

**3R-1030**

**Work Assessment Plan /  
General Correspondence**

**San Juan 28-6 Unit #155N**

**Date: 4/2016**



April 18, 2016

Reference No. 11119528

Mr. B. Keith Coffman, Program Manager  
ConocoPhillips RM&R  
600 North Dairy Ashford, 2WL 11050  
Houston, TX 77079

Dear Mr. Coffman:

**Re: Site Assessment Work Plan  
San Juan 28-6 #155N  
Sec 28, T27N, R6W  
Rio Arriba County, NM**

On behalf of ConocoPhillips Company (ConocoPhillips), GHD Services, Inc. (GHD) is pleased to present this work plan to further assess the vertical extent of hydrocarbon impacts at the above referenced site (the Site). This work plan is submitted in response to requirements communicated to ConocoPhillips from the Federal Bureau of Land Management (BLM) field staff during their Site on-Site meeting April 12, 2016. The BLM is the surface owner at the Site.

## **1. Project Information**

The Site is located on federal land within Section 28, Township 27N, Range 6W, San Juan County, New Mexico. Geographical coordinates for the Site are N36.69571, W107.98404. The location and Site layout details are presented as Figures 1 and 2, respectively.

Excavation of impacted soils at the Site was completed in January 2015. The area of final excavation measured approximately 64 feet by 71 feet by 19 feet below ground surface (ft bgs, see Figure 2). The depth of the excavation was limited due to a sandstone layer at a depth of approximately 19 ft bgs.

Confirmation soil samples were collected from the excavation sidewalls and bottom in February 2015. The five composite soil samples were analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA method 8015 and for total petroleum hydrocarbons, gasoline, diesel and motor oil range organics (TPH) by EPA method 8260. Sidewall laboratory results indicated concentrations below the New Mexico Oil Conservation Division (NMOCD) remediation clean up levels established for the site.

The bottom sample exceeded these levels for both total BTEX and for TPH. Following a potassium permanganate application, the bottom of excavation location was re-sampled in April 2015 and results indicated concentrations below NMOCD established levels. Details of the excavation field screening

### **GHD Services Inc.**

6121 Indian School Road NE Suite 200 Albuquerque New Mexico 87110 USA  
T 505 884 0672 F 505 884 4932 W www.ghd.com

and confirmation laboratory results are presented in the July 14, 2015 Animas Environmental Services Final Excavation Report.

## **2. Scope of Work**

At the direction of the BLM, GHD, on behalf of ConocoPhillips, will core into the sandstone layer in the bottom of the existing excavation to assess the vertical extent of hydrocarbon impacts. A professional engineer will assess the existing excavation and soils to prescribe sloping of the excavation to ensure that it is OSHA compliant and can be safely entered by equipment and personnel. Once the excavation is appropriately sloped and a ramp constructed, a drilling rig and crew will enter the excavation to core and collect samples. The professional engineer designing the excavation sloping will be working directly for ConocoPhillips and will not be a GHD contractor. The excavation contractor implementing the engineered sloping and ramp and the drilling company will be GHD contractors.

### ***Task 1 - Project Preparation***

This task includes preparing and submitting this Work Plan and other project preparation activities that occur after Work Plan approval, but before fieldwork mobilization. After receiving authorization to proceed, GHD will:

- Submit the Work Plan to affected stakeholders for review and approval. This includes ConocoPhillips and BLM.
- Ensure the Site Specific Health and Safety Plan (HASP) and job hazard analyses (JHAs) address field work specified in the Work Plan.
- Coordinate site access with appropriate ConocoPhillips staff.
- Execute GHD's subsurface clearance protocol.
- Develop work orders and contracts for subcontractors.

On Site activities will be coordinated through ConocoPhillips. The excavation and drilling contractors will notify New Mexico One-Call to facilitate location of underground utilities and pipelines prior to drilling activities. GHD will document subsurface clearance activities in accordance with our protocol.

