WRG 2016

VanHorn, Kristen, NMENV

From: VanHorn, Kristen, NMENV
Sent: Friday, April 15, 2016 2:57 PM
To: 'Riege, Ed'; Cobrain, Dave, NMENV; Chavez, Carl J, EMNRD; Dhawan, Neelam, NMENV
Cc: Hains, Allen; Scott Crouch
Subject: RE: Chemical analyses for fresh spills of Crude and/or petroleum products

Hi Ed,
We have questions related to the reasoning behind the proposed analyses and the procedures and methods the facility uses to clean up fresh spills in order to inform any decisions the agencies may make regarding Western's request. Please see the following questions:

Regarding the list of proposed chemical analyses:

1. Why were data from SWMUs used to come up with the list of proposed analyses for fresh spills?
2. What was the basis for the comparison?
3. Are there data available related to fresh spills?
4. What are the constituents of concern for the components of crude oil and petroleum products (rather than rely on data from disposal units)?
5. What are the other petroleum products that may spill?
    a. Does that list include process wastewater?
    b. Intermediate products?

Regarding the facility's response action for new spills:

1. What are the standard procedures used to: contain spill, recover spilled liquid, recover contaminated media, conduct confirmation sampling?
2. Does the facility have a standard protocol that is followed for all releases?
3. What is the decision process for recovering contaminated soil?
    a. What is the basis for determining whether or not to conduct soil removal?
    b. What is the basis for determining if addressing new spill or encountering old spill in the process of cleaning up new spill?
4. How are samples collected (both for waste characterization and for confirmation sampling)? And
    a. How is field screening conducted (visual, instruments)?
    b. What field instruments are used (PID)?
    c. What is used to collect samples (scoop, shovel, encore sampler)?
    d. How are soil samples collected for VOCs?
5. When a spill or release occurs, how does the facility currently decide what to analyze for?
6. How is the spill and contaminated media delineated? And
    a. Does the facility produce a map or figure for the spill area?
    b. Take photographs?
7. How are stockpiles of contaminated soil contained and maintained?
8. What is the criteria use for spacing of confirmation samples? And
    a. When confirmation samples are collected, does the facility report the information to the agencies in the final release report along with the associated analytical reports?
9. When berms are affected, are the berms removed and replaced or samples collected to determine if the berm is contaminated?
10. What are the criteria for collecting waste characterization samples (number of samples per cubic yard)?
    a. Are samples composited?
11. Generally, what is the timeline for excavating and containerizing petroleum soaked soil, surface water, snow, etc. from the time the spill occurs?

12. What are the facility's remedial objectives for spill cleanup (e.g. TPH, PAH levels below residential screening levels or below DAF levels)?
13. Does the facility document the final disposition of all excavated contaminated soils and provide the information to the agencies?
14. How does the facility decide to (or not) submit remediation plans to address spills or releases?

Thank you for taking the time to answer these questions. Once NMED and OCD review the answers, we will revisit Western's request.

Regarding the small spills where you would like to collect confirmation samples – which spills are you referring to? If we know what spilled, we can help you narrow down the analytical suites.

Please let me know if you have questions or need any clarification regarding our questions.

Thank you,
Kristen

From: Riege, Ed [mailto:Ed.Riege@wnr.com]
Sent: Monday, April 11, 2016 4:16 PM
To: VanHorn, Kristen, NMENV; Cobrain, Dave, NMENV; Chavez, Carl J, EMNRD
Cc: Hains, Allen; Scott Crouch
Subject: Chemical analyses for fresh spills of Crude and/or petroleum products

Kristen, Carl:

Pursuant to our conversation last week with Kristen and Dave, we would like to develop a list of chemical analyses that could be used to demonstrate new spills of crude oil and/or petroleum products have been adequately cleaned up to prevent the spill from creating a future potential Area of Concern. When dealing with releases of crude and/or petroleum products in refineries, there seems to be a fairly common list of constituents that have concentrations in soils over cleanup levels. We reviewed the Gallup analyses for soil and groundwater samples collected at SMWUs 1, 10 and 14 and the list of the more common constituents with concentrations over screening levels is shown below. This list is consistent with what Scott has seen in many different refineries and we believe a reasonable list to target in confirmation sampling for fresh spills of crude oil and petroleum products. You will note that all but one (2,4-dimethylphenol) of the individual constituents can be detected running 8260.

<u>Primary organic constituents detected in soils and/or groundwater above screening levels at SWMU 1, SWMU 10 and SWMU 14</u>

1,2,4-Trimethlybenzene (8260), 1,3,5-trimethylbenzene(8260), 2,4-dimethylphenol (8270), 1-Methylnaphthalene(8260), 2-Methylnaphthalene(8260), Benzene(8260), Ethylbenzene(8260), Naphthalene(8260), Toluene(8260), Xylenes(8260), Diesel Range Organics (DRO), and Motor Oil Range Organics (MRO)

<u>Target Compound List for petroleum products/crude oil spill confirmation sampling</u>

- Method 8260 VOCs (1,2,4-Trimethlybenzene, 1,3,5-trimethylbenzene, 1-Methylnaphthalene, 2-Methylnaphthalene, Benzene, Ethylbenzene, Naphthalene, Toluene, and Xylenes)
- Method 8015 (GRO, DRO, and MRO)

Concerning metals, we believe the metals concentrations in our crude and resulting petroleum products is very low, and certainly very low in comparison to cleanup levels. In contrast, constituents like benzene are present at much higher concentrations and have much lower cleanup levels than metals. There is no partitioning of constituents at the fresh

spills - if you clean up the benzene to the very low action levels, then you have also removed any metals to very low concentrations.

Please let us know if you have questions and we look forward to a timely response as we currently have a few small spills for which we would like to collect confirmation samples.

Thanks,
Ed

Ed Riege MPH

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