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MEMORANDUM

To: Eric Traynor, IDEQ State Office, Boise
Bruce Wicherski, IDEQ State Office, Boise
Steve Gill, IDEQ Regional Office, Coeur d'Alene
Terri Griffith, USEPA Region 10, Seattle
Raymond Wu, USEPA Region 10, Seattle
Deborah Johnston, USEPA Region 10, Seattle

From: Jon Munkers, TerraGraphics, Boise
Rachel Gibeault, TerraGraphics, Boise

Date: November 7, 2014

Project Code: 14072-01

Subject: **Response to IDEQ and USEPA Comments for the Sampling and Analysis Plan (SAP)/Quality Assurance Project Plan (QAPP) for 217 & 317 East 6th Street Moscow, Idaho, Phase II Environmental Site Assessment**

This memorandum summarizes the response to comments for the Sampling and Analysis Plan (SAP)/Quality Assurance Project Plan (QAPP) for 217 & 317 East 6th Street Moscow, Idaho Phase II Environmental Site Assessment. Presented below are the comments IDEQ and USEPA provided in track changes and comments in the Draft Microsoft® Word® document. TerraGraphics shows a specific comment (in bold) and how we incorporated a response into the final report is below each comment. IDEQ presented several overarching themes in comments that we addressed below. TerraGraphics provided references, when necessary, to show how we incorporated our responses into the document.

IDEQ: The revision number should be included. The page header should also include the date and revision number.

The revision number was included and the page header also includes the date and revision number.

IDEQ: Project organization theme. Eric's appropriate title is Quality Assurance Officer. Mark's last name is Clough not Cough.

TerraGraphics updated the: Approval Form, the Distribution List, Figure 1. Organizational Chart, and Table 1. Roles and Responsibilities to provide a clearer and cohesive understanding of all parties involved and their roles in regards to the project.

IDEQ: Isn't this project also part of an EPA Cleanup Grant and VCP?

TerraGraphics added VCP information at the end of Section 1.2.1.

USEPA BF: Since the UST is documented as being on-site but no sampling for petroleum occurred, please add a couple of sentences as to why no sampling for petroleum products is necessary.

TerraGraphics added information regarding removing the UST and soil sampling that Tetra Tech completed in 2012 (referenced as Tetra Tech 2013).

IDEQ: Unclear what the timing of these activities are in relation to sampling, etc. Will there be two mobilizations for well installation and two rounds of sampling, two rounds of survey (one to determine the direction of flow and the other after the final well is installed)?

TerraGraphics will conduct two surveys: one prior to installing the well and an official one after the new wells are installed. However, there will only be one sampling event.

USEPA BF: Third Street is misspelled on the map.

TerraGraphics corrected this mistake.

USEPA BF: Revise the schedule for sampling as it cannot occur before approval (after October 2014).

TerraGraphics changed October to November in Table 2.

USEPA BF: The following information does NOT identify the steps in the DQO process. The DQO process is defined by providing the information in each of the seven steps (see Figure 2 of the reference provided). What this document provides is only the information for Step 6 – Specify Performance or Acceptance Criteria.

TerraGraphics added in the seven DQO steps. This process is now presented in Sections 1.4.1 through 1.4.7.

IDEQ: Data quality and assurance theme.

TerraGraphics contacted Anatek Labs to confirm their data quality objectives for each analyses. We updated: Table 3. Quality Control Requirements for Analyses, Section 1.4.2.1 Precision, Section 1.4.2.2 Accuracy/Bias, and Section 1.6.3 Data Handling Records.

USEPA BF: The final approval will be recommended upon receipt of PQL/MRL confirmation of Dieldrin & DDT analytes in table 4 and the certifications for all the different tests mentioned.

IDEQ: What about where the [mercury] MRL doesn't meet the required criteria? Dieldrin?

TerraGraphics contacted Anatek Labs regarding mercury and dieldrin reporting limits. A representative from Anatek stated that TerraGraphics must request and make a clear note that a lower reporting limit for mercury is required so the lab can properly dilute the sample. For dieldrin, the lab can attempt to get the reporting limit down to meet the MCL. However, it depends upon the soil--the cleaner the matrix, the easier it is for the lab to push the reporting limit lower. "Clean" soil lacks heavy petroleum contamination, humic acids, high organic acid content, etc. that cause organic interferences.