### ***Task 2 - Existing Excavation Preparation***

ConocoPhillips will provide GHD the engineered sloping and ramp requirements necessary to provide safe entry for the drill rig and crew. The engineering report will be provided to the excavation contractor, MMT, Inc. (MMT), and the existing excavation will be prepared as designed. MMT will have equipment on Site during coring activities to provide assistance to the drill rig should it have difficulties exiting the excavation.

### ***Task 3 - Coring***

GHD, COP representatives (if available) and the drilling subcontractor, Yellow Jacket Drilling Services (Yellow Jacket) will mobilize to the Site to perform a project kickoff meeting. The project kickoff

meeting will include a tailgate safety meeting to discuss the Site-specific HASP, applicable JHA's, and stop work authority. Tailgate safety meetings will be conducted daily at the beginning of the day and as conditions change.

Borehole locations will not need pre-clearance as they will be placed in the bottom of an existing 19 ft deep excavation. Six boring locations are proposed for coring at the locations indicated on Figure 2. However, final boring locations will be located in the field based on drill rig accessibility and agreement between BLM and ConocoPhillips. The borings will be cored via conventional air-rotary drilling using CME 850 equipment. A GHD field scientist will supervise the advancement of the sandstone coring.

Cores will be advanced in 2 foot-long increments to an estimated maximum depth of 10 ft bgs or refusal. Sandstone cores will be broken up to the extent possible to allow for sufficient sample size and consistency for field screening and laboratory sample collection. Field screening for petroleum hydrocarbons will be performed using the heated headspace method with a calibrated photo-ionization detector (PID) and PetroFlag test kit.

Once field screening indicates hydrocarbons are below the 100 part per million range, a sample will be collected for laboratory analyses. Samples will be analyzed for BTEX constituents by EPA method 8260 and for TPH GRO/DRO by EPA method 8015 by Hall Environmental Analysis Laboratory. Once total depth is achieved, the boreholes will be backfilled with hydrated bentonite chips.

#### ***Task 4: Project Reporting***

A summary of the field activities will be included in a Site Assessment Report for the Site. The report will include an updated site plan showing the location of completed borehole locations and tabulation of field screening and laboratory analytical test results.

The Site Assessment Report will include copies of laboratory chain-of-custody documentation and results, laboratory quality assurance/quality control (QA/QC) documentation, tabulated soils concentration data and a summary of findings.

#### ***Health and Safety Considerations***

Personal protective equipment including fire retardant clothing, steel-toed work boots, gloves, safety glasses and hard hats will be required (basic Level D requirements) during field tasks. The project HASP will be maintained onsite. It will be reviewed and signed by on-site personnel, subcontractors, and authorized visitors.

#### ***Quality Assurance/Quality Control***

Well installation and sampling will be completed in accordance with GHDs standard Quality Assurance/Quality Control procedures designed to minimize cross-contamination between samples and to provide reliable laboratory results.

***Schedule***

GHD is prepared to initiate the scope of work immediately, subsequent to ConocoPhillips approvals, the availability of resources and stakeholder concurrence. A start date and schedule of report submittals will be provided following receipt of driller availability.

If you have any questions or comments with regards to this work plan, please do not hesitate to contact GHDs Albuquerque office at (505) 884-0672. Your timely response to this correspondence is appreciated.

