Grenada Manufacturing, LLC

635 Hwy 332
Grenada, Ms 38901

662-226-1161
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Via Electronic Mail and Overnight Delivery

September 11, 2015

Mr. Brian Bastek (bastek.brian@epa.gov)
RCRA Corrective Action and Permitting Section
RCRA Cleanup and Brownfields Branch
U.S. Environmental Protection Agency
Region 4, Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303-8960

Re: Submission of Final Revised Interim Measures Work Plan
EPA HSWA Permit No. MSD 007 037 278, July 29, 2010
Grenada Manufacturing, LLC, Grenada, Mississippi

Dear Mr. Bastek:

On behalf of Grenada Manufacturing, LLC, I have enclosed the Final Revised Interim Measures Work Plan requested in your letter of September 4, 2015. The revisions address the comments provided in the letter as well as comments provided during discussions with the agency. Mr. John Ellis of ARCADIS U.S., Inc., will continue to serve as the Project Manager on this matter.

Please do not hesitate to contact Mr. Ellis at 225-292-1004 if you have any questions regarding the enclosed work plan.

Sincerely,

Grenada Manufacturing, LLC
c/o Mr. Donald Williams
635 Highway 332
Grenada, MS 38901

Enclosure

cc: Ms. Carla Brown, Mississippi Department of Environmental Quality
Mr. John Ellis, ARCADIS U.S., Inc.

ARCADIS U.S., Inc.
10352 Plaza Americana Drive
Baton Rouge
Louisiana
Tel 225-292-1004
Fax 225-218-9677
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ENVIRONMENT

Mr. Donald Williams
Grenada Manufacturing, LLC
635 Highway 332
Grenada, Mississippi 38901

Subject:
Final Revised Interim Measures Work Plan – Vapor Intrusion Assessment
Grenada Manufacturing, LLC, Grenada, Mississippi.
Permit No. MSD 007 037 278

Date:
September 11, 2015

Contact:
John Ellis

Extension:
208

Email:
john.ellis@arcadis-us.com

Our ref:
IN000899.0013.00001
Grenada/IN899.13/C/1/bbn

Dear Mr. Williams:

ARCADIS is pleased to provide this Final Revised Interim Measures Work Plan (IMWP) to Grenada Manufacturing, LLC (Grenada Manufacturing) for its facility located in Grenada, Mississippi, detailing the proposed Vapor Intrusion (VI) Assessment and supplemental soil and groundwater sampling. The revisions to the IMWP incorporate comments provided by the U.S. Environmental Protection Agency (USEPA). This IMWP has been prepared in response to the June 30, 2015, August 20, 2015, and September 4, 2015, USEPA Region 4 letters to Grenada Manufacturing, in which the USEPA requested performance by Grenada Manufacturing of the tasks identified therein pursuant to the company's Hazardous and Solid Waste (HSWA) permit. The IMWP outlines screening, field work, laboratory analysis, data evaluation, and reporting proposed for the scope of work, which will be conducted in accordance with *the USEPA OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* (USEPA June 2015) and, as appropriate, USEPA Region 4 protocols.

Background

The manufacturing facility was constructed by Lyon in 1961 and sold to Rockwell International Corporation (Rockwell) in 1966. Rockwell operated a wheel cover manufacturing facility from 1966 to 1985, when the plant and property were sold to Textron, Inc. (Textron), formerly Randall Textron. In 1999, Textron sold the operations and property to Grenada Manufacturing, who continued to operate the wheel cover plant until 2008 when portions of the property were leased to ICE Industries, Inc. (ICE). Following ICE's lease of the premises, the facility was converted to a stamping plant, providing stamp-formed parts for various industries.

During prior groundwater investigation activities performed at the facility, an elevated concentration of trichloroethylene (TCE) was detected in a groundwater sample collected from off-site Monitoring Well MW-20 in a May 2012 sampling event.

Seventeen soil gas ports (VP-1 through VP-17) were installed and sampled in 2013 to further investigate this area. An additional six soil gas ports (VP-101, VP-103, VP108, VP-110, VP112, and VP-114) were installed and sampled during May 2014.

Groundwater samples were also obtained in the fall of 2012 and the spring of 2013 from sample locations WL-1, WL-2, WL-6, WL-10, WL-11, WL-12, WL-13, WL-15, WL-16, WL-17, and TW-18S/D. The sample locations correspond to the soil gas ports (VPs) with the same number. Given the construction of the soil gas ports, groundwater is sometimes encountered in ports and water samples are collected. Water samples were collected from (VP-1, VP-2, VP-4, VP-5, VP-6, VP-7, VP-8, VP-10, VP-11, VP-12, VP-14, VP-15, VP-16, VP-17, VP-101, VP-103, VP-106, VP-107, VP-108, VP-110, VP-112, and VP-114). The data and preliminary evaluation from the sampling were submitted to USEPA Region 4 in a letter dated January 17, 2014. A figure presenting the groundwater data obtained from the soil gas ports is provided in Attachment A. These data were collected using the methods described in the January 17, 2014, letter.

Figure 1 depicts the sample locations in relation to the off-site Monitoring Well MW-20 assessment area. The USEPA requested that Grenada Manufacturing prepare an IMWP to evaluate the potential VI pathway in the off-site area in a letter dated June 30, 2015. An IMWP was submitted on August 3, 2015. The USEPA provided comments on the IMWP in a letter dated August 20, 2015. A Revised IMWP was submitted to the USEPA on August 28, 2015. The USEPA provided additional comments in a letter dated September 4, 2015.

Scope of Work

In an effort to evaluate the potential VI pathway in the off-site area, additional air data will be collected. Samples collected will include:

- Soil gas
- Ambient air
- Indoor air from select residential buildings
- Sub-slab vapor from select residential buildings

A reconnaissance of any building where indoor air and sub-slab vapor samples will be collected will be conducted prior to sampling.

The USEPA has also requested that sampling of groundwater conditions in the upper aquifer be conducted. Additionally, the USEPA requested the collection of soil samples during the groundwater sampling.

Details on the sampling procedures and data evaluations are provided below.

Any additional sampling beyond what is described in this IMWP will be based on the data evaluation. The evaluation will use the multiple lines of evidence (MLE) approach described in the *USEPA OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* (USEPA June 2015). If the evaluation indicates that the VI pathway is incomplete, additional VI evaluation is not warranted.

Soil Gas Assessment

ARCADIS proposes to install and sample eight shallow soil gas ports as shown on Figure 1. These eight proposed off-site locations will be installed in proximity to the existing deeper soil gas ports (VP-2 through VP-6, VP-13, and VP-17), including the ones with the elevated TCE concentrations. A desktop review of the available soil borings and geological cross-sections shows that an approximate 8- to 12-foot-thick surficial clay layer underlain by a sand layer is present in this area. The existing soil gas ports with detected volatile organic compound (VOC) concentrations were screened at the clay/sand interface or within the water-bearing sand layer. ARCADIS will use the data to evaluate the migration of concentrations detected in the previously installed soil gas ports.

