intended as a starting point, and we are hoping to receive OCD input on the contents of the plan. We want this document to provide OCD with a defensible basis for

directing HFNR in spill response activities, while taking into account the factors associated with an active refinery, as described above.

We would greatly appreciate the opportunity to discuss the plan with you and address any questions or concerns you might have prior to OCD issuing a formal response to the plan. Please let me know when you are ready, and I can set up a call to discuss.

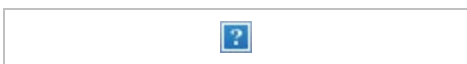
Thank you in advance for your assistance and consideration.

Jason

**Jason Leik, P.E.**  
**Environmental Specialist** | Corporate Environmental

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**From:** [Leik, Jason](#)  
**To:** [McDill, Teresa L, EMNRD](#)  
**Cc:** [Tupou, Kawika](#); [Holder, Mike](#)  
**Subject:** [EXT] HollyFrontier Navajo Refinery - DRAFT Release Response and Characterization Plan  
**Date:** Friday, June 18, 2021 9:52:19 AM  
**Attachments:** [image001.png](#)  
[HFNR Release Response and Char Plan DRAFT.docx](#)

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Terry,

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The attached draft plan is intended as a starting point, and we are hoping to receive OCD input on the contents of the plan. We want this document to provide OCD with a defensible basis for directing HFNR in spill response activities, while taking into account the factors associated with an active refinery, as described above.

We would greatly appreciate the opportunity to discuss the plan with you and address any questions or concerns you might have prior to OCD issuing a formal response to the plan. Please let me know when you are ready, and I can set up a call to discuss.

Thank you in advance for your assistance and consideration.

Jason

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**DRAFT**

**Reportable Releases Response and Characterization Plan  
June 2020**

HollyFrontier Navajo Refining LLC  
Artesia Refinery, GW-028, Artesia, New Mexico

This Reportable Releases Response and Characterization Plan provides guidance on the initial response, notification requirements, and characterization/assessment of releases at the HollyFrontier Navajo Refining LLC (HFNR) Artesia Refinery in Artesia, New Mexico (refinery) that occur within the refinery fence line or on refinery-owned effluent pipeline right of way. The goal of this plan is to protect human health and the environment in the event of a spill and provide a structured approach to determine if remediation is necessary. The refinery is subject to the renewed Discharge Permit GW-028 (GW-028) issued by New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division (OCD) on May 25, 2017 and modified on June 29, 2017, December 14, 2018, and August 30, 2019. This plan is applicable to reportable releases defined as follows, in accordance with GW-028 and 20.6.2 New Mexico Administrative Code (NMAC):

- Release of oil or other water contaminant, in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property; and/or
- Release of any constituent that exceeds the standards specified in 20.6.2.3103 NMAC, New Mexico Water Quality Control Commission (WQCC) Standards.

This plan does not apply to historical releases that are solely subject to the requirements of the HFNR Resource Conservation and Recovery Act (RCRA) permit or new releases that, with the concurrence of OCD and the New Mexico Environment Department (NMED), are managed under the RCRA corrective action program.

The general sequence of tasks for the Release Response and Characterization Plan will be as follows, with further descriptions below:

- Identify and eliminate the source of the release.
- Conduct the initial response (i.e., abatement) and notification as required.
- Perform the immediate recovery of released material (i.e., cleanup) with allowance for accessibility concerns.
- If the spill is a water stream (e.g., cooling water, waste water; further discussion below), collect a representative sample of the released material if one is not already available and compare chemical of concern (COC) concentrations to WQCC Standards (20.6.2.3103 NMAC).