Yours truly,

GHD



Jeffrey Walker, CPG, PMP  
Project Manager

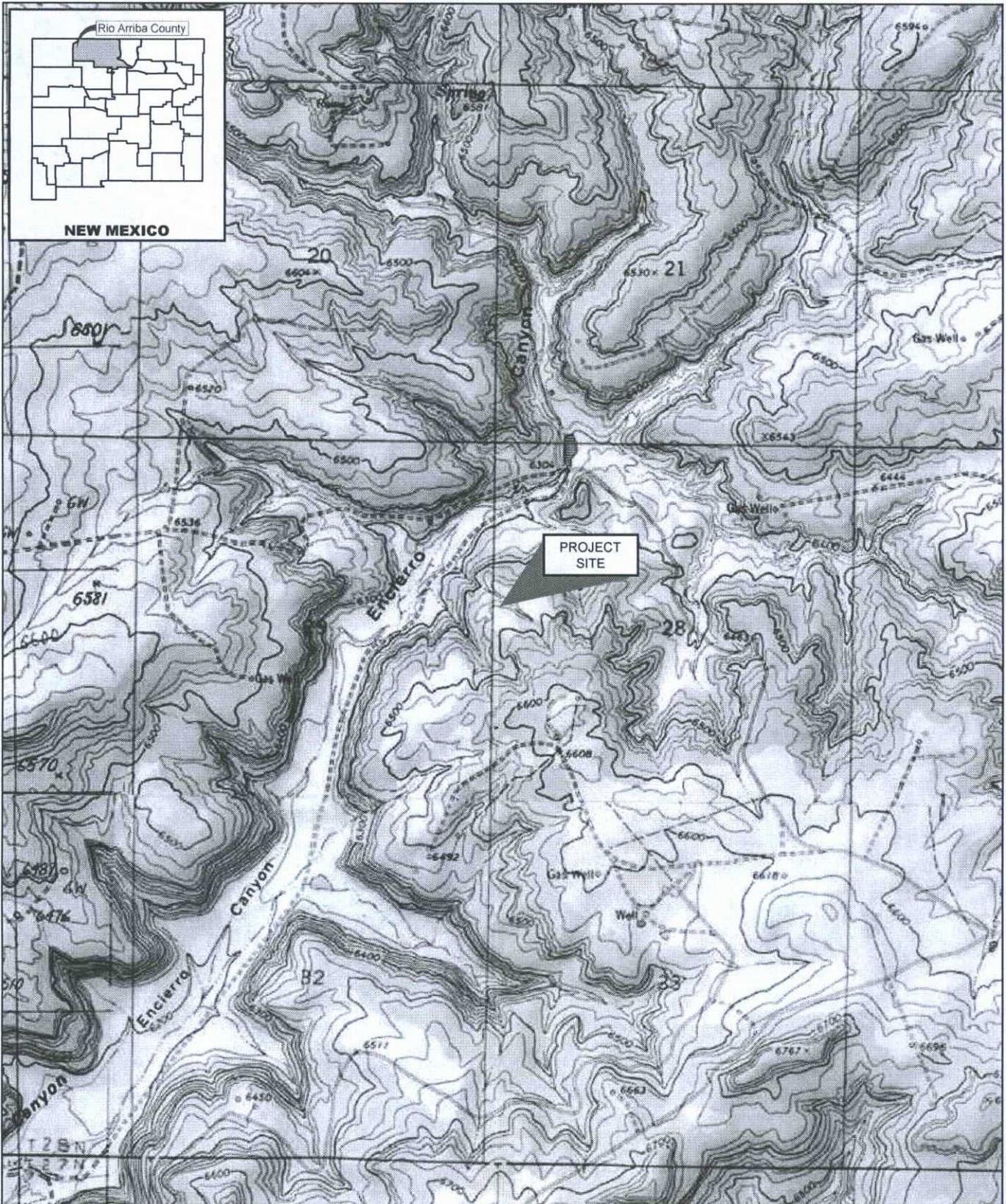


Bernard Bockisch  
Sr. Project Manager

JW/mc/1

Encl. (5)

- Figure 1 - Vicinity Map
- Figure 2 - Site Plan



Source: USGS 7.5 Minute Quad "Fourmile Canyon, Santos Peak, Gould Pass, and Delgadito Mesa, New Mexico"

Lat/Long: 36.63291° North, 107.48120° West



Coordinate System:  
NAD 1983 (2011) StatePlane-  
New Mexico Central (US Feet)