Soil Gas Port Installation

A truck mounted Geoprobe® will be used to create an open borehole, and a 2.25-inch-diameter Macro-Core® sampler will be used to remove soil from the boring. As part of the reconnaissance, a utility locate will be requested to identify buried utilities in the vicinity of the structures and any proposed soil gas ports prior to intrusive activities. Soil will be classified in the field and certain soil samples may be collected from select borings for soil moisture analysis. Each of the soil gas ports will be installed to a depth of 6 feet below ground surface and will be screened from the 5.5-foot to 6-foot interval below ground surface. Soil gas ports will be constructed of 0.25-inch nylon tubing with 6-inch stainless steel screens. The screen will be installed with filter pack sand placed around the screen to 6 inches above the screen. Granular bentonite will be used to fill the remainder of the borehole above the screen filter pack to the surface and hydrated during installation. A protective cover will be installed at the surface. At the surface, the end of the tubing will be equipped with a Swagelok® fitting and a gas tight valve. Upon completion of the installation and sealing of each soil gas port, the volume of air in the sand pack will be calculated and approximately 3 times this volume of air will be purged using a low-flow air sampling pump set at a rate of 100 milliliters per minute (mL/min).

Soil Gas Port Sampling

A minimum of 24 hours after installation, each soil gas port will be sampled using 1-liter polished stainless steel SUMMA® canisters with calibrated flow controllers that

are cleaned and certified by the laboratory. The flow controllers will be calibrated for a sampling duration of 10 minutes (≈ 80 mL/min). Approximately one to three times the dead volume of air will be purged at a rate of 100 mL/min prior to sampling using a low-flow air sampling pump. The amount and rate of dead volumes purged will be measured and recorded in the field and will remain consistent between sample locations. The sampling procedure consists of connecting the purge pump to the soil gas port, then turning it on, then opening the soil gas port valve to purge the tubing. At completion of purging, the valve on the soil gas port will be closed, the purge pump removed, and then the sampling canister and flow controller will be connected to the soil gas port. The sampling canister will be opened and then the valve on the soil gas port will be opened. At the completion of sampling, the canister will be closed first and then the soil gas port valve. A final canister vacuum between 2 and 5 inches of mercury will signify that sample collection is complete. At the completion of each sample collection, the Summa canisters will be closed and sealed with a brass Swagelok® cap.

Meteorological data (temperature, precipitation, humidity, barometric pressure, and wind speed/direction) will be collected before and during sampling activities.

Residential VI Assessment

In addition to the supplemental soil gas investigation, ARCADIS proposes to complete VI sampling at six residential properties located on Lyon Drive (as shown on Figure 1). Work will be conducted in accordance with *the USEPA OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* (USEPA June 2015).

The six residential structures on Lyon Drive have been selected based on their relative proximity to known groundwater impacts (MW-20) and potential soil gas impacts (VP-2, VP-3, VP-5, VP-6). Only four of these structures are within 100 feet of the known groundwater or potential soil gas impacts (as shown on Figure 1). The other two properties, east and west of the potentially impacted area, are being assessed as a conservative measure. At this time, no preferential pathways have been identified in the area of potential impacts.

Community Outreach

Prior to engaging property owners regarding the residential VI sampling, the USEPA will conduct outreach with potentially affected community members. The purpose of this outreach will be to disseminate information regarding the Site history, constituents being assessed, vapor intrusion, sampling process, and obtaining access.

Residential VI sampling will be contingent on the USEPA obtaining approval and a signed access agreement from the property owners.

Reconnaissance of Structures

As recommended in USEPA guidance, prior to conducting sampling activities, a reconnaissance of the potentially affected structures will be performed. As appropriate, a visual inspection of the structure's interiors and exteriors will be performed to identify potential preferential pathways (such as utilities) to potential vapor migration into the structures and to identify any background sources or other factors that could affect the quality of indoor air. As part of the reconnaissance, information will be gathered from the homeowner on potential sources within each structure, ventilation systems, and building construction. A copy of the indoor air building survey and sampling form is provided in Attachment B. Identified potential background sources will be removed from the structure during the VI sampling event. Samples collected from the residential structures will be given a unique identification to conceal the identity of the sample locations.

Review of the Grenada County Assessor records indicates that the houses along Lyon Drive are single-story buildings with slab-on-grade construction (no basements) and are less than 1,500 square feet in size. Thus, paired indoor air and sub-slab sampling is recommended at each structure.

The USEPA will collect information on the residences in the community during their outreach campaign.

Indoor Air Sampling

Indoor air samples will be collected using 6-liter polished stainless steel SUMMA® canisters with calibrated flow controllers that are cleaned and certified by the laboratory. The canisters will utilize flow controllers calibrated for a 24-hour sample collection. During the collection process, the indoor air canister will be securely positioned at the breathing zone level for the most sensitive exposed population and located near the center of the structure. Because all six of the structures identified for the residential VI assessment are single-story, slab-on-grade construction and are less than 1,500 square feet in size, one indoor air sample location is appropriate. All indoor air samples will be collected under normal home conditions. A final canister vacuum on the flow controller between 2 and 5 inches of mercury will signify that sample collection is complete. At the completion of sampling, the canister will be closed and the flow controller removed. The canisters will be gauged with an independent gauge and the final vacuum recorded. The canister will then be closed and sealed with a brass Swagelok® cap.

Meteorological data (temperature, precipitation, humidity, barometric pressure, and wind speed/direction) will be collected before and during sampling activities.

Ambient Air Sampling

Ambient air samples will be collected outdoors concurrently with indoor air samples to evaluate potential background contaminant sources from outside the structures. Ambient air samples will be collected using 6-liter polished stainless steel SUMMA® canisters with calibrated flow controllers that are cleaned and certified by the laboratory. The canisters will utilize flow controllers calibrated for a 24-hour sample collection. During the collection process, the sample canister will be securely positioned at breathing height (approximately 5 feet above the ground). It is anticipated that all structures will not be sampled at the same time. It is proposed that, instead of collecting ambient air samples at each structure location, ambient air samples be collected at strategic locations that cover multiple structures at once. One ambient air sample will be collected upwind of multiple groups of buildings. At this time, two ambient air sample locations are proposed (Figure 1). If multiple events are required to collect indoor air samples, additional ambient air samples will be collected during these events. The location of the ambient air sample will be determined based on wind direction at the time of sampling and the forecasted wind direction.

The ambient air sample canister will be placed so as to minimize potential contamination from extraneous sources. The canister will be positioned away from wind shields such as trees or bushes and at least 15 feet away from any buildings. Collection of the ambient air sample will follow the same methodology as described for indoor air samples.

Sub-Slab Port Installation

In accordance with USEPA guidance, a permanent sub-slab vapor port will be installed in the concrete floor near the center of the structure for collecting sub-slab vapor samples. The sub-slab ports will be placed in an unobtrusive location within the home to minimize disturbance of the residents. The home will be returned to its original condition to the extent possible. The ports will be installed after the collection of the indoor air sample from that structure. The sub-slab vapor ports will be designed to lie flush on the upper surface of the concrete floor and to “float” in the slab to enable collection of vapors from sub-slab material in direct contact with the slab or from a pocket of air directly beneath the slab created by sub-slab material subsidence. New stainless steel Vapor Pins™ will be utilized. The Vapor Pins™ will be preassembled for each installation prior to drilling through the floor to minimize exposure time of the sub-slab soils to an open hole.

To install a sub-slab vapor port, a rotary hammer drill will be used to drill a 1.125-inch-outer-diameter hole approximately 2 inches into the floor. The inside of the 1.125-inch-outer-diameter hole will be cleaned with a damp towel and then a 0.625-inch-outer-diameter hole will be drilled through the remainder of the concrete.

