

TAD21

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Sent: Wednesday, March 14, 2001 11:57 AM
Attach: vickie_maranville.vcf
Subject: DP Tank Farm Review

I have conducted a preliminary review of the DP Tank Farm field investigation activities conducted at PRS 21-029. I have reviewed all the deviations and omissions from the approved Phase II RFI Investigation and have the following comments.

1. The field screening information (with the exception of the immunoassay information) and field documentation is missing. There is not sufficient information to prepare the required boring logs (subsurface geologic information is basically nonexistent).
2. Borehole logs are unacceptable as prepared because there is not enough information to construct them, they were prepared several months following the field investigation and were prepared and reviewed by the same person who was not a regular member of the field team. Therefore, the boring logs are unacceptable and can not be part of the submittal or NMED Administrative Record. However, NMED will allow some of the field work to stand (this was discussed during the NMED/LANL meeting on 3/14/01).
3. There appears to be no QA data for the sampling program. This is unacceptable.
4. PID information provided is not useable because the instrument calibration logs are not provided and field notes indicate that the instrument was not functioning properly.
5. When comparing fracture map sample locations to final maps, several borehole and auger locations do not match. It is unclear if the locations that were intended to intersect fracture locations were actually properly located.

In addition to the work identified by LANL to be re-done, NMED is requiring the following locations be resampled or redrilled:

DP Canyon - East of DP Tank Farm
 21-11124 (sediment sample location)
 21-11183 (hand auger)
 21-11185 (hand auger)

DP Tank Farm



10596

3/14/2001

Vicks - you
 need to
 mark your
 samples on
 the
 Bink on
 these
 maps.

21-11143 (borehole)
21-11144 (borehole)
21-11145 (borehole)
21-11146 (borehole)
21-11170 (borehole)
21-11164/21-11172 (sediment) and additional sample down gradient
down gradient sample for 21-11165/21-11173

Please let me know if you have any additional questions or concerns.

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Summary
Evaluation of Field and Analytical Data
From DP Tank Farm FY00 RFI

General Comments:

1. QA/QC samples were not collected from any sample locations during the investigation and will need to be collected from resampled locations.
2. For a majority of the sample locations, the required field documentation was not collected and/or documented including: descriptions of visual and olfactory observations for sample location, photographs of sample, surface fracture and sample fracture information, subsurface geologic descriptions and borehole logs, radiation screening, field instrument calibration logs, etc. As a result, this information will have to be collected from the sample locations that do require resampling and from those locations that don't require resampling. The borehole logs were prepared well after completion of the fieldwork based on insufficient field documentation. In addition, the same individual prepared the logs and subsequently reviewed them. This individual was not part of the regular field team.
3. The auger sample locations initially chosen in the DP Canyon Stream Channel focused on defining source, nature, and extent of the hydrocarbon contamination in the channel. Auger samples locations were spaced to fall in and on either side of fractures. Therefore, the number these sample locations requiring resampling cannot be reduced and the identical location must be resampled.
4. The geophysical survey completed prior to the sampling is not documented in field logs or FSR. Contractor was to have compared survey results to former DP Tank Farm engineering drawings and bias samples accordingly.

Total Number and Type of Sample Locations Requiring Resampling:

- **Sediment Locations: 6 out of 15, plus two additional sediment samples downgradient of storm drain locations 21-11164 and 21-11165 due to detects of TPH in these samples.**
- **Auger Hole Locations: 18 out of 24**
- **Borehole Locations: 8 out of 16**

Rationale for Resampling

Of all the sample locations requiring resampling in the western area, only the two angle boreholes, (sample locations 21-11170 and 21-11171) would require resampling because of rejected analytical data (diesel range organics and kerosene) critical to the investigation in addition to omissions described in items #1 and #2 above. The remainder of the rejected data either involved a chemical not considered a COPC or was associated with an incorrect sample location. The two storm drain sediment samples to be collected down gradient of locations 21-11164 and 21-11165 are required by the RSI Response to determine extent.

Of the ten sample locations requiring resampling in the eastern area, eight of the locations, (sample locations 21—11176, -11177, -11178, -11180, -11182, -11183, -11184, and -11186) would require resampling because of rejected analytical data critical to the investigation in addition to omissions described in items #1 and #2 above. Resampling of locations 21-11124 and 21-11185 is based on inadequate field documentation at both locations per NMED. The remainder of the rejected data involved a chemical not considered a COPC.

Western Area Investigation

DP Canyon Stream Channel Sediment Sample Locations (supplement DP Reach Report): 0 locations to be resampled

- 21-11125 – no resampling
- 21-11126 – no resampling
- 21-11127 – no resampling
- 21-11128 – no resampling

Hand Auger Sample Locations – Fill Ports: 1 location to be resampled (including QA/QC)

- **21-11140 – resample, wrong location sampled. Contractor was to compare geophysical survey results to former site drawings and locate this sample in vicinity of anomaly observed on survey results.**
- 21-11141 – no resampling

Storm Drain Sediment Sample Locations: 4 locations to be resampled along with 2 new locations (including QA/QC)

- 21-11129 (west drainage) – no resampling
- **21-11164/21-11172 (west drainage) – resample per NMED, insufficient field documentation and screening**
- **New location downgradient of 21-11164**
- 21-11130 (middle drainage) – no resampling
- 21-11165/21-11173 (middle drainage) – no resampling
- **New location downgradient of 21-11165**
- **21-11131 (east drainage) – resample, wrong location sampled**
- **21-11166/21-11174 - resample, wrong location sampled**
- **21-11167/21-11175 - resample, wrong location sampled**

Background Sediment Sample Location (below Verde Ridge): 1 location to be resampled (including QA/QC)

- **21-11139 – resample, sample collection logs/field logbooks unclear as to sample location**