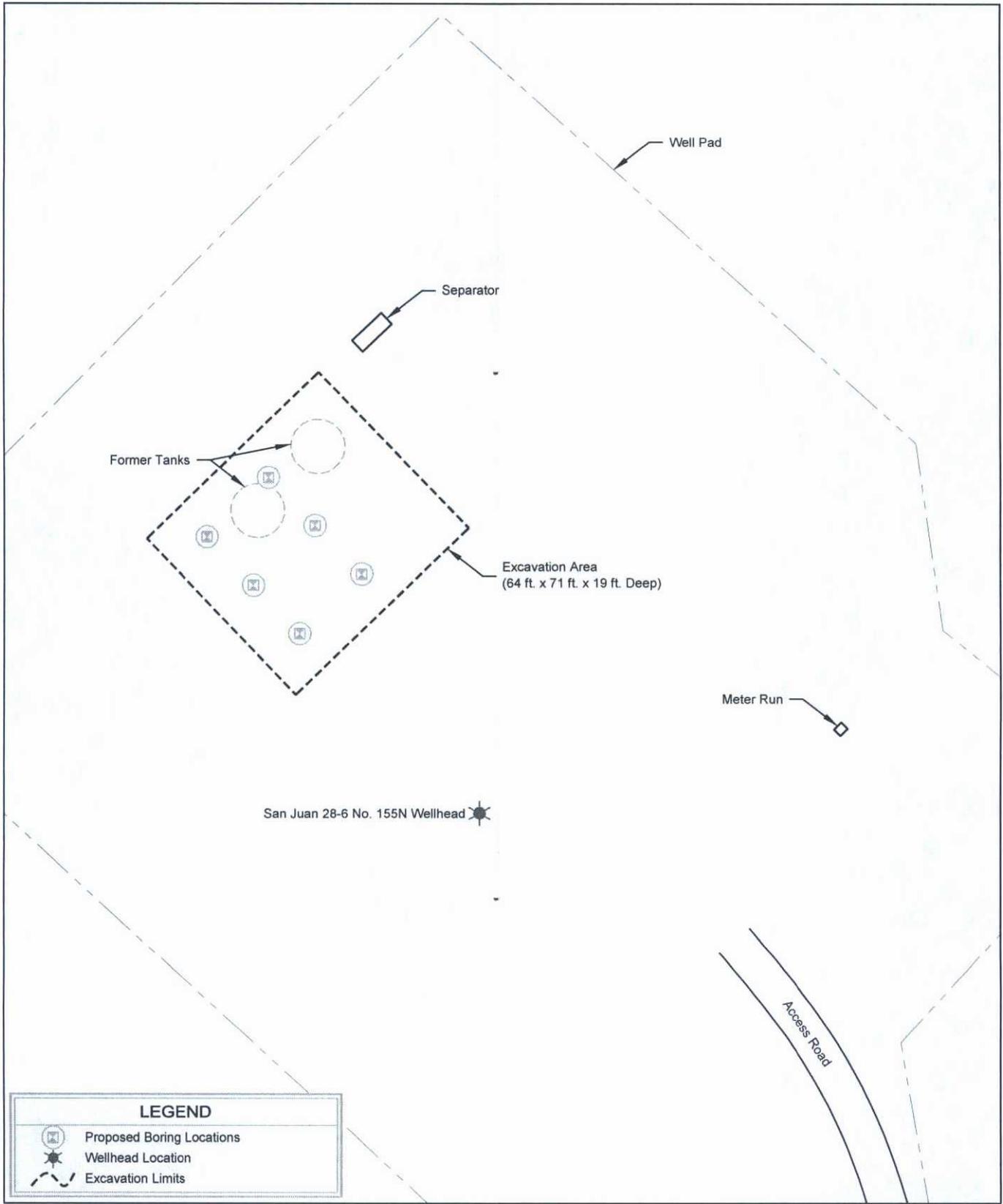


CONOCOPHILLIPS COMPANY  
RIO ARRIBA COUNTY, NEW MEXICO  
SAN JUAN 28-6 No. 155N

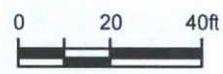
11119528-00  
Apr 14, 2016

SITE LOCATION MAP

FIGURE 1



Lat/Long: 36.63291° North, 107.48120° West



Coordinate System:  
NAD 1983 (2011) StatePlane-  
New Mexico Central (US Feet)