Once through the concrete, the drill will be allowed to penetrate an additional 2 to 3 inches into the sub-slab material. The outer-diameter hole will be cleaned once more with a damp towel. The Vapor Pins™ will be pressed into the concrete slab and sealed with the supplied non-volatile organic compound silicone sleeve. After the sub-slab vapor port is set, a small aliquot of air will be purged into a Tedlar® bag so as to not introduce potential vapors to the building interior. A protective cap will be placed on the end of the Vapor Pin™ and finished with a stainless steel thread-on flush-mount cover. Once the sub-slab vapor port is installed, it will be allowed to set for a minimum of 24-hours prior to sampling. These sub-slab vapor ports will remain in place after the initial sampling for use in future sampling events. After all sampling events have been completed, the sub-slab vapor ports will be removed, the holes will be patched, and the home will be returned to its original condition to the extent possible.

Sub-Slab Port Sampling

The sub-slab vapor samples will be collected using 1-liter polished stainless steel SUMMA® canisters that are cleaned and certified by the laboratory with a calibrated flow controller. The flow controller will be calibrated for a sampling duration of 10 minutes (≈80 mL/min). The sub-slab samples will be collected by assembling a short (≈16 inches) length of 0.25-inch-diameter nylon tubing fitted with stainless steel Swagelok® tube connectors at each end that connect directly to the sub-slab vapor port and the sampling canister. A stainless steel gas-tight valve will be installed near the canister end of the sample tubing. The sample assembly will be connected to the sub-slab vapor port and approximately three volumes of dead air will be purged from the sample assembly at a rate of approximately 100 mL/min prior to sampling using a 60-mL syringe into a Tedlar® bag so as to not introduce potential vapors to the building interior. The sampling canister will then be connected, opened, and then the valve on the sample assembly will be opened. A final canister vacuum on the flow controller between 2 and 5 inches of mercury will signify that sample collection is complete. At the completion of sampling, the canister will be closed first and then the sample assembly to the sub-slab vapor port valve. The canisters will be disconnected from the port and the flow controller removed. The canisters will be gauged with an independent gauge and the final vacuum recorded. The canister will then be closed and sealed with a brass Swagelok® cap.

Meteorological data (temperature, precipitation, humidity, barometric pressure, and wind speed/direction) will be collected before and during sampling activities.

Residential VI Seasonal Sampling

In accordance with USEPA guidance, multiple VI sampling events will be performed to demonstrate that the VI pathway is not complete. Thus, a second seasonal sampling event will be performed in the opposite season as the initial sampling

event. The seasonal sampling event will follow the procedures detailed above for soil gas, sub-slab, indoor air, and ambient air sampling.

Air Sample Laboratory Analysis

Air samples will be analyzed for the following VOCs:

- 1,1-Dichloroethene (1,1-DCE)
- 1,2-Dichloroethane (1,2-DCA)
- cis-1,2-Dichloroethene (cis-1,2-DCE)
- trans-1,2-Chloroethene (trans-1,2-DCE)
- Tetrachloroethene (PCE)
- 1,1,2-Trichloroethane (1,1,2-TCA)
- Trichloroethene (TCE)
- Vinyl chloride
- Benzene
- Toluene
- Ethylbenzene*
- Xylenes*
- 1,2,4-Trimethylbenzene
- Chloroform
- Methylene chloride

*Ethylbenzene and xylenes are being analyzed at USEPA's request to evaluate background concentrations in the structures that are being sampled.

Analysis of the air samples will use USEPA Compendium Method TO-15. Sample media will be ordered from Eurofins Air Toxics, Inc. (Eurofins) in Folsom, California, using proper quality assurance/quality control (QA/QC) procedures and chain-of-custody protocols. Analysis of air samples will also be conducted by Eurofins. Analytical results will be reported in concentration units of parts per million by volume (ppmv) and micrograms per cubic meter (µg/m3). Eurofins will be instructed to report data with constituent detection limits at or below screening levels. To minimize potential effects on the sample integrity, samples will be shipped within 24 hours following collection and the samples will not be chilled during storage. To improve the confidence in measured concentrations, a duplicate sample will be collected and analyzed for the same parameters as the parent samples. Duplicate samples will be collected by connecting two canisters together so that they have the same intake port. One duplicate sample will be collected per 20 samples of each media sampled, with the exception of the ambient air (e.g., one duplicate soil gas sample, one duplicate sub-slab sample, and one indoor air sample).

Leak Testing

In accordance with USEPA guidance, leak testing will be performed on the soil gas and sub-slab vapor ports. Leak testing will be accomplished by enriching the atmosphere in the immediate vicinity of the area where the port intersects the ground with a tracer gas and measure a vapor sample from the port for the presence of high concentrations (>10 percent) of the tracer gas. A shroud consisting of a 1-gallon container equipped with two gas valves will be placed over the sub-slab vapor ports and sealed to the ground with modeling clay. The tubing assembly will be passed through the shroud to the outside through a hole that will then be sealed with modeling clay. A cylinder of laboratory-grade compressed helium gas will be connected to one gas valve, and helium will be introduced to the shroud at a slow rate in order to not pressurize the shroud. A Dielectric MGD-2002 Helium Detector (or equivalent) will be used to measure the amount of helium in the shroud by inserting the detector probe into the second gas valve in the shroud. Once a minimum of 60 percent helium is detected in the shroud, the port will then be purged and the purged air will be collected in a Tedlar® bag. The helium detector will then be used to screen the sample aliquot in the Tedlar® bag. If less than 10 percent helium is detected in the Tedlar® bag, a SUMMA® canister will then be attached to the tubing assembly and the sample collected while the helium concentration within the shroud is maintained at a minimum of 60 percent. At the completion of the sample collection, an aliquot of air will be purged again from the port and screened for helium. If less than 10 percent helium is detected in the Tedlar® bag, the sample will be submitted to the laboratory for analysis. If greater than 10 percent helium is detected in the Tedlar® bag, the sample will not be analyzed. The sub-slab vapor port will be removed and reinstalled following the procedures detailed above. The sub-slab vapor port will then be leak tested and re-sampled.

Groundwater Sampling

The USEPA also has requested that additional groundwater sampling be conducted in the residential neighborhood north of the facility to assess the constituent concentrations. At the request of the USEPA, ten locations were selected. ARCADIS will install and sample ten Vertical Aquifer Profiling (VAP) borings as shown on Figure 1 to further evaluate the stratification of constituent concentrations in the groundwater of the upper aquifer. Groundwater samples collected in the fall of 2012 and the spring of 2013 from sample locations WL-1, WL-2, WL-6, WL-10, WL-11, WL-12, WL-13, WL-15, WL-16, WL-17, and TW-18S/D indicated that VOC detections, if any, at or near the groundwater table are very low, with VOC concentrations increasing with depth. ARCADIS will evaluate the data from the new borings. The extent of VOCs in groundwater will be assessed and considered in the context of the MLE approach to determine whether supplemental VI assessments are needed. At USEPA's request, other constituents will also be evaluated.

Vertical Aquifer Profiling (VAP) Boring Installation and Sampling

A truck-mounted Geoprobe® rig will be used to advance the ten VAP borings to a depth of approximately 50 feet below ground surface (bgs) or refusal. This depth is the approximate base of the upper aquifer. Beginning at the groundwater table (anticipated to be encountered approximately 10 to 12 feet bgs), ARCADIS will collect a grab groundwater sample at first encountered groundwater, then at 5-foot intervals to a total depth of approximately 50 feet bgs. After the samples have been collected, the Geoprobe® boreholes will be properly abandoned.