USEPA BF: Didn't see this in the table [4]?

TerraGraphics removed MA and NA from the table notes. However, we retained NPDWR since that is part of the last column heading of Table 4.

IDEQ: EPA, City of Moscow [in sections 1.6 and 1.6.3]?

USEPA and the City have been included in sections 1.6 and 1.6.3.

USEPA BF: The document uses interchangeably City and Moscow. Recommend using City of Moscow in all instances.

TerraGraphics changed these references to be consistently named throughout the document.

IDEQ: Is this the data needed to complete the level 2A data validation?

Yes. This is taken from Appendix A, Sections 1.2 of USEPA's *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (USEPA 2009).

USEPA BF: Figure 3 only shows 8 boring locations. Where will the other borings be located? Show all boring locations on Figure 3. DU2 is not shown on Figure 3. Include the boundaries of DU2 on the map. DU3 is not shown on Figure 3. Include the boundaries of DU3 on the map.

TerraGraphics updated Figure 3 to reflect these changes.

IDEQ: These aren't shown in Figure 3.

TerraGraphics updated Figure 3 to reflect the sample borings in DU3.

USEPA BF: What constituents will the groundwater be analyzed for?

TerraGraphics added the constituents in Section 2.1.

IDEQ: There are no procedure or accuracy requirements stated for the elevation or location aspects of this data collection, primarily the survey [referring to the last bullet point in Section 2.1].

The surveyor will set an arbitrary point of reference at the site using a handheld GPS unit to establish a relative groundwater gradient within 0.10 feet. TerraGraphics will create a groundwater gradient map using the Idaho State plain NAD83. TerraGraphics will survey the site twice: 1) prior to installing additional monitoring wells at the site, and 2) after installing and sampling all site monitoring wells.

IDEQ: The response did not indicate the locational accuracy (horizontal and vertical) of the GPS unit which will be used and the data which it generates. The datum cited is State Plane not State plain. Will a professional licensed surveyor be used?

TerraGraphics included a horizontal and vertical location accuracy of 0.1 feet. We also changed the type of GPS to be of survey-grade quality instead of a handheld since it will produce better accuracy. We corrected Plane. We will not use a professional licensed surveyor.

IDEQ: What information did we provide for this determination [in Section 2.2.1]?

Based upon previous assessment activities, TerraGraphics does not expect IDW to be considered hazardous waste.

IDEQ: Water sampling method theme [Section 2.2.2].

TerraGraphics accepted Steve Gill's recommendation of referencing USEPA 540/S-95/504, Low-flow (Minimal Drawdown) Ground-water Sampling Procedures instead of referencing ASTM D-4448-01.

Additionally, we updated the Standard Method 4500: Standard Method for the Examination of Water and Waste Water to reference the specific sections within the method that relate to nutrients sampling for NH₃, TKN, and total P. We also added it to the reference section and analytical methods requirements (Section 2.4).

IDEQ: The low flow sampling procedure should indicate three consecutive readings for stabilization not two. Also, there is no mention of any minimal drawdown criteria or measuring water levels during the purging procedure. Also, the purge rate should be low enough to minimize drawdown (less than 0.3 feet ideally) and yet turn over at least 1 flow cell volume between readings.

TerraGraphics made these changes.

IDEQ: Should this be an amber bottle [in reference to USEPA Method 8081A: dieldrin and DDT in water in Table 6 in Section 2.4]?

TerraGraphics contacted Anatek Labs to confirm what type of sample container they will send for the project. Anatek recommends using a glass bottle with a Teflon® lined cap for USEPA Method 8081A.

USEPA BF: [Soil for USEPA 6020A] Should be cooled to 4oC. Change Table 6 (see SOP for Anatek Labs attached as Appendix B).

TerraGraphics changed the preservation requirement in Table 6.

IDEQ: I don't think that unpreserved soil samples can be held for these periods of time without either immediate analysis or preservation? Seems like these forms of nitrogen are pretty changeable [Table 6 in Section 2.4 regarding nutrients in soil].

