



GUAM POWER AUTHORITY

ATURIDÁT ILEKTRESEDÁT GUAHAN
P.O. BOX 2977 HAGÁTÑA, GUAM U.S.A. 96932-2977

January 2, 2019

AMENDMENT NO.: IX

TO

INVITATION FOR MULTI-STEP BID NO.: GPA-034-18

FOR

**BUILD, OPERATE & TRANSFER CONTRACT FOR 180MW OF NEW GENERATION CAPACITY
STEP 2 – TECHNICAL SPECIFICATIONS**

Step 1 Qualified Bidders are hereby notified of the following responses to inquiries received from the following:

Qualified Bidder #1 dated 11/06/2018:

QUESTION:

1. Similar Design
IFBSB Section B, 3.2.3 Additional General Instructions
-b), iv) For fossil fuel fired components, new and clean dual fuel ULSD and Natural Gas units of similar design that have been in reliable commercial operation for at least three(3) continuous years as of the Bid Date.

Please clarify whether a reciprocating engine model which has been scaled up, with identical technology, from the model having been in reliable commercial operation for at least three(3) continuous years be accepted as "SIMILAR DESIGN" of the IFMSB Section B, 3.2.3, b), iv), clause(Page 59 of 595). Please find the attachment which was already attached to our clarification letter dated 31/10/2018.

ANSWER:

If the specific engine model has not been successfully built and commercially operated, it is not acceptable equipment.

Qualified Bidder #3 dated November 15, 2018:

QUESTION:

1. Does GPA have a drone video of the new power plant site and surrounding area? If so, could GPA provide a link to it?

ANSWER:

Drone videos can be downloaded from the link on GPA's Procurement website.

QUESTION:

2. Regarding the transient response requirements described in Section C, Functional Technical Specifications, section 2.2.4 Transient Response (pdf page 107): What type of load change curve (transient response) is desired? Is the transient response seen as a ramp following a dispatch order from GPA (Figure 1 below) or a step load acceptance capability (Figure 2)?

Figure 1

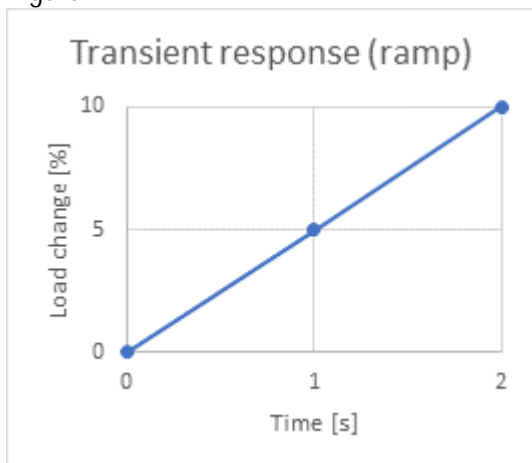
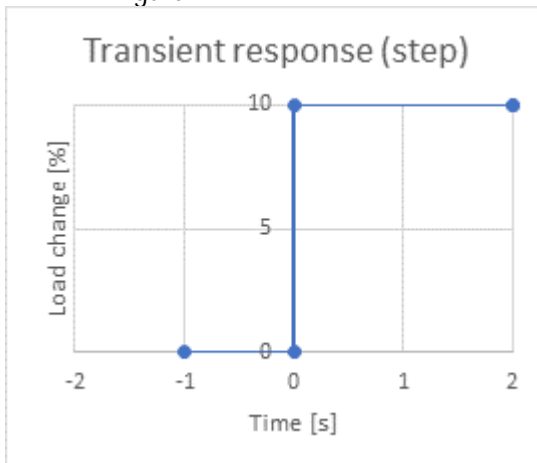


Figure 2



ANSWER:

The minimum required response is as defined in the specifications. Figure 1 meets the minimum required response for the transient response of the unit. Figure 2 also appears to meet the minimum required response for the transient response of the unit. Figure 1 is the expected minimum response required from the unit.

QUESTION:

3. The partial pipeline easement/ROW drawings provided with Amendment 1 and the pipeline tour on November 7th were helpful, thank you. However, the ROW drawings provided with Amendment 1 only cover the southern half of the pipeline; they did not show easement/ROW information for the northern portion of the pipeline from where it enters airport property to its termination at the Tanguisson power plant. Please provide comparable drawings for that northern portion of the pipeline. Also, please provide as-built drawings of the entire pipeline, if available, so that bidders understand exactly where within the easement they will be able to locate the new pipelines.

ANSWER:

Kindly refer to ***INCLUSIONS*** of Amendment No.: VIII.

QUESTION:

4. Regarding the existing HFO pipeline: We request that GPA provide copies of all records and reports in its possession (including submittals to Guam EPA) related to releases from the existing pipeline, release response activities, and pipeline closure (including information regarding GPA's draining/flushing/capping of the pipeline and Guam EPA closure).

ANSWER:

GPA is providing the Pipeline spill reports that are available. See attachments.