As required by state law, ARCADIS will initiate the call-before-you-dig procedure at least 48 hours before the investigation is conducted to determine the location of utilities. Furthermore, a utility locate company (GPRS) will be utilized to assist in identifying the utilities in the vicinity. The VAP grab groundwater samples will be collected in a manner that will minimize interference and/or cross-impacts from the various vertical water-bearing zones within the upper aquifer. Duplicate, trip blank, and matrix spike/matrix spike duplicate samples will be collected during the sampling event for QA/QC purposes.

Groundwater Sample Laboratory Analysis

Groundwater samples will be shipped on ice under proper chain-of-custody to TestAmerica Laboratory for analysis of the following parameters:

VOCs (USEPA Method 8260)

SVOCs (USEPA Method 8270)

Metals:

- Total Metals (RCRA metals plus Nickle and Zinc) (USEPA Method 6020)
- Hexavalent chromium (USEPA Method 7196)

Groundwater samples for metals analysis will be filtered in the field or at the laboratory using a 0.45-micron filter. Filtering will be necessary because the groundwater samples are being collected from temporary points.

Soil Sampling

The USEPA has requested that soil samples be collected during the groundwater assessment activities. As specified in the September 4, 2015, USEPA comment letter, a lithologic description will be prepared for all borings and an organic vapor analyzer (OVA) will be used to field screen soil from the boreholes. A single soil sample will be collected from each borehole and will correspond to the interval with the highest measured OVA reading.

Soil Boring Installation and Sampling

The soil sampling activities will be conducted with the truck-mounted Geoprobe® unit that will be utilized during the VAP sampling. The soil borings will be co-located with or adjacent to the VAP locations. A soil coring device with a new acetate sleeve will be driven into the ground by the Geoprobe® unit and retrieved to the surface. Upon retrieval of the soil core and removal from the acetate sleeve, a qualified geologist will conduct a visual inspection of the core. The following information will be recorded on Sample/Core logs, which will be prepared for each location:

- Major soil type and percentage;
- Composition of the soil;
- Moisture, texture, and color of the soil;
- Other geologic observations such as bedding characteristics, structure and orientation, and primary and secondary permeability/porosity (if possible); and
- Observations on drilling progress including sample interval loss and recovery.

The soil core will be screened in the field using an OVA (e.g., photoionization detector [PID] or flame ionization detector [FID]) to document the levels of organic vapors present. To collect volatile organic headspace readings, a portion of the soil core will be placed in a sealed plastic bag. The bag will be placed in a dry area and allowed to warm to ambient temperatures. After a minimum of 10 minutes, the OVA will be inserted into the bag to measure the vapors that have accumulated. OVA readings will be recorded on the Sample/Core Log. The soil interval in the zone above the water table (vadose zone) exhibiting the highest OVA reading in each borehole will be selected for sampling. VOC samples will be collected directly from the target depth interval of the soil core to minimize disturbance using an EnCore™ sampler or equivalent (Terra Core). SVOC and metal samples will be collected in containers provided by the laboratory. Duplicate, trip blank, and matrix spike/matrix spike duplicate samples will also be collected during the sampling event for QA/QC purposes. If no OVA readings are obtained above background levels in a given soil boring within the vadose zone, a soil sample will be collected from the upper 5 feet of the boring.

Soil Sample Laboratory Analysis

Soil samples will be shipped on ice under proper chain-of-custody to TestAmerica Laboratory for analysis of the following parameters:

VOCs (USEPA Method 8260)

SVOCs (USEPA Method 8270)

Metals:

- Total Metals (RCRA metals plus Nickle and Zinc) (USEPA Method 6020)
- Hexavalent chromium (USEPA Method 7196)

Data Evaluation and Reporting

Upon receiving the air data, which should be available approximately 14 days after completion of sampling, the analytical package will be reviewed for completeness. Once reviewed, the data package will be shared with the USEPA. The data obtained from this VI assessment will be evaluated and compared to the calculated Vapor Intrusion Screening Levels. Any additional sampling beyond what is described in this IMWP will be based on the data evaluation. The evaluation will use the MLE approach described in the *USEPA OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* (USEPA June 2015). Additionally, data will be evaluated against indoor air background concentrations as identified in the *Background Indoor Air Concentrations of Volatile Organic Compounds in North American Residences (1990-2005): A Compilation of Statistics for Assessing Vapor Intrusion* (USEPA 2011). Data from the background ambient air samples collected during the event will assist in the MLE evaluation. If the evaluation of the initial and seasonal sampling events indicate that the VI pathway is incomplete, additional VI evaluation is not warranted.

Soil and groundwater data will also be evaluated upon receipt and reviewed for completeness. The data will be summarized and the electronic data package will be shared with the USEPA. The electronic format will be compatible with the USEPA's EQuIS system. The need for additional sampling will be evaluated with the USEPA.

Data validation will be conducted on the air samples collected during this assessment. Soil and groundwater data validation will be conducted in accordance with procedures described in the Quality Assurance Project Plan for the site monitoring program previously approved by the USEPA.

ARCADIS will prepare a Summary Report of the results from this assessment for Grenada Manufacturing to submit to the USEPA. Communication of the sample results to the residential property owners will be handled by the USEPA.

Schedule

Upon receiving the executed access agreements, personnel will mobilize to the area to conduct the structure reconnaissance and the sampling. In the event that potential source materials are found, they will be removed or isolated and the structure will be allowed to ventilate for approximately 24 hours. Installation and sampling of the soil gas ports are expected to take approximately 3 days. Installation of the sub-slab sample ports will take approximately 1 hour per structure. Indoor air sampling will

take approximately 24 hours per structure. This sampling effort will take approximately 3 to 5 days to complete, assuming all access agreements are in place. The soil and groundwater sampling is anticipated to take an additional 10 to 15 days to complete and likely will occur under a separate mobilization. Data will be available to the USEPA approximately 30 days following sample collection.

Closing

If you have any questions regarding this IMWP, please do not hesitate to contact us at 225-292-1004.

Sincerely,

ARCADIS U.S., Inc.

I have reviewed this document in sufficient depth to accept full responsibility for its contents.

George E. Cook, RPG
Staff Geologist
Mississippi Registration Number 0889

John Ellis
Certified Project Manager

Attachments

Copies:
Steven Sharp – ARCADIS

ARCADIS

Figure

LEGEND

- Site Boundary
- 100-foot radius
- Monitoring Well
- Temporary Monitoring Well
- Stratigraphy Boring
- Soil-Gas Port
- Waterloo Profile
- Proposed Residential Vapor Intrusion (VI) Sample
- Proposed Soil-Gas Port
- Proposed Ambient-Air Sample
- Proposed Vertical Aquifer Profile Sample

NOTE: All locations are approximate.

0 160 320

SCALE IN FEET

PROJECTION: NAD 1983 StatePlane Mississippi West FIPS 2302 Feet
AERIAL SOURCE: ESRI Online Imagery (NAIP, July 2014).