DP Canyon Stream Channel Auger Sample Locations: 9 locations to be resampled (including QA/QC)

- **21-11132 – resample, samples never submitted to fixed lab, field data poorly documented, need to define extent, no subsurface geologic information/borehole log**
- **21-11133 – resample, sample collection logs/field logbooks unclear as to sample location, field data poorly documented, no subsurface geologic information/borehole log**
- **21-11134/21-11179 – resample, sample collection logs/field logbooks unclear as to sample location, field data poorly documented, no subsurface geologic information/borehole log**
- **21-11135 – resample, sample collection logs/field logbooks incomplete, extent not defined, no subsurface geologic information/borehole log**
- **21-11136 – resample, sample collection logs/field logbooks incomplete, no subsurface geologic information/borehole log**
- **21-11137 – resample, sample collection logs/field logbooks incomplete and unclear, no subsurface geologic information/borehole log, all SVOC data rejected for bottom sample**
- **21-11138/21-11168 - resample, sample collection logs/field logbooks unclear as to sample location, field data poorly documented, no subsurface geologic information/borehole log, extent not defined. Sample on wrong side of stream channel.**
- 21-11142 – no resampling
- 21-11157 – no resampling
- 21-11162 – no resampling
- **21-11163 – resample, Fed Ex lost the samples, contractor never resampled location, plus inadequate field documentation (fracture)**
- **21-11169 - resample, sample collection logs/field logbooks incomplete, no subsurface geologic information/borehole log (key location for western extent in stream channel)**

Borehole Sample Locations: 8 locations to be resampled (including QA/QC)

Mesa Top/North of Perimeter Road and Fence:

- **21-11144 – resample per NMED, sample collection logs/field logbooks incomplete, field data poorly documented, no documentation regarding location with respect to fractures, no subsurface geologic information/borehole log, and not deep enough to define extent per NMED, (should be extended to approximately 70 - 75” bgs).**
- **21-11145 – resample per NMED, sample collection logs/field logbooks incomplete, field data poorly documented, no documentation regarding location with respect to fractures, no subsurface geologic information/borehole log, and not deep enough to define extent per NMED, (should be extended to approximately 70 - 75” bgs).**
- **21-11146 – resample per NMED, sample collection logs/field logbooks incomplete, field data poorly documented, no documentation regarding location with respect to fractures, no subsurface geologic information/borehole log, and not deep enough to define extent per NMED, (should be extended to approximately 70 - 75” bgs).**
- 21-11147 – no resampling
- 21-11148 – no resampling
- 21-11153 – no resampling
- 21-11154 – no resampling
- 21-11155 – no resampling

Western Valve Box:

- **21-11152 – resample, wrong location sampled**

Former Storage Tank Locations:

- **21-11149 (Tank #9) – resample, contamination observed from 4’ – 104’ below ground surface with no QA/QC data, sample collection logs/field logbooks incomplete, no subsurface geologic information**
- 21-11150 (Tank #10) – no resampling
- 21-11151 (Tank #6) – no resampling

West Fill Station:

- **21-11143 – resample per NMED, sample collection logs/field logbooks incomplete, field data poorly documented, no subsurface geologic information/borehole log, may not be deep enough to define extent.**

West of Tank #9:

- 21-11156 – no resampling

Angled Boreholes West of Perimeter Road:

- **21-11170* – resample per NMED, sample collection logs/field logbooks incomplete, field data poorly documented, no subsurface geologic information/borehole log, and rejected data**
- **21-11171* – resample, sample collection logs/field logbooks incomplete, field data poorly documented, no subsurface geologic information/borehole log, and all diesel-related organics (DRO) data rejected**

* - Rejected data critical to investigation

Eastern Area

DP Canyon Stream Channel Sediment Sample Locations (supplement DP Reach Report): 1 locations to be resampled

- 21-11123 – no resampling
- **21-11124 – resample per NMED, sample collection logs/field logbooks unclear and incomplete, field data poorly documented**

DP Canyon Stream Channel Sediment Sample Locations (TPH fingerprint only): 0 locations to be resampled

- 21-11161 – no resampling

DP Canyon Stream Channel Auger Sample Locations: 9 locations to be resampled (including QA/QC)

- **21-11176* - resample, sample collection logs/field logbooks incomplete and unclear, no subsurface geologic information/borehole log, kerosene and DRO data rejected**
- **21-11177* - resample, sample collection logs/field logbooks incomplete and unclear, no subsurface geologic information/borehole log, kerosene, TAL metals and DRO data rejected**
- **21-11178* - resample, sample collection logs/field logbooks incomplete and unclear, no subsurface geologic information/borehole log, kerosene, TAL metals and DRO data rejected**
- **21-11180* - resample, sample collection logs/field logbooks incomplete and unclear, no subsurface geologic information/borehole log, extent not defined**
- 21-11181 – no resampling
- **21-11182* - resample, sample collection logs/field logbooks incomplete and unclear, no subsurface geologic information/borehole log, extent not defined (DRO), Stoddard solvent and gasoline-related organics (GRO) data rejected**
- **21-11183* – resample per NMED, sample collection logs/field logbooks incomplete and unclear, no subsurface geologic information/borehole log**
- **21-11184* - resample, sample collection logs/field logbooks incomplete and unclear, no subsurface geologic information/borehole log, extent not defined (DRO), Stoddard solvent and gasoline-related organics (GRO) data rejected**
- **21-11185 – resample per NMED, sample collection logs/field logbooks incomplete and unclear, no subsurface geologic information/borehole log**

- **21-11186* – resample, sample collection logs/field logbooks incomplete and unclear, no subsurface geologic information/borehole log, extent not defined Stoddard solvent and gasoline-related organics (GRO) data rejected**

* - Rejected data critical to investigation