- Pipeline Spill Summary (2004-2018).xls
- 2004-08-02 Pipeline (Sasa Valley).pdf
- 2005-02-23 MTM Spill.pdf
- 2006-09-25 Barrigada Post Office, Tiyan.pdf
- 2006-09-26 Across Crown Market, Tiyan.pdf
- 2006-09-29 HPVLPV Pit, Tiyan.pdf
- 2013-09-25 Agana Hts.pdf
- 2015-02-11 GPA Tanguisson Pipeline Emer Resp Clean up Services Report.pdf and 2015-02-11 Toto Pipeline.pdf

Furthermore, please see attached Document of Draining Activity:

- Tango PL draining timeline accountability As of 8-28-15.pdf

QUESTION:

5. Is there a Phase I Environmental Site Assessment available for (a) the facility site, and (b) the pipeline easement/ROW? If so, please provide a copy.

ANSWER:

There is no ESA for the facility site or the pipeline easement.

QUESTION:

6. Regarding the power plant site: Communications from GPA have indicated that the lots that comprise the designated power generating plant site have been rezoned to M-1 and that power generation is an approved use for the site. Those communications have not indicated exactly what specific building restrictions (e.g., FAR, percent impervious cover, property line setback requirements, building height limits, stack height limits, etc.) will apply to the project, if any. Please provide a summary of such restrictions, if there are any, with a reference to their source.

ANSWER:

Response shall be forthcoming.

QUESTION:

7. Regarding the preliminary geotechnical study being conducted by GPA:
 - a. Please confirm the number of boreholes. Sixteen were mentioned in the pre-bid meeting; however, the map provided with Amendment V shows 12.
 - b. Would it be possible for GPA to provide the driller's logs and the engineer's field notes as soon as they are available, e. g., the next day? Doing so would enable bidders to review some preliminary site geotechnical information without waiting until the report is available.

ANSWER:

- a. Twelve is correct.
- b. Yes.

QUESTION:

8. What is the availability requirement for the project's synchronous condenser capability?

ANSWER:

The Synchronous condenser shall have availability of 90% or more.
Facility availability guarantee is considered in the evaluation model by assuming that the existing GPA plants will have to generate electricity during the time when the Facility is not available.

QUESTION:

9. Please confirm that the project company will not be responsible for any GPA system upgrades beyond the Harmon Substation interconnection facilities and that GPA will ensure that its system can absorb the power from the new plant.

ANSWER:

The GPA system can accept the power from the plant during certain times of the day. During periods of high PV production, the plant will be providing minimal energy to the GPA system. As PV production is reduced during the evening hours, the plant's production is expected to increase until such a time as GPA secures additional load-shifting resources on its system.

QUESTION:

10. Please confirm that GPA wants to have the new natural gas pipeline in place by the Phase 1 COD.

ANSWER:

Confirmed.

QUESTION:

11. Regarding Form 2, Affidavit by the Bidder (pdf page 425): Paragraph two on page one mentions Attachment 1-A but the list of attachments on the next page refers to "Attachment 2-A: Certificate from Parent Company (pursuant to Form 2, paragraph 2)". Is one of these a typo or does GPA want to see a certificate of authorization from the parent company also, and not just from the bidder company (i.e., the special purpose company)? And is the certificate supposed to evidence the signatory's authority to give the affidavit, etc. or is it perhaps supposed to be a certificate for something else, e.g., a certificate of incorporation?

ANSWER:

Response shall be forthcoming.

All other Terms and Conditions in the bid package shall remain unchanged and in full force.


JOHN M. BENAVENTE, P.E.
General Manager

**Oil Spill Summary for Tanguisson, Cabras, and MEC Heavy Oil Line
FY 2004-2008**

Date	Location	Remarks
FY04-06	MTM (Aug. 4, 2001)	
08/02/04	Nimitz Hill	Contaminated soil removed manually with shovels. Corroded area repaired with metal plate.
02/23/05	MTM	Booms were placed at the end of oil flow. Swales were also dug out to prevent the flow from going into the nearby wetland. Contractor was called in for cleanup. Central Maintenance made repairs to the pipeline. Contractor Called in to Conduct Cleanup
03/21/05	Peterra fuel farm	Central Maintenance repaired pipeline and conducted cleanup. Contractor called in to assist in cleanup
07/13/06	Pipeline Near berm above Tanguisson Power Plant	Emergency Spill Response Contractor called in to conduct cleanup. Contractor who installed line made repairs.
07/14/06	Nimitz Hill	Called in Contractor to conduct clean-up
07/14/06	GIAA	Called in Contractor to conduct clean-up
08/24/06	Sasa Valley	Called in Contractor to conduct clean-up
09/25/06	Pipeline in Tiyan near US Post office	Plastic sheeting, booms, pads, and drum catchments were already in place. The contractor conducted cleanup.
09/26/06	Tiyan across Crown Market	Emergency Spill Response contractor conducted cleanup
09/28/06	Ponding Basin, in Tiyan across Crown Market (related to the September 26th incident)	Emergency Spill Response contractor conducted cleanup
09/29/06	Tiyan. 3rd HPV/LPV Pit from N.O.S. valve pit	contaminated soil removed;
FY2006	Sasa Valley (Continued from 8-24-06)	Called in Contractor to conduct clean-up
11/09/06	CSG at GIAA Fenceline, Across Rev and Tax	Called in Contractor to conduct clean-up
09/25/13	Agana Heights	Central Maintenance discovered leak and repaired pipeline and conducted cleanup.
02/11/15	JS Store, Toto-Canada Rd.	CM Depressurizing pipeline. Initial clean up by CM. Continued by Gresco



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OIL SPILL INCIDENT REPORT

SPILL DATE: August 2, 2004 MON

LOCATION OF SPILL: Off Turner Road, Nimitz Hill going down to Sasa Valley. Opposite gate going to 115 kv towers

INDIVIDUAL WHO DISCOVERED SPILL: Mike Cruz and Rey Bugao of Central Maintenance

TYPE OF OIL: RFO#6

ESTIMATED VOLUME: 15 – 20 gallons

ESTIMATED VOLUME REACHING WATERWAY: None

ESTIMATED AREA AFFECTED: 10' x 10'

CLEANUP ACTION TAKEN: Top soil scraped manually with shovels and placed on plastic sheeting.

CORRECTIVE ACTIONS AND COUNTERMEASURES TAKEN TO STOP SPILL: Pumping operation halted. Contaminated soil placed on plastic sheeting then covered with plastic. Booms placed around plastic. Cleanup in preliminary stage.

FAILURE ANALYSIS OF CAUSE OF SPILL: Corrosion at pedestal area of pipe.

MEASURES NECESSARY TO PREVENT RECURRENCE: Metal patch to be welded around affected area of pipe.

GOVERNMENT AGENCIES CONTACTED: GEPA (Manny Minas)

REMARKS: P&R Responders: Norbert Madrazo & Roger Pabunan. Leak discovered at about 2:30pm.

Report by:

Roger Pabunan
Environmental Engr. I







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March 29, 2005

COMPLETION REPORT

To: Sylvia I. Tumaneng
From: Roger U. Pabunan
Subject: MTM Pipeline Spill, February 23, 2005 WED

Clean-up on the recent MTM Pipeline spill has concluded. PERI picked-up 14 cubic yards of soil, 18 drums of soil, and 5 drums of pads and booms. The waste was transported to Aliron for disposal. As of March 3, the site was restored to it's former condition.

Attached are pictures of the temporarily stockpiled waste from February 28 and proceedings of the final clean-up on March 3.


Roger U. Pabunan
Environmental Engineer I

Attachments:
A/S

cc: General Manager
AGMO
Manager of Generation
P & R File



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ATURIDÁT ILEKTRESEDÁT GUAHAN
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February 25, 2005

SPILL REPORT

To: General Manager

Via: Sylvia I. Tumaneng
Engineer Supervisor
Planning & Regulatory

From: Roger U. Pabunan
Environmental Engineer I
Planning & Regulatory

Subject: MTM Pipeline Spill, February 23, 2005 WED

At about 1:30 pm, Steve Bautista of Project Management was heading North on the pipeline road in MTM from a Pipeline Repair Project (see attached *Area Map*). It was at a point down the hill (approximately 400 ft from the project) that Steve spotted a leak (RFO #6). He was able to inform Greg Quitano (Central Maintenance) who immediately informed P & R also onsite. Spill Notification Procedures were then carried out. After the call to Environmental Compliance Officer, Sylvia Tumaneng (P&R), Emergency Response Contractor, PERI, was mobilized and Guam EPA was informed of the situation.

Cause of Oil Spill

The oil spill was caused by a failure from a corroded point where the pipeline sits on a support.

Oil Spill Cleanup

Attempts were made to control the flow oil and prevent it from going into the nearby wetland area. The flow was halted at about 80 ft downhill from the Spill Point. PERI arrived at the scene at about 2:00 pm. A vacuum truck was mobilized to start recovery and clean up operations and GPA and PERI Personnel were able to redirect the oil at the spill point into an awaiting drum.

A plan was made to release the pressure by opening a Low Point Drain Valve at the bottom of the hill. Plastic sheeting, an empty 55 gallon drum, pads and booms were set up to catch the oil that would come out. Another vacuum truck was also mobilized to recover the oil that would come out. When the Low Point Drain Valve was opened, some the pressure at the Spill Point above was relieved.

By nightfall, generators and floodlights had been set up at the Spill Point, along the Spill and the Low Point Drain Valve. Personnel, with the help of the, backhoe were able to remove the contaminated soil which was placed in sealed drums or stockpiled on plastic sheeting which they covered to prevent any spreading of oil in case of rains. Most of the contaminated soil was removed by 9:30 pm, with just a few isolated spots that were cleared by the end of the night.

At about 9:50 pm, Central Maintenance began work on repairing the defective part of the pipeline. They put a metal plate around the defective area and proceeded to weld the plate and seal the pipeline. They finished welding at about 1:00 am, Feb. 24, 2005 THU.

Extent of Release

The release had an estimated volume of 300 gallons. The affected area was approximately 90' by 6 '. A total of 18 drums of soil and 5 drums contaminated pads and booms were collected from the spill. Contaminated soil (about 2 dump truck loads) was temporarily stockpiled. Oil recovered and drained reached 4,800 gallons.

Spill Prevention Measure


The pipeline was monitored closely when the Sectionalizing Valves were opened and during the first hour while fuel was being transferred. Special attention was given to the point on the pipeline where the spill occurred, the Low Point Drain Valves, and the repaired sections.

Recommendations

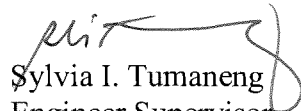
After the day of the spill most of the pipeline in the MTM area was inspected by Central Maintenance who made repairs accordingly on critical points.

We recommend corrosion prevention, controls (i.e. painting) in several areas.

Engineering is working on a Change Order for this stage of the Pipeline Repair Project to include repairs to the pipeline supports. Also included in the Pipeline Repair and Maintenance Project are (but not limited to) patching, replacement of heavily/deeply pitted sections, burying sections to allow driveway access, restoration of cathodic protection, etc.


Roger U. Pabunan
Environmental Engineer I

Concurred:


Sylvia I. Tumaneng
Engineer Supervisor

Attachments:

Area Map
MTM Pipeline Spill Pics

cc: AGMO
Manager of Generation
Guam EPA
P & R File

GUAM POWER AUTHORITY
MTM Pipeline Spill
February 23, 2005 THU

4644



Spill Point. Defect located at the saddle area.

4647



Oil flowing downhill.

GUAM POWER AUTHORITY
MTM Pipeline Spill
February 23, 2005 THU

4646



Oil flowing downhill.

4645



Oil flowing downhill. Greg Quitana on the scene. Booms were placed at the end of the flow about 80 ft downhill from the Spill Point.

**GUAM POWER AUTHORITY
MTM Pipeline Spill
February 23, 2005 THU**

4648



2,000 gl. PERI Vacuum Truck.

4652



Personnel removing contaminated pads and soil.

**GUAM POWER AUTHORITY
MTM Pipeline Spill
February 23, 2005 THU**

4653



Personnel removing contaminated pads and soil.

4655



Rubber mat used to direct flow inside a waiting drum. Vacuum truck pumped out oil collected in drum.

**GUAM POWER AUTHORITY
MTM Pipeline Spill
February 23, 2005 THU**

4661



Low Point Drain Valve to be opened to relieve pressure at Spill Point.

4662



Low Point Drain Valve opened oil being pumped out into Tanker Truck.

GUAM POWER AUTHORITY
MTM Pipeline Spill
February 23, 2005 THU

4663



Diaphragm pump transferring oil from Low Point Drain Valve to Tanker Truck.

4664



4,000 gal PERI Tanker Truck.

**GUAM POWER AUTHORITY
MTM Pipeline Spill
February 23, 2005 THU**

4665



Back hoe utilized in digging and transferring soil to stockpile area on right side.

4666



Close-up of stockpiled soil. Plastic sheeting was laid on the ground prior to soil transfers.

**GUAM POWER AUTHORITY
MTM Pipeline Spill
February 23, 2005 THU**

4668



Stockpiled soil covered with plastic sheeting. An estimated 1.5 - 2 dump truck loads of soil was removed.

4673



Central Maintenance crews preparing to weld a metal plate around the leak. Contaminated soil has been removed.

**GUAM POWER AUTHORITY
MTM Pipeline Spill
February 23, 2005 THU**

4672



Contaminated soil has been removed.

4671



Contaminated soil has been removed.

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MTM Pipeline Spill
February 23, 2005 THU

4670



Contaminated soil has been removed.

4669



Contaminated soil has been removed. This is the end point of the oil flow.

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MTM Pipeline Spill
February 23, 2005 THU**

4675



Central Maintenance Crew welding plate over the leak.

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MTM Pipeline Spill (2-23-05)
as of February 28, 2005

4696



Leak has been repaired

4697



Close-up.

**GUAM POWER AUTHORITY
MTM Pipeline Spill (2-23-05)
as of February 28, 2005**

4698



Stockpiled contaminated soil.

4703



Drums of contaminated pads, booms, and soil.

**GUAM POWER AUTHORITY
MTM Pipeline Spill (2-23-05)
as of March 10, 2005 THU**

199



Stockpiled contaminated soil has been removed.

198



Contaminated soil transported in dump truck.

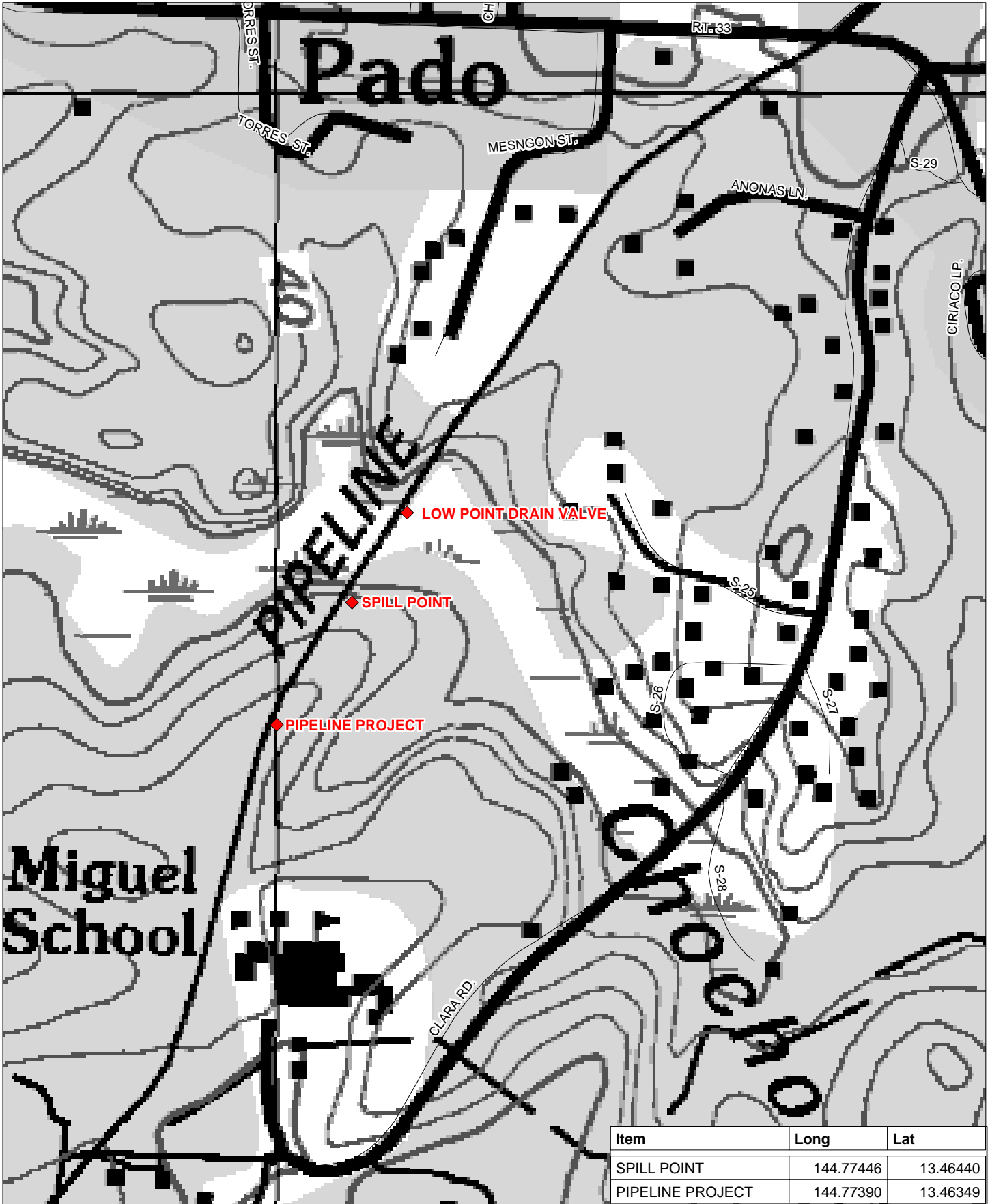
**GUAM POWER AUTHORITY
MTM Pipeline Spill (2-23-05)
as of March 10, 2005 THU**

201



PERI workers loading drums of various waste onto Flatbed.

AREA MAP



500 feet



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file



MEMORANDUM

TO: Engineer Supervisor, Planning & Regulatory
FROM: Steven Bautista, Engineer II (Electrical)
DATE: September 25, 2006
SUBJECT: Tiyan oil spill incident report

As you are aware, an oil spill occurred while the contractor, Smithbridge, was trying to drain a portion of the USN pipeline located at the corner of Route 16 and the U.S. Postal Main Facility, part of the tie-in procedures for the new Tiyan Underground Pipeline Project.

The incident happened approximately at 13:25 hours today (September 25, 2006). It was explained to me that as the contractor punched a 3/4 hole into the pipe, the gasket under the strapping valve, which was meant as a means to control the draining process, failed. Thus approximately 10-20 gallons of RFO #6 sprayed the area, due to the intrinsic pressure in the pipe. At the time of the incident a PERI vacuum truck was on site, and the contractor had absorbent pads, drums catchments, and laid down plastic coverings as a means of spill control. Unfortunately, due to the pressure, the oil spread further than what was anticipated. The contractor contained the oil spill and is presently removing the contaminated soil (approximately 1 to 1-1/2 feet of soil), erecting a silt barrier, and placing oil booms around the area.

Please contact me, should you have any further questions. Thank you.


Steven C. Bautista

Cc: Engineer Supervisor, Project Management
File

OIL SPILL INCIDENT REPORT FORM

SPILL DATE: September 26, 2006

DATE OF REPORT: October 2, 2006

LOCATION OF SPILL: Tiyon across Crown Market

INDIVIDUAL WHO DISCOVERED THE SPILL: GPA Central Maintenance

ESTIMATED VOLUME: 5 Gallons

TYPE OF OIL SPILLED: RFO No. 6

ESTIMATED VOLUME TO REACH WATERS: None

ESTIMATED AREA AFFECTED: 6 ft. x 30 ft.

CLEANUP ACTIONS TAKEN: South Pacific Environmental conducted clean up by removing contaminated soil and vegetation and properly disposed.

CORRECTIVE ACTIONS AND COUNTERMEASURES

TAKEN TO STOP SPILL: GPA Cental Maintenance provided rubber and 8" clamp at the Tanguisson Pipeline. Placed absorbent booms and pads on the side of fence to prevent migration of the oil.

FAILURE ANALYSIS OF CAUSE OF SPILL: Pressure build up due to valve closed in preparation for tie-in project.

MEASURES NECESSARY TO PREVENT RECURRENCE: The existing tanguisson pipeline will be remove after completion of the tie-in project.

GOVERNMENT AGENCIES CONTACTED: GEPA

NOTE:

On September 28, oil spill was discovered by SPE at the ponding basin across the spill site. The affected area is 6' x 100'. The fuel oil had passed through the culvert and into the ponding basin. The estimated volume of No. 6 is approximately between 50 – 100 Gallons. Preliminary clean up was conducted by SPE by removing contaminated soil and placing absorbent booms and pads at the site.

REPORT PREPARED BY: Norbert M. Madrazo

Date: October 2, 2006





SMITHBRIDGE

GUAM INC.

Guam Office:
P.O. Box 11700
Yigo, Guam 96929
Phone: (671) 653-5036
Fax: (671) 653-5040
email: SBG@smithbridge.com.gu

Brisbane Office:
55 Paringa Road
Murarrie, Brisbane
AUSTRALIA 4172
Phone: +61 (7) 3907 5800
Fax: + 61 (7) 3890 2976
email: albertsmith@smithbridge.net

OIL SPILL INCIDENT REPORT

SPILL DATE: 29 September 2006

LOCATION OF SPILL: 3rd HPV/LPD Pit from N.O.S. Valve Pit

INDIVIDUAL WHO DISCOVERED SPILL: Steve Bautista

TYPE OF OIL: Bunker Fuel

ESTIMATED VOLUME: 5 to 10 Gallons

ESTIMATED VOLUME REACHING WATERWAY: None

ESTIMATED AREA AFFECTED: 10sq.ft.

CLEANUP ACTION TAKEN: Removal and proper disposal of spilled fuel and contaminated soil

CORRECTIVE ACTIONS AND COUNTERMEASURES TAKEN TO STOP SPILL: Close and fix defective valve. Vacuum truck was deployed to contain the spill.

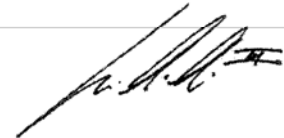
FAILURE ANALYSIS OF CAUSE OF SPILL: Personnel looking after the valve were told to take break

MEASURES NECESSARY TO PREVENT RECURRENCE: Man valves at all times during activity

GOVERNMENT AGENCIES CONTACTED: GEPA, GPA

REMARKS: During re-fueling operation, GPA told our personnel take break leaving the valve un-manned for monitoring. Fuel then leaked out on a defective valve. Spilled fuel was sucked by vacuum truck (PERI) and contaminated soil was excavated and removed for proper disposal at ALIRON. Re-fueling operation was directly supervised and controlled by GPA.

Report by:



Moises Oliver Olivares
Project Engineer



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OIL SPILL INCIDENT REPORT FORM

SPILL DATE: 09/25/13

TIME: 1130 am

DATE OF REPORT: 09/26/13

LOCATION OF SPILL: Third phase (Agana Heights – 2" Pump out valve) –(C-19, 130 + 50 in the vicinity map)

INDIVIDUAL WHO DISCOVERED THE SPILL: Daniel Quenga, Perry Garcia of Central Maintenance

TYPE OF OIL SPILLED: Fuel Oil (Bunker Fuel)

ESTIMATED VOLUME OF OIL SPILLED: 55-65 gallons of Fuel

ESTIMATED VOLUME TO REACH WATERS: None.

ESTIMATED AREA AFFECTED: 6' to 8' in width and 16' in length

CLEANUP ACTIONS TAKEN: Immediately transported absorbent pads to the site and deployed it on the surrounding areas of spill. Gathered all contaminated soil and vegetation and placed onto a sheet of plastic. Called Planning and Regulatory to report the incident and activate the contractor (Gresco) to continue with the cleanup.

CORRECTIVE ACTIONS AND COUNTERMEASURES TAKEN TO STOP SPILL: We created a berm to the surround/enclose the affected area of the fuel oil spill then called my Supervisor to inform him of the incident. Then I called Vital Energy and requested to secure all pumping operations should they be in operation. They informed me that they were not in operation. We closed the two isolation 8" gate valves limiting the amount of fuel oil spilled to a minimum and then contacted the Fuel Oil officer on duty (Planning and Regulatory).

FAILURE ANALYSIS OF CAUSE OF SPILL: During vegetation and other debris clearing, bamboo debris covered the drain and when the backhoe pulled the debris it snag on the drain piping. The force caused the pipe to bend and crack the pipe. Spotter's failure to carefully watch and warn the operator or notify him the location of the 2" low point drain or pump out drain valve.

MEASURES NECESSARY TO PREVENT RECURRENCE: Conduct awareness training for all of Central Maintenance personnel and make sure that locations of drain pipe, valve and fittings are properly marked along the pipeline. Continue with the inspections and reporting of discrepancies to the proper channels. Initiate refresher training on the Spill Prevention Countermeasure and Control training and Best Management program training.

GOVERNMENT AGENCIES CONTACTED: Environmental Protection Agency

REPORT PREPARED BY: Frankie C. San Niicolas **Date:** 09-26-13



March 31, 2015

Mr. Norbert Madrazo
Guam Power Authority, Planning and Regulatory Division
Gloria B. Nelson Public Service Building
688 Route 15 Fadian, Mangilao, Guam



RE: Emergency Response Cleanup Services Report for the GPA Tanguisson Pipeline Spill Incident on February 10, 2015 at the Village of Toto Guam

Dear Mr. Madrazo:

Please find enclosed report reflecting the emergency response and clean up services that was performed in the wake of the Tanguisson Pipeline spill event on February 10, 2014 at the village of Toto Guam.

The report is inclusive of supporting attachments that are enumerated below for your reference:

- Appendix A Diagram indicating areas of impact and where cleanup services took place
- Appendix B Photos taken at the time of initial emergency response clean up
- Appendix C Photos taken at the conclusion of the clean up services
- Appendix D Confirmatory Sampling Services and Analytical Test Results
- Appendix E Photos taken during and at the conclusion of high pressuring washing activities at the site.
- Appendix F JS Store Site Inspection and Turnover Form

Please give us a call at any of our contact numbers listed for the refinery/Environmental below if we could be of further assistance to you on this matter.

Respectfully,

Dennis S. Penaflorida
Project Manager

GRESKO Mailing Address: PO Box 6307, Tamuning, Guam 96931

REFINERY/ENVIRONMENTAL
320 South East Santa Rita Industrial Dr.
Santa Rita, Guam
Tel: (671) 565-7474 Fax: (671) 565-7575

L.P. GAS DIVISION (Yigo)
330 Chalan Pale Ramon Lagu
Yigo, Guam
Tel: (671) 653-4888 Fax: (671) 653-4889

L.P. Gas DIVISION (Mangilao)
482 Rte 10 Vietnam Veterans Hwy
Mangilao, Guam 96913
Tel: (671) 734-4887 Fax: (671) 734-4889

CNMI OFFICE
PMB 327, Box 10000
Saipan, MP 96950
Tel/Fax: (670) 234-2000

REPORT FOR EMERGENCY RESPONSE CLEANUP SERVICES AT THE GUAM POWER AUTHORITY (GPA) TANGUISSON PIPELINE SPILL IN TOTO GUAM

March 27, 2015
GRESKO Inc

I OVERVIEW/SPILL SITE CHARACTERIZATION

The High Sulfur Fuel Oil (HSFO) spill on February 10 2015 had occurred at a segment of the Tanguisson Pipeline that runs through the Toto Village in Guam. The pipeline that runs through this village is readily accessible via the Pipeline road that runs parallel along the pipeline's immediate north. An area of soil and shrubbery area borders the pipeline's length on its immediate south and also segregates the pipeline from several housing complexes to include the JS Store property. The source of the spill was a bleeder valve on the pipeline which had sprayed HSFO contents upwards at the time of its occurrence. The bleeder valve is adjacent to a pipeline valve and is within an area located at the immediate north of the JS Store Property at the intersection of the Kanada Toto road and the Pipeline road.

The village of Toto, Guam is located near the center of the island. The spill site is approximately 200 feet above sea level while geological aspect of the area is made up of Barrigada limestone which is a dominant feature at this area of the island.

II EMERGENCY RESPONSE AND CLEANUP SERVICES

The source of the spill was already contained by Guam Power Authority (GPA) personnel. GPA personnel deployed absorbent pads and booms at the affected areas by the time GRESKO's emergency response cleanup crew had arrived at the site. The GPA crew had began cleaning areas of the northern wall and had also arranged for the inspection and cleaning of several outdoor air conditioning (AC) units, which operate the store's chiller and air conditioning systems. The outdoor AC units are mounted on the northern concrete pad walkway and outer wall of the store which was also stained by the petroleum spray.

The emergency crew cleanup response team had initially conducted an assessment to delineate lateral impact on the soil areas affected and had also performed a survey on the vertical impact of the spill. A visual investigation on the vertical extent of the spilled material on the soil areas adjacent to the spill source had revealed impact at surficial levels only. Prevailing winds at the time of the spill had caused a combination of heavier HSFO spray and a lighter HSFO mist cloud to migrate at a southwesterly trend that was carried into the JS store's property. Areas of the heavier spray impact that were readily discernible at the time of the spill was a section of soil and grassy area adjacent to the pipeline. This had included northern areas of the JS store property such as the concrete perimeter wall, the northern wall of the store building, and a northern segment of the rooftop to include a blue storage container at store's eastern area or backyard. The lighter mist cloud was carried further and can only be identified via a close inspection towards an extended area surrounding the easily discernible heavier RFO spray delineation. The oily mist was present on vegetation and a grassy area outside the concrete enclosure. This was also present on the grassy area that dominates the store's eastern area or backyard as well as the inner side of the concrete perimeter wall (Please see Appendix A for a diagram depicting identified area of spill migration due to prevailing winds with a south westerly direction at the time of the spill)

Priority for cleanup efforts were directed at removal of the impacted surficial soil areas adjacent to the Tanguisson pipeline and within the JS Store property. An absorbent wipe down of the impacted segment of the Tanguisson pipeline was performed while a barrier of absorbent materials were placed along the peripheral areas of the

northern concrete walkway of the store's property to contain any free flowing HSFO and to prevent any unwanted migration of spilled materials into the adjacent soil areas. The impact on the roof of the store was mitigated using sorbent materials to prevent any potential migration during precipitation. Removal of surficial soil and shrubbery by hand had immediately taken place at the impacted areas of the soil adjacent and beneath the pipeline. In a similar fashion, impacted surficial soil and vegetation adjacent to the northern concrete sidewalk within the JS store property was also removed. Collected materials were placed in a 55 gallon DOT drums at the site. A backhoe was subsequently used to expedite removal of impacted surficial soil and vegetation outside the store's property adjacent to the pipeline. The surficial materials that were removed by the backhoe was staged and secured at the site by completely enclosing this with High Density Poly Ethylene Sheath (HDPE). An advertising banner which had dominated the outer facade of the property's northern concrete perimeter wall was also removed due to spill impact and was contained in a 55 gallon DOT drum. A total of fifteen (15) cubic yards of impacted materials made up mainly of soil and shrubbery from the site was removed using the backhoe and a dump truck the following day after the spill had occurred. The materials were delivered to a local permitted facility for processing and disposal. Impacted vegetation and shrubbery were removed using a bush cutter before containment using 55 gallon DOT drums. Impacted surficial soil located along the northern outer concrete perimeter wall of the property's had required manual removal due to the presence of several concrete bollards that had prevented heavy equipment access. The JS store concrete perimeter wall to include the bollards and a concrete power pole were also wiped down in order to collect any residual free flowing spilled material present.

Subsequent cleaning activities had then addressed the cleanup of the blue storage 40 foot container at the store's eastern and backyard area along with the northern concrete walkway pad. Cleaning of the rooftop had involved scraping and removal of impacted elastomeric coating along with sorbent wipe down of the impacted parapets. Cleaning and collection of HSFO present on the concrete and steel surfaces within the vicinity of the spill was limited to the use of simple green cleaning solution along with brushes, scrub pads and sorbent material for collection. (Please refer to Appendix B Photos taken during the spill incident and Appendix C Photos taken at the conclusion of clean up services)

Soil sampling services were conducted on February 27, 2015 as a part of confirmatory measures for the cleanup services that was performed following the wake of the spill occurrence. The analytical test results indicated "ND" or Not Detectable readings for Total Petroleum Hydrocarbons – Bunker Fuel in all three (3) soil samples taken at areas of the soil that were noted to have received the most impact from the spill. (Please refer to Appendix D for confirmatory sampling services report)

Final cleaning activities at the site took place at northern concrete walkway pad of the JS store using a high pressure water wash. As a matter of safety to operators at the site and protection of the external chiller & air conditioning units mounted on the stores northern external wall and concrete walkway pad, external units were all shut off during cleaning and were enclosed with high density polyethylene sheath to protect this from water splashes during the course of the cleaning. Additionally, sorbent booms were lined along the concrete pads borders in order to address any petroleum materials might have been released during the wash. A specialized high pressure surface cleaner was utilized along with a turbo tip wand on the concrete pad in order to minimize splashes during cleaning. (Please refer to Appendix E for photos taken during and at the conclusion of high pressure washing activities at the site and Appendix F for the site inspection and turnover form from JS Store.)

III IMPACTED MATERIALS ACCOUNTING AND INVENTORY

Below is a list of items and corresponding quantity that was removed from the site due to impact.

1. 15 cubic yards of impacted surficial soil and vegetation that was removed from the site using backhoe and dump truck.
2. 11 ea, 55 gallon drums consisting of impacted materials removed by hand such as soil, vegetation, signs, roof elastomeric coating, and sorbent materials utilized during the whole duration of cleanup services.

IV ATTACHEMENTS