CONOCOPHILLIPS COMPANY  
RIO ARriba COUNTY, NEW MEXICO  
SAN JUAN 28-6 No. 155N  
SITE DETAIL AND  
BORING LOCATION MAP

11119528-00  
Apr 18, 2016

FIGURE 2

## Smith, Cory, EMNRD

---

**From:** Walker, Jeffrey <Jeff.Walker@ghd.com>  
**Sent:** Monday, April 18, 2016 10:12 AM  
**To:** kdiemer@blm.gov  
**Cc:** Coffman, Keith; Smith, Cory, EMNRD; Kanack, Cale  
**Subject:** San Juan 28-6 No. 155N Remediation WorkPlan  
**Attachments:** SJ 28-6 155N Assessment Workplan.pdf

Katherina,

Please find attached the work plan to assess vertical impacts to site soils/sandstone at subject site, prepared on behalf of ConocoPhillips Co. To meet the BLM deadline for submission of assessment report, we are making every attempt to get this project into the field this week, as early as tomorrow, to prepare the excavation for safe entry of personnel and equipment. Weather may cause that schedule to slip 1 day, but we are on schedule to be in the field this week and will notify you this afternoon once we receive word from our excavation contractor on road conditions. Your prompt review and approval will therefore be greatly appreciated. Please do not hesitate to contact myself or Keith Coffman (281-799-0624) with any questions.

Thank you-Jeff

**Jeff Walker**  
**GHD**

T: 505 884 0672 | M: 505 377 3920 | | F: 505 884 4932 | E: jeff.walker@ghd.com  
6121 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110 | [www.ghd.com](http://www.ghd.com)  
[WATER](#) | [ENERGY & RESOURCES](#) | [ENVIRONMENT](#) | [PROPERTY & BUILDINGS](#) | [TRANSPORTATION](#)

## Smith, Cory, EMNRD

---

**From:** Diemer, Katherina <kdiemer@blm.gov>  
**Sent:** Monday, April 18, 2016 11:02 AM  
**To:** Walker, Jeffrey  
**Cc:** Coffman, Keith; Smith, Cory, EMNRD; Kanack, Cale; Jon Flaniken; Joe, Maureen  
**Subject:** Re: San Juan 28-6 No. 155N Remediation WorkPlan

Hello Jeff,

Per our conversation the BLM approves the Site Assessment Work Plan for San Juan 28-6 Unit 155N with the following notes.

The Project Information/Background is incomplete, this site has been through a State Director Review and sample results from February 12, 2016 showed elevated levels of contaminants in 4 out of 6 samples.

6 Boring locations are **required**. The locations will be as evenly spaced as possible, close or on the last sample locations, and determined in the field.

Please keep me informed of any changes and the schedule this week. Thank you and have a good day!

Katherina

On Mon, Apr 18, 2016 at 10:12 AM, Walker, Jeffrey <[Jeff.Walker@ghd.com](mailto:Jeff.Walker@ghd.com)> wrote:

Katherina,

Please find attached the work plan to assess vertical impacts to site soils/sandstone at subject site, prepared on behalf of ConocoPhillips Co. To meet the BLM deadline for submission of assessment report, we are making every attempt to get this project into the field this week, as early as tomorrow, to prepare the excavation for safe entry of personnel and equipment. Weather may cause that schedule to slip 1 day, but we are on schedule to be in the field this week and will notify you this afternoon once we receive word from our excavation contractor on road conditions. Your prompt review and approval will therefore be greatly appreciated. Please do not hesitate to contact myself or Keith Coffman (281-799-0624) with any questions.

Thank you-Jeff

**Jeff Walker**  
**GHD**

T: 505 884 0672 | M: 505 377 3920 | F: 505 884 4932 | E: [jeff.walker@ghd.com](mailto:jeff.walker@ghd.com)

6121 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110 | [www.ghd.com](http://www.ghd.com)

--

**Katherina E Diemer**  
**Natural Resource Specialist**  
**Spills Coordinator**  
**Farmington Field Office**  
**6251 North College Boulevard**  
**Suite A**  
**Farmington, NM 87402**  
**Office: 505-564-7666**  
**Mobile: 505-436-4042**  
**email: [kdiemer@blm.gov](mailto:kdiemer@blm.gov)**

## Smith, Cory, EMNRD

---

**From:** Diemer, Katherina <kdiemer@blm.gov>  
**Sent:** Monday, April 18, 2016 11:40 AM  
**To:** Walker, Jeffrey  
**Cc:** Coffman, Keith; Smith, Cory, EMNRD; Kanack, Cale; Jon Flaniken; Joe, Maureen; Project Email Filing  
**Subject:** Re: San Juan 28-6 No. 155N Remediation WorkPlan ~COR-11119528~  
**Categories:** Release Inspection

Gentlemen,

After further review I highly recommend taking a sample with the highest field OVM for lab sampling from each borehole as well. This will determine which contaminants are left in place and help with a plan forward once extent is determined. This would mean 6 additional samples from the borehole where the highest reading is. We will be able to make a more informed decision moving forward. Thank you!