- Provide notification to OCD:
  - For hydrocarbon releases, oral notification within 24 hours of the release discovery and formal written notification (“Release Notification” Form C-141) within one week of the release discovery.
  - For water stream releases, a precautionary oral notification will be provided within 24 hours of release discovery and formal written notification (Form C-141) will follow upon confirmation of WQCC Standard exceedance in released material.
  - For releases from underground lines or tanks where the release is not directly observed, an estimate of spilled material will be made. The estimate will be based on the best professional judgment of the responding member of the Environmental Department and any readily available operational data such as pumping rates or inventory discrepancies. OCD will be verbally notified as soon as a release has been confirmed and formal written notification (Form C-141) will follow.
- Determine if excavation is necessary, appropriate, and safe.
- Collect confirmation soil samples from the release area or excavation and background areas, compare the results to soil screening standards (*NMED Risk Assessment Guidance for Site Investigations and Remediation, current version*).
- Determine if additional response/corrective action is required based on risks to site workers, likelihood of additional significant impacts to groundwater, overlap with RCRA-regulated areas, and future intended use of the area.

A copy of “Release Notification” Form C-141 is included as Attachment A. A Release Response Guidance Procedural Checklist is included as Attachment B.

## **1.0 INITIAL RELEASE RESPONSE AND NOTIFICATION**

Initial release abatement/cleanup activities will be conducted immediately upon discovery of a release. If practicable, released liquids should be immediately recovered (e.g., vacuum truck, pump, etc.) while released heavy oils (e.g., asphalt and gas-oil) may be recovered via excavation and/or followed with treatment with microbial amendments designed to reduce hydrocarbon concentrations via natural biodegradation processes. The determination to perform excavation will be made based on consideration of health and safety concerns related to refinery personnel exposure and hazards caused by the spilled material, minimization of the spread of impact, accessibility due to refinery operations, and overall environment benefit. Excavation within the refinery fence line, regardless of location, is inherently hazardous, and will only be performed where the above considerations mandate removal of impacted materials. It may also be appropriate to collect representative samples of the released substance for laboratory analysis. A representative sample should be collected of any released material consisting primarily of water (e.g., wastewater, cooling water, etc.) or any released material of which the general composition is not known.



Release notifications will be performed in accordance with Section 2.C. of GW-028 as follows:

- Oral Notification: Within 24 hours of the release discovery, call the OCD district office and/or the Environmental Bureau Chief to report the release. The oral notification should include the following information:
  - Name, address, and telephone number of the person or persons in charge of the facility, as well as of the Permittee;
  - Name and location of the facility;
  - Date, time, location, and duration of the release;
  - Source and cause of the release;
  - Description of the release, including its chemical composition;
  - Estimated volume of the release; and
  - Any corrective or abatement actions taken to mitigate immediate environmental damage from the release.
- Written Notification: Within one week of the release discovery, send an initial written notification to the OCD district office and the Environmental Bureau Chief. The written notification should include “Release Notification” Form C-141 and any appropriate additions or corrections to the information contained in the prior oral notification.

## **2.0 INITIAL INSPECTION AND EXCAVATION**

After initial recovery (i.e., abatement/cleanup) is complete, the potentially affected soils beneath the release should be inspected to determine if excavation of shallow soils is appropriate. For all releases, potential hazards will be discussed with the HFNR Health and Safety Department before entering and assessing the release area.

In the case of a release of fluids other than petroleum hydrocarbons (e.g. wastewater, cooling water, etc.), observations of potential impacts (i.e., odor, staining, or elevated photoionization detector [PID] readings) may not be useful to determine if excavation is appropriate. Thus, the response will proceed as follows:

1. A representative sample of the released material will be collected from the release source and submitted for laboratory analysis of applicable WQCC constituents (20.6.2.3103 NMAC) in accordance with Table 1.
2. The extent of the release will be mapped on site plans/aerial photographs and stakes/flags will be used to demarcate the release boundaries. The release area may be defined by the presence of wet soil if no other indications of potential impacts are present (best professional judgement).

3. Surface soil samples will be collected for laboratory analysis as discussed in Section 3.0 if the released material contains any COCs at concentrations in exceedance of WQCC Standards. Excavation of surface soils may be conducted if laboratory results exceed applicable soil screening standards (Section 4.0).