GRENADA MANUFACTURING, LLC
GRENADA, MISSISSIPPI

REVISED INTERIM MEASURES WORK PLAN

Site Map

ARCADIS

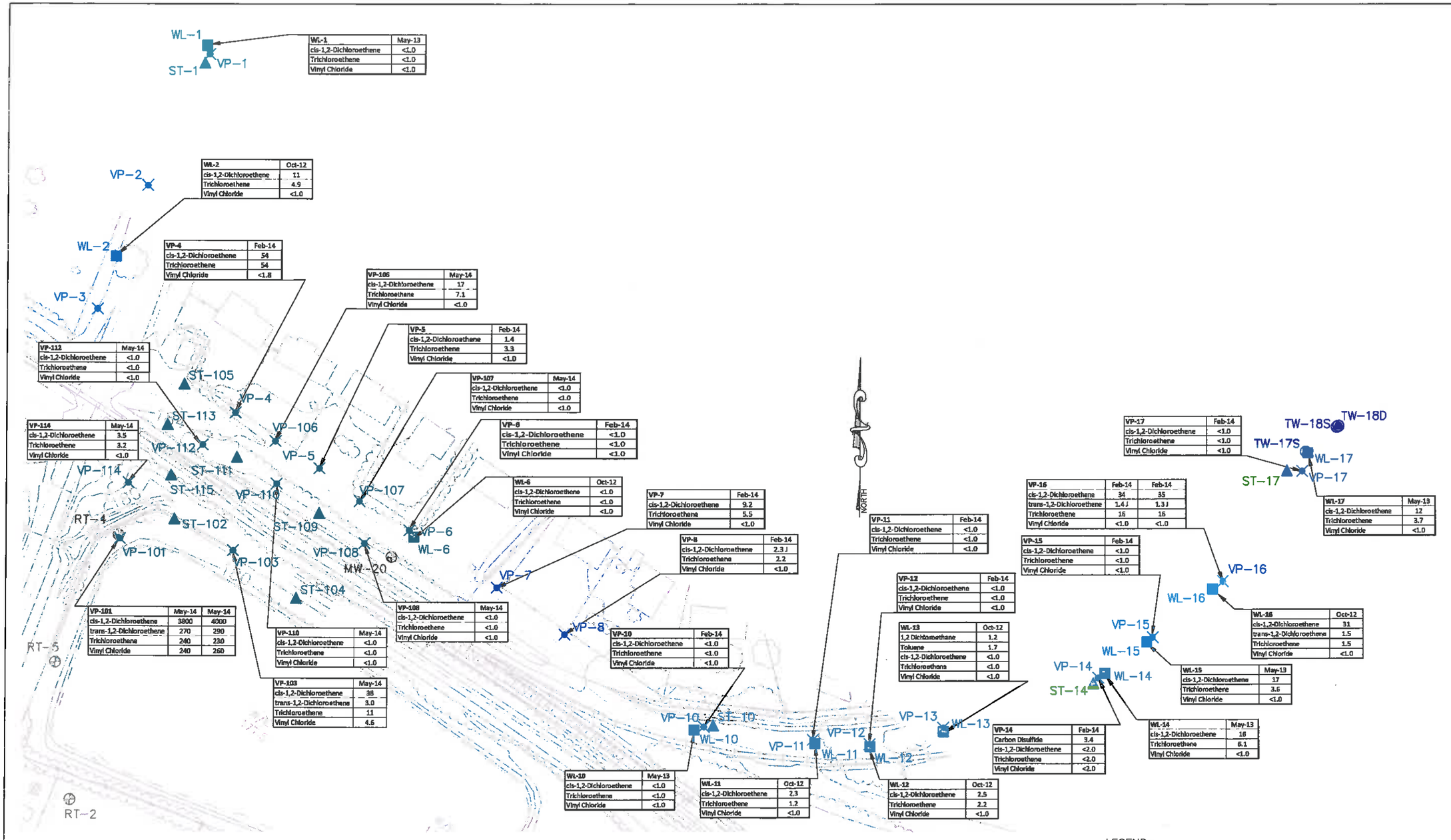
FIGURE
1

CITY:(KNOXVILLE) DIV/GROUP:(ENV/GIS) LD:(B.ALTOM) PIC:(P.WAGNER) PM:(S.SHARP) TM:(M.HEAP)
PROJECT: IN000899.DWD PATH: G:\GIS\MERITORMS_GRENADA_ICE\MAPDOCS\2015\REV INTERIM WP\F1 ICE_RIMWP SITE MAP V2.MXD DATE SAVED: 9/10/2015 11:27:56 AM BY: BALTOM

ARCADIS

Attachment A

Groundwater Analytical Data Figure



TAM ASSOCIATES
4675 LAKEHURST COURT
SUITE 250
COLUMBUS, OHIO 43016
TEL 614-339-3380
WWW.TAMASSOCIATES.COM

MERITOR, INC.

GRENADA MANUFACTURING, LLC PLANT

GRENADA, MISSISSIPPI

GROUNDWATER ANALYTICAL DATA
SHALLOW/WATER TABLE

NO.	DATE	REVISIONS	BY	CHECKED

PROJECT NO.	DATE 12/16/13
SCALE 1"=100'	CADD FILE
DESIGNED BY	DWG PATH
CHECKED BY JP	DRAWN BY BF

FIGURE

X

ARCADIS

Attachment B

Building Survey and Product Inventory Form

Building Survey and Product Inventory Form

Directions: This form must be completed for each residence or area involved in indoor air testing.

Preparer's Name: _____

Date/Time Prepared: _____

Preparer's Affiliation: _____

Phone No.: _____

Purpose of Investigation: _____

1. OCCUPANT:

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/Persons at this Location: _____

Age of Occupants: _____

2. OWNER OR LANDLORD: (Check if Same as Occupant ___)

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS:

Type of Building: (circle appropriate response)

Residential	School	Commercial/Multi-use
Industrial	Church	Other: _____

If the Property is Residential, Type? (circle appropriate response)

Ranch		2-Family 3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If Multiple Units, How Many? _____

If the Property is Commercial, Type?

Business Type(s) _____

Does it include residences (i.e., multi-use)? Y / N If yes, how many? _____

Other Characteristics:

Number of Floors_____ Building Age_____

Is the Building Insulated? Y / N How Air-Tight? Tight / Average / Not Tight

4. AIRFLOW:

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow Between Floors

_____

_____

_____

Airflow Near Source

_____

_____

Outdoor Air Infiltration

_____

Infiltration Into Air Ducts

_____

_____

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS: (circle all that apply)

a.	**Above grade construction:**	wood frame	concrete	stone brick	
b.	**Basement type:**	full	crawlspace	slab	other _____
c.	**Basement floor:**	concrete	dirt	stone	other _____
d.	**Basement floor:**	uncovered	covered	covered with _____	
e.	**Concrete floor:**	unsealed	sealed	sealed with _____	
f.	**Foundation walls:**	poured	block stone	other _____	
g.	**Foundation walls:**	unsealed	sealed	sealed with _____	
h.	**The basement is:**	wet	damp	dry	moldy
i.	**The basement is:**	finished	unfinished	partially finished	
j.	**Sump present?**	Y / N			
k.	**Water in sump?**	Y / N / NA			

Basement/lowest level depth below grade: _____(feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

_____

Are the basement walls or floor sealed with waterproof paint or epoxy coatings? Y / N

6. HEATING, VENTILATING, AND AIR CONDITIONING: (circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard
Space heaters	Stream radiation	Radiant floor
Electric baseboard	Wood stove	Outdoor wood boiler
Other _____		

The primary type of fuel used is:

Natural base	Fuel oil	Kerosene
Electric	Propane	Solar
Wood coal		

Domestic hot water tank fueled by: _____

Boiler/furnace located in: Basement Outdoors Main Floor Other_____

Air conditioning: Central Air Window Units Open Windows None

Are there air distribution ducts present? Y / N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

_____

_____

_____

7. OCCUPANCY:

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

General Use of Each Floor (e.g., family room, bedroom, laundry, workshop, storage):

Basement _____

1st Floor _____

2nd Floor _____

3rd Floor _____

4th Floor _____

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY:

a. Is there an attached garage? Y / N

b. Does the garage have a separate heating unit? Y / N / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, ATV, car)?