TerraGraphics contacted Anatek Labs to confirm the preservation and holding times for NH₃, TKN, and total P in soil. Anatek provided TerraGraphics with a link to Code of Federal Regulations Chapter 40 found at <http://www.ecfr.gov/cgi-bin/text-idx?SID=001b5bab5a1a7d1463d3c26da5adc28d&node=se40.23.136_13&rgn=div8>. Table II—Required Containers, Preservation Techniques, and Holding Times confirms the holding time and preservation for nutrients in soil.

IDEQ: Isn't the rinsate blank collected after decon [in Section 2.5.1]?

TerraGraphics clarified this language to specify that the rinsate blank is collected after decon.

IDEQ: What field instruments will be used [Section 2.6]? Field instruments to be used also includes a GPS unit.

TerraGraphics will use flow through cell conductivity probe, temperature, pH, dissolved oxygen, e-tape, and a survey-grade GPS unit. We changed the language to specify field instruments.

IDEQ: This is different than making decisions about remediation. It is more than reference info, especially if it will be used with the data being gathered. If data were gathered pursuant to a QAPP the QAPP should be referenced. Some judgement should be made as to the acceptability of the data if it is going to be used along with the new data for decision making [Table 7 in Section 2.7].

TerraGraphics will reference the QAPPs for the other data collected to ensure that the data is of the same quality.

USEPA BF: Do a certain percentage of the samples need to be validated to Stage 4?

It is TerraGraphics' opinion that data does not need to go through Stage 4 validation since Stage 2A validation will provide information regarding the accuracy, precision, and comparability of the data to determine if it is usable for decision making for site cleanup. No language has been changed in the SAP/QAPP.

IDEQ: This will be included in the assessment report [in regards to TerraGraphics' Internal QA/QC memorandum in Section 4.1.2]?

We can add this in the report if the memorandum also goes through TerraGraphics' QA/QC. Otherwise, it will remain as an internal memorandum with the summary results only presented in the assessment report.

IDEQ: The complete TG internal QA memo should be included in the assessment report not just the summary.

TerraGraphics will include the internal QA/QC memorandum as an Appendix to the data summary report at IDEQ's request.

IDEQ: Inserted the low-flow reference.

Thanks.

Alisa J. Anderson

From: Jon Munkers <Jon.Munkers@terragraphics.com>
Sent: Thursday, November 06, 2014 1:46 PM
To: Bruce.Wicherski@deq.idaho.gov; Steve.Gill@deq.idaho.gov; Eric.Traynor@deq.idaho.gov
Cc: Alisa J. Anderson; Kyle Steele; Robin Nimmer
Subject: RE: 6th and Jackson QAPP

Bruce –

Thanks. We will incorporate these comments and await any additional input from Steve and Eric. Thanks – Jon

Jon Munkers
jon.munkers@terragraphics.com
208-336-7080

From: Bruce.Wicherski@deq.idaho.gov [<mailto:Bruce.Wicherski@deq.idaho.gov>]
Sent: Thursday, November 06, 2014 2:44 PM
To: Jon Munkers; Steve.Gill@deq.idaho.gov; Eric.Traynor@deq.idaho.gov
Cc: aanderson@ci.moscow.id.us; ksteele@ci.moscow.id.us; Robin Nimmer
Subject: RE: 6th and Jackson QAPP

Jon-
Here are some comments on the revised QAPP document and responses. Eric and/or Steve may have additional ones:

- Eric's appropriate title is Quality Assurance Officer.
- Marks last name is Clough not Cough.
- Response regarding the GW well survey. The response did not indicate the locational accuracy (horizontal and vertical) of the GPS unit which will be used and the data which it generates. The datum cited is State Plane not State plain. Will a professional licensed surveyor be used?
- Field instruments to be used also includes a GPS unit.
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Thanks.
Bruce

From: Jon Munkers [<mailto:Jon.Munkers@terragraphics.com>]
Sent: Thursday, November 06, 2014 10:45 AM
To: Bruce Wicherski; Steve Gill; Eric Traynor
Cc: aanderson@ci.moscow.id.us; ksteele@ci.moscow.id.us; Robin Nimmer
Subject: 6th and Jackson QAPP

DEQ Team –



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From: Jon Munkers, TerraGraphics, Boise
Rachel Gibeault, TerraGraphics, Boise

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