In the case of a release of petroleum hydrocarbons, visible soil contamination will be excavated as determined viable and necessary or treated in-situ. Any excavated material will be segregated based on visible impacts or odor and will be characterized for disposal or potential reuse. The response will proceed as follows:

1. The extent of the release will be mapped on site plans/aerial photographs and stakes/flags will be used to demarcate the release boundaries.
2. Surface soils will be inspected for potential hydrocarbon impacts via observations of hydrocarbon staining or odor (best professional judgement) and/or elevated PID readings.
3. The release area will be inspected to ensure excavation will not endanger any sensitive infrastructure (e.g. buried pipelines, buried cables, storage tanks, electric lines, buildings, etc.).
4. Excavation of surface soils will be conducted if warranted based on Steps 2 and 3 until no impacts are observed or until practicable.
5. Confirmation soil samples will be collected for laboratory analysis as discussed in Section 3.0.

Wastes generated as a result of cleanup activities will be properly managed in accordance with all local, state, and federal regulations and refinery procedures.

### **3.0 SOIL CHARACTERIZATION**

As appropriate (e.g., based on the size, nature, and accessibility of the spill area), discrete soil samples will be collected from the affected area for laboratory analysis. Background area samples may be collected at a frequency of 10% of total spill area samples, up to a maximum of 5 samples, for laboratory analysis of inorganics, including applicable metals and anions, to distinguish background or historic/preexisting conditions. For releases of fluids other than petroleum hydrocarbons (i.e. wastewater, cooling water, etc.), laboratory analysis of soil samples will be limited to analytes that exceed their applicable WQCC in the released material, as discussed in Section 2.0 and shown in Table 1. For hydrocarbon releases, selection of the precise sample location may be determined by using a PID. Releases that are not expected to contain petroleum hydrocarbons will be characterized by laboratory analysis.

Following initial response activities, confirmation soil samples will be collected to determine if initial cleanup activities were sufficient in the following manner:

- For releases without initial excavation – 2 samples minimum

- Initial surface soil confirmation samples will be collected at a rate of one sample for every 400 square feet of surface soil potentially affected by the release (biased to the soil that is most impacted). Surface soil samples will be collected from 0 to 0.5 feet below ground surface (bgs).
- In situations where spilled constituents are not prevalent throughout the refinery, surface soil confirmation samples may be collected every 20 linear feet immediately (i.e., one foot) outside the perimeter of affected soils in an effort to delineate the lateral extent of the release in the event the initial soil sample analytical results exceeded soil screening standards (Section 4.0). For constituents that are likely to be ubiquitous throughout the refinery (for example, total petroleum hydrocarbons [TPH], benzene, toluene, ethylbenzene, and xylenes [BTEX], and chloride) due to past and current site operations, lateral delineation of spills may not be completed within the refinery. Results of characterization samples will be retained in refinery records and addressed as part of remedy actions under the RCRA corrective action program.
- For releases with initial excavation – 2 samples minimum
  - Initial confirmation soil samples will be collected from the bottom of the excavation at a rate of one sample for every 400 square feet of excavation (biased to the soil that is most impacted).
  - Soil confirmation samples will also be collected every 20 linear feet along the midpoint of the sidewall of the excavation if the excavation is at least 0.5 feet in depth. If the excavation is less than 0.5 feet in depth, soil samples will be collected every 20 linear feet immediately (i.e., one foot) outside the perimeter of the excavation from 0 to 0.5 feet bgs to delineate the lateral extent of the release.
- For releases to ditches, soil samples should be collected every 20 linear feet from 0 to 0.5 feet bgs and analyzed separately regardless if initial excavation is completed. Samples will be collected after completion of initial excavation, if applicable.
- To evaluate background or historic/preexisting soil concentrations of inorganics, soil samples may be collected from locations unaffected by the release at a frequency of 10% of total spill area samples, up to a maximum of 5 samples.
- Additional samples may be required for further assessment where deemed necessary.
- For releases that occur within a RCRA permitted area (Area of Concern [AOC] or Solid Waste Management Unit [SWMU]), soil sampling will be limited to surface evaluation to determine if excavation is warranted to ensure worker protection during additional activities.
- Soil samples will be analyzed according to Table 1.