Y / N / NA Please specify: _____

d. Has the building ever had a fire? Y / N When? _____

e. Is a kerosene or unvented gas space heater present? Y / N Where? _____

f. Is there a workshop or hobby/craft area? Y / N Where & Type? _____

g. Is there smoking in the building? Y / N How frequently? _____

h. Have cleaning products been used recently? Y / N When & Type? _____

i. Have cosmetic products been used recently? Y / N When & Type? _____

j. Has painting/staining been done in the last 6 months? Y / N Where & When? _____

k. **Is there new carpet, drapes or other textiles? Y / N Where & When?** _____

l. Have air fresheners been used recently? Y / N When & Type? _____

m. Is there a kitchen exhaust fan? Y / N If yes, where _____

n. Is there a bathroom exhaust fan? Y / N If yes, where vented?_____

o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type?_____

q. Are there odors in the building? Y / N

If yes, please describe: _____

Do any of the building occupants use solvents (e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist) at work? Y / N

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (circle appropriate response)

Yes, use dry-cleaning regularly (weekly) No

Yes, use dry-cleaning infrequently (monthly or less) Unknown

Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / N

Date of Installation: _____

Is the system active or passive? Active/Passive

Are there any Outside Contaminant Sources? (circle appropriate responses)

Contaminated site with 1000-foot radius? Y / N Specify _____

Other stationary sources nearby (e.g., gas stations, emission stacks, etc.): _____

_____

Heavy vehicle traffic nearby (or other mobile sources): _____

9. WATER AND SEWAGE:

Water Supply: Public Water Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: Public Sewer Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION: (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

_____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

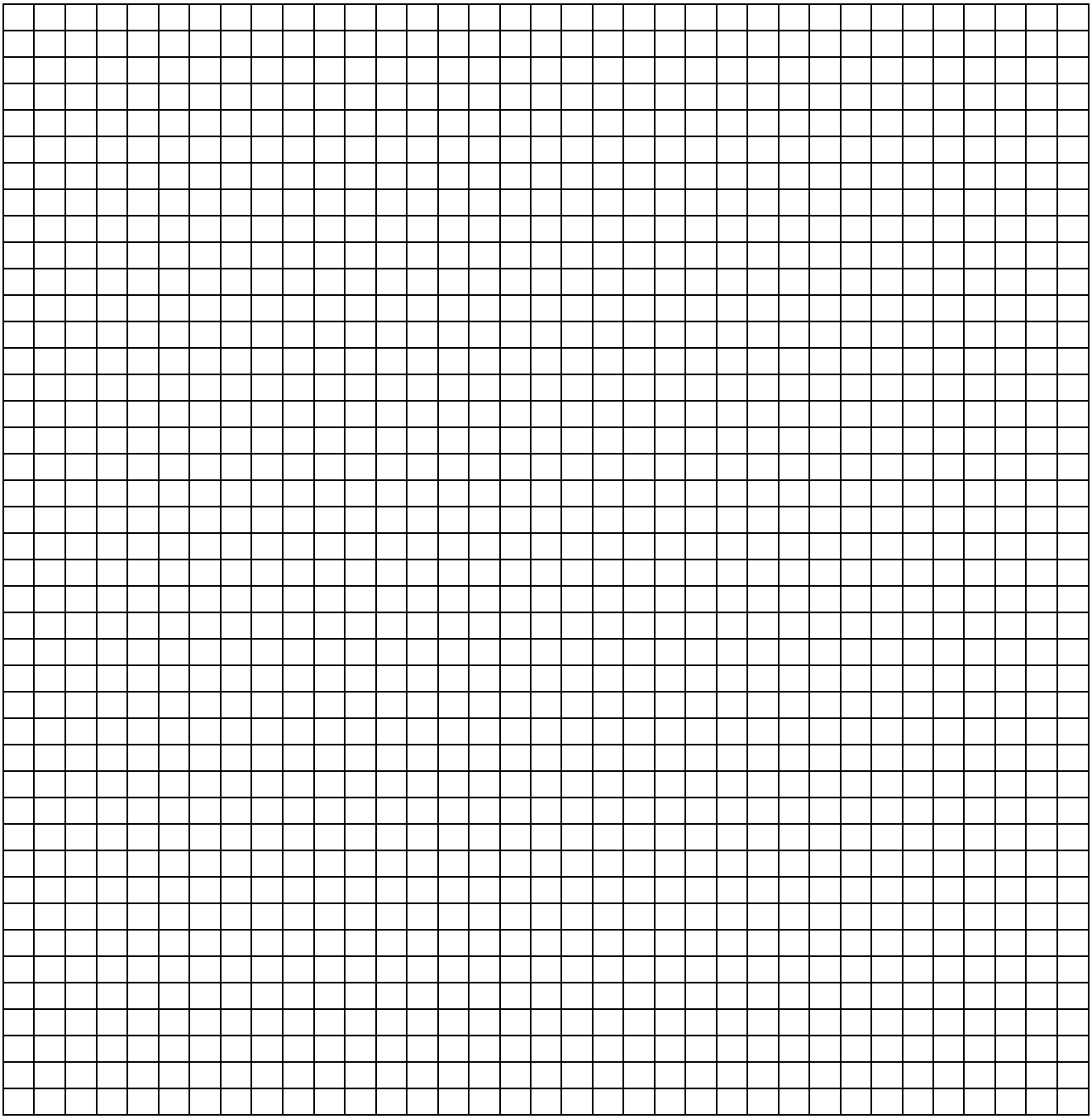
d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS:

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:

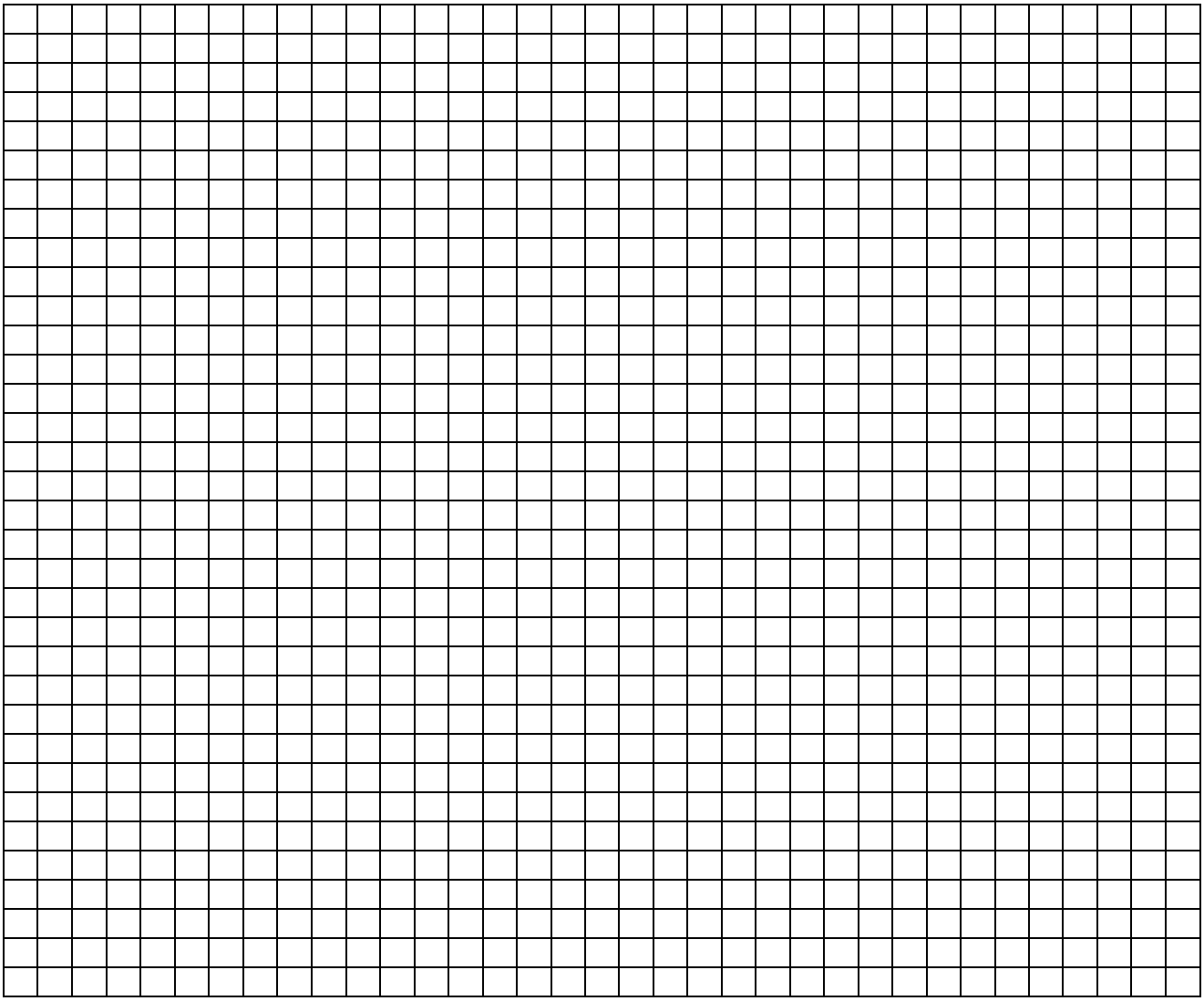
First Floor:



12. OUTDOOR PLOT:

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s), and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM:

Make and Model of field instrument used: _____

List specific products found in the residence or area that have the potential to affect indoor air quality (e.g., gasoline or kerosene storage cans, glues, paints, cleaning solvents/products, polishes/waxes, new furniture/ carpet, nail polish/hairspray/cologne).

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y/N

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JUN 30 2015

Via Overnight Delivery – Return Receipt Requested

Grenada Manufacturing, LLC
c/o Mr. Donald Williams
635 Highway 332
Grenada, Mississippi 38901

SUBJ: Notice Regarding the Need for Interim Measures Work Plan
EPA HSWA Permit No. MSD 007 037 278, July 29, 2010
Grenada Manufacturing, LLC, Grenada, MS

Dear Mr. Williams:

The U.S. Environmental Protection Agency has reviewed a January 17, 2014 sampling report submitted by T and M Associates regarding groundwater and soil gas sampling conducted near Monitoring Well 20 (MW-20) at the northern boundary of the Grenada Manufacturing, LLC (Grenada) facility (the Facility). Based on the January 2014 report, as well as data from groundwater monitoring performed in 2012, 2013, and 2014, the EPA is concerned about a potential residential vapor intrusion pathway from elevated levels of trichloroethylene (TCE) in groundwater in and around MW-20. Accordingly, pursuant to Condition II.F.1. of the above-referenced EPA HSWA Permit, the EPA hereby notifies Grenada that it shall prepare and submit an Interim Measures Work Plan (IMWP) addressing the potential for vapor intrusion into the residences north of the Facility along Lyon Drive. Consistent with Conditions II.F.1.a. and II.F.1.c. of the EPA HSWA Permit, this IMWP shall be submitted within thirty (30) calendar days of Grenada's receipt of this letter, and shall include interim measures objectives, as well as procedures and schedules for implementation. The IMWP shall account for the analysis of all volatile organic compounds (VOCs) that have been identified as chemicals of concern at the Facility.

In preparing and implementing the IMWP, Grenada shall follow the "OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway From Subsurface Vapor Sources to Indoor Air" (OSWER Pub. 9200.2-154), June 11, 2015, available at http://www.epa.gov/oswer/vaporintrusion/.

The EPA appreciates your cooperation and response to this request. If you have any technical questions regarding the preparation of the IMWP, please contact me at (404) 562-8511, or at bastek.brian@epa.gov. If you have any legal questions regarding this work or compliance with the terms of the EPA HSWA Permit, please contact Gregory Luetscher at (404) 562-9677, or at luetscher.greg@epa.gov.

Sincerely,

Brian Bastek
RCRA Corrective Action and Permitting Section
RCRA Cleanup and Brownfields Branch

cc: Carla Brown, MDEQ

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

AUG 20 2015

Grenada Manufacturing, LLC.
c/o John Ellis
ARCADIS U.S., Inc.
10352 Plaza Americana
Baton Rouge, LA 70816

SUBJ: EPA Comments on Vapor Intrusion Assessment - Draft Interim Measures Work Plan
Grenada Manufacturing, LLC
MSD 007 037 278
Grenada, Mississippi

Dear Mr. Ellis:

The EPA has reviewed the Grenada Manufacturing, LLC (Grenada) draft Vapor Intrusion (VI) Interim Measures Work Plan (IMWP). In addition to transmitting the enclosed comments, this letter highlights several key components of the revisions to the IMWP that will be necessary. You will recall that Brian Bastek and I discussed these matters with you by phone on Friday, August 14, 2015.

As we stated during our phone conversation, certain aspects of the revisions to the IMWP are of primary importance to the EPA; they are summarized as follows:

- Consistent with the *USEPA OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* (USEPA, June 2015), along with soil gas, sub-slab, indoor, and ambient air sampling, groundwater sampling is an important component of a VI investigation. A major omission of the draft IMWP is its failure to include concurrent groundwater sampling along with the VI air sampling. As described in the EPA's June 2015 guidance, data derived from groundwater and air sampling constitute information that is critical for adequately assessing the potential risks to human health associated with a VI pathway. Accordingly, please be advised that groundwater sampling throughout the area of the neighborhood must be conducted as part of, and concurrent with, the proposed VI investigation air sampling. This "multiple lines of evidence" approach is necessary in order to determine if a complete VI pathway is, or is not, present in this area. The draft VI IMWP, therefore, must be modified to reflect such sampling.

- In addition, the draft VI IMWP currently contemplates additional air sampling events based on an evaluation of the initial data obtained from the first six residences indicated on Figure 1 of the draft VI IMWP, as well as additional seasonal sampling. It is therefore necessary to modify the draft VI IMWP to include additional detail specifying the decision process that will be used to identify the need for, and locations of, the contemplated additional sampling.

- Finally, the draft VI IMWP must be amended to include a schedule of all sampling activities.

Please refer to the enclosure for additional edits to the draft VI IMWP that will need to be made, as we discussed during our phone conversation on August 14, 2015.