On Mon, Apr 18, 2016 at 11:16 AM, Walker, Jeffrey <[Jeff.Walker@ghd.com](mailto:Jeff.Walker@ghd.com)> wrote:

Thank you, Katherina, and I will be sure to capture and document a more accurate summary of project background in the report on our upcoming assessment, as we discussed. Also will let you know as soon as possible once I get word from our contractor on road conditions and how schedule may be affected.

Thank you for the prompt response and we look forward to working with you on this project.

Jeff

---

**From:** Diemer, Katherina [mailto:[kdiemer@blm.gov](mailto:kdiemer@blm.gov)]  
**Sent:** Monday, April 18, 2016 11:02 AM  
**To:** Walker, Jeffrey  
**Cc:** Coffman, Keith; Smith, Cory, EMNRD; Kanack, Cale; Jon Flaniken; Joe, Maureen  
**Subject:** Re: San Juan 28-6 No. 155N Remediation WorkPlan

Hello Jeff,

Per our conversation the BLM approves the Site Assessment Work Plan for San Juan 28-6 Unit 155N with the following notes.

The Project Information/Background is incomplete, this site has been through a State Director Review and sample results from February 12, 2016 showed elevated levels of contaminants in 4 out of 6 samples.

6 Boring locations are **required**. The locations will be as evenly spaced as possible, close or on the last sample locations, and determined in the field.

Please keep me informed of any changes and the schedule this week. Thank you and have a good day!

Katherina

On Mon, Apr 18, 2016 at 10:12 AM, Walker, Jeffrey <[Jeff.Walker@ghd.com](mailto:Jeff.Walker@ghd.com)> wrote:

Katherina,

Please find attached the work plan to assess vertical impacts to site soils/sandstone at subject site, prepared on behalf of ConocoPhillips Co. To meet the BLM deadline for submission of assessment report, we are making every attempt to get this project into the field this week, as early as tomorrow, to prepare the excavation for safe entry of personnel and equipment. Weather may cause that schedule to slip 1 day, but we are on schedule to be in the field this week and will notify you this afternoon once we receive word from our excavation contractor on road conditions. Your prompt review and approval will therefore be greatly appreciated. Please do not hesitate to contact myself or Keith Coffman (281-799-0624) with any questions.

Thank you-Jeff

**Jeff Walker**

**GHD**

T: 505 884 0672 | M: 505 377 3920 | | F: 505 884 4932 | E: [jeff.walker@ghd.com](mailto:jeff.walker@ghd.com)

6121 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110 | [www.ghd.com](http://www.ghd.com)

[WATER](#) | [ENERGY & RESOURCES](#) | [ENVIRONMENT](#) | [PROPERTY & BUILDINGS](#) | [TRANSPORTATION](#)

--

**Katherina E Diemer**

**Natural Resource Specialist**

**Spills Coordinator**

**Farmington Field Office**

**6251 North College Boulevard**

**Suite A**

**Farmington, NM 87402**

**Office: 505-564-7666**

**Mobile: 505-436-4042**

**email: [kdiemer@blm.gov](mailto:kdiemer@blm.gov)**

---

This e-mail has been scanned for viruses

--

**Katherina E Diemer**

**Natural Resource Specialist**

**Spills Coordinator**

**Farmington Field Office**

**6251 North College Boulevard**

**Suite A**

**Farmington, NM 87402**

**Office: 505-564-7666**

**Mobile: 505-436-4042**

**email: [kdiemer@blm.gov](mailto:kdiemer@blm.gov)**