For releases where excavation is not practicable (e.g. located within immediate proximity to sensitive infrastructure, etc.), additional assessment may be conducted as discussed in Section 5.0.

#### **4.0 SOIL SCREENING STANDARDS**

Soil analytical results will be compared to screening standards dependent upon the location of the release. The screening standards and subsequent actions are described for release each location as follows:

- Releases that do not occur within a RCRA permitted area (AOC or SWMU):
  - Soil analytical results will be compared to WQCC Standards with a 20x dilution attenuation factor (DAF) or the maximum background concentration. WQCC Standards with a 20x DAF will be developed consistent with Equation 55 of the New Mexico Environment Department (NMED) 2019 *Risk Assessment Guidance for Site Investigations and Remediation* (2019 Risk Guidance, or current version) for Soil Screening Level (SSL) for Leaching to Groundwater Pathway.
  - If soil analytical results are below WQCC Standards with a 20x DAF and/or background concentrations, no further action will be necessary.
  - If soil analytical results exceed WQCC Standards with a 20x DAF and/or background concentrations, a determination will be made to conduct additional response action and confirmation sampling. If it is determined that limited additional response action (e.g., over-excavation) is needed based on imminent risk to refinery personnel or significant new or additional impacts to groundwater, additional confirmation soil sampling and data evaluation will be conducted after completion of additional response actions as discussed above. Otherwise, additional assessment may be required as discussed in Section 5.0.
- Releases that occur within a RCRA permitted area (AOC or SWMU) are located within the refinery security/control:
  - Soil analytical results will be compared to the lowest Industrial/Occupational SSL provided in Table A-1 of the NMED 2019 Risk Guidance (or current update).
  - If soil analytical results exceed NMED Industrial/Occupational SSLs, excavation will be performed to remove visible impacts or up to one foot bgs. The excavation will be backfilled with at least one foot of clean, uncompacted soil to protect workers during routine operations and maintenance activities in accordance with NMED 2019 Risk Guidance (or current update). The residual soil impacts will be managed under the RCRA corrective action program administered by the NMED.

#### **5.0 ADDITIONAL ASSESSMENT**

If soil COC concentrations remain above soil screening standards and/or background concentrations, soil samples may be analyzed using synthetic precipitation leaching potential (SPLP) to evaluate the potential for COCs to leach from soil to groundwater at concentrations in exceedance of WQCC Standards. If SPLP results are below WQCC Standards, no further action will be necessary. If SPLP results are above WQCC Standards, a determination will be made if additional immediate remediation is warranted, or, if based on existing groundwater conditions in the vicinity and downgradient of the spill, existing monitoring and recovery efforts are sufficient to prevent significant additional groundwater impacts as a result of the spill. Groundwater monitoring may utilize existing monitor wells that are near the affected soil. The monitoring activities and schedule will be incorporated into the facility-wide groundwater monitoring program, as needed.

An evaluation of potential risk and development of site-specific SSLs may also be performed in accordance with the NMED 2019 Risk Guidance (or current version). Based on the results of the risk evaluation, either no further action will be required or additional actions will be completed.

Additional response action or assessment may be prohibited due to the proximity of the affected soil to existing infrastructure. For such cases, release response actions and assessment results will be retained in refinery records and affected soil will be addressed as part of remedy actions under the RCRA corrective action program.

## **6.0 REPORTING**

Response actions and assessment results will be documented in the follow-up reports to the C-141 Form and in the Annual Discharge Report submitted to OCD by June 15 of each calendar year in accordance with Section 2.E of GW-028. The following information will be included in the Annual Discharge Report, at a minimum: description of release response and characterization activities; site plans/aerial photographs depicting the soil sample locations, affected area, and excavation limits; comparison of laboratory analytical results and soil screening standards; laboratory analytical reports; and waste manifests.

## **7.0 PLAN UPDATES**

This plan will be reviewed on an annual basis. Any changes will be provided to OCD.



**Table 1**

**Attachment A**

**Form C-141**



**Attachment B**

**Release Response Guidance Procedural Checklist**