Due to the potentially very serious human health concerns, please update the draft VI IMWP previously submitted to the EPA and re-submit a revised VI IMWP to the EPA by August 27, 2015, so that, following review and approval by the EPA, sampling can begin by August 31, 2015. You may contact Brian Bastek of my staff at 404-562-8511 if you any questions about contents of this letter or the enclosed information.

Sincerely,

Meredith C. Anderson, Chief
RCRA Corrective Action and Permitting Section
Resource Conservation and Restoration Division

Enclosure

cc: Carla Brown, MDEQ
Donald Williams, Grenada Manufacturing, LLC

EPA Comments on the draft Vapor Intrusion Interim Measures Work Plan,
dated August 3, 2015
Prepared by ARCADIS for
Grenada Manufacturing, LLC
Grenada, Mississippi
8/20/15

p. 1 – Background:
Please include a brief description of the groundwater sampling that was conducted simultaneously with the soil gas sampling.

p. 2 – Scope of Work:
Groundwater sampling is an essential component of a Vapor Intrusion (VI) investigation to provide adequate "multiple lines of evidence", along with soil gas, sub-slab, indoor, and ambient air sampling, to evaluate whether a complete VI pathway is present. Please include groundwater sampling throughout the neighborhood to provide the necessary information for informing the decision-making process for potential future sampling. Initially, a minimum of 10 wells located at key locations within and around the neighborhood must be installed and sampled for site-related constituents. A full evaluation of this data, concurrent with the air data, is required to determine the need for additional sampling.

p. 2 – Scope of Work/last sentence:
Please amend this sentence to read: "*If the evaluation indicates that the VI pathway is incomplete, additional VI evaluation is not warranted.*" It is important to understand, however, that a continued groundwater monitoring program in this area may be necessary for the purposes of understanding the nature and extent of groundwater contamination.

p. 3 – Residential VI Assessment:
In the first sentence, please specify what is meant by "VI sampling" (for instance, sub-slab and indoor air sampling). Also, in the third sentence, please specify what is meant by "potential soil gas impacts (VP-2, VP-3, VP-5, VP-6)".

p. 3 – Community Outreach:
Please edit this section to read as follows: "*Prior to engaging property owners regarding the residential VI sampling, USEPA will conduct outreach with potentially affected community members. The purpose of this outreach will be to disseminate information regarding the Site history, the constituents being assessed, vapor intrusion and the sampling process, and obtaining sampling site access. Residential VI sampling will be contingent on USEPA obtaining approval and a signed access agreement from the property owners.*" Also, please indicate in this section that the permittee and ARCADIS will participate along with the EPA in outreach activities, as needed, and support the production of outreach materials.

p. 4 – Reconnaissance of Structures:
Please include the residential checklist as an attachment to this work plan.

p. 5 – 1st paragraph:
Please specify the total number of ambient air samples that will be collected during the first phase of the residential sampling.

p. 5 – Sub-Slab Port Installation:
Please add a clarification that sub-slab ports will be installed in a discrete location within the home to minimize disturbance, and provide a description of how the ports will be removed and that the home will be returned to its original condition, to the extent possible.

p. 6 – Residential VI Seasonal Sampling:
Please clarify that more than 2 seasonal sampling events may be necessary based on a review of the VI (air and groundwater) data. This should be reflected in the decision process (discussed below) used to determine the need for additional sampling.

p. 6 – Laboratory Analysis:
The EPA requires that for all sample analyses the Method Detection Levels be less than the most up-to–date EPA Regional Screening Levels. Laboratory analytical results should be received on a priority schedule and shared with EPA in an electronic format as a soon as practicable. Also, please add benzene and xylene to the list of VOCs for analyses of all air samples.

p. 7 – 1st paragraph:
Please specify that duplicate samples will be taken for each media being sampled.

p. 7 – Data Evaluation and Reporting:
This section should include a sampling schedule and a detailed presentation of the decision process to be used to determine, using a "multiple lines of evidence approach", whether and where additional VI sampling (including groundwater, soil gas, sub-slab/indoor air, and ambient air) are needed to confirm the presence or absence of a complete VI pathway.

p. 8 – 1st sentence:
This sentence should read "*If the evaluation of the initial and all seasonal sampling events indicate that the VI pathway is incomplete, additional VI evaluation is not warranted.*" It is important to understand, however, that a continued groundwater monitoring program in this area may be necessary for the purposes of understanding the nature and extent of groundwater contamination.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

September 4, 2015

Grenada Manufacturing, LLC.
c/o John Ellis
ARCADIS U.S., Inc.
10352 Plaza Americana
Baton Rouge, LA 70816

SUBJ: Conditional Approval for Vapor Intrusion Assessment - Interim Measures Work Plan
Grenada Manufacturing, LLC
MSD 007 037 278
Grenada, Mississippi

Dear Mr. Ellis:

The EPA has reviewed the Grenada Manufacturing, LLC (Grenada) revised draft Vapor Intrusion (VI) Interim Measures Work Plan (IMWP). This work plan is approved with the following conditions listed below. Meredith Anderson and I discussed these items with you on Tuesday, September 1, 2015.

As we stated during our conversation, several items still need to be included or modified in the work plan and are summarized as follows:

- Consistent with the *USEPA OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* (USEPA, June 2015), along with soil gas, sub-slab, indoor, and ambient air sampling, groundwater sampling is an important component of a VI investigation. Though the revised work plan included 6 sampling locations, the EPA had asked for a minimum of 10. The program feels that at least 10 will be necessary to determine the nature and extent of groundwater contamination. As discussed, a minimum of 4 additional wells should be located along the northern perimeter of the neighborhood, as well as in the interior. The lithology at all geoprobe borings should be identified and logged by a professional geologist. OVA readings should be obtained and a soil sample should be collected and analyzed at the location of the highest OVA readings. All soil and groundwater samples should be analyzed for VOCs, SVOCs, and metals (including speciated chromium) using SW846 methods.

- All sampling and analysis activities for this VI study should be conducted in accordance with the appropriate EPA Region 4 protocols (http://www.epa.gov/region4/sesd/lbqstp/index.html).

- All sub-slab sampling ports will be installed in a discrete location within the home to minimize disturbance, and the home will be returned to its original condition, to the extent possible.

- Based on the review of groundwater and air (soil gas, sub-slab, indoor, and ambient) data from the initial 2 seasonal sampling events, it may be necessary to conduct additional groundwater and air sampling to provide adequate multiple lines of evidence to determine the presence or absence of a complete VI pathway. This determination will be made by the EPA and will be communicated promptly to the permittee.

- All data from this investigation should be submitted promptly to the EPA in an electronic format using the EPA's Equis system.

- The EPA requests that the permittee and their consultants participate in outreach activities in the community, as needed, and support the production of outreach materials.

- Upon request, comprehensive data validation procedures will be performed on all data obtained from this investigation.

Due to the potentially very serious human health concerns, please update the latest draft VI IMWP previously submitted to the EPA and re-submit a final VI IMWP to the EPA by September 10, 2015, so that sampling can begin no later than the week of September 21, 2015. You may contact me at 404-562-8511 if you any questions about the contents of this letter.

Sincerely,

Brian Bastek
RCRA Corrective Action and Permitting Section
Resource Conservation and Restoration Division

cc: Carla Brown, MDEQ
Donald Williams, Grenada Manufacturing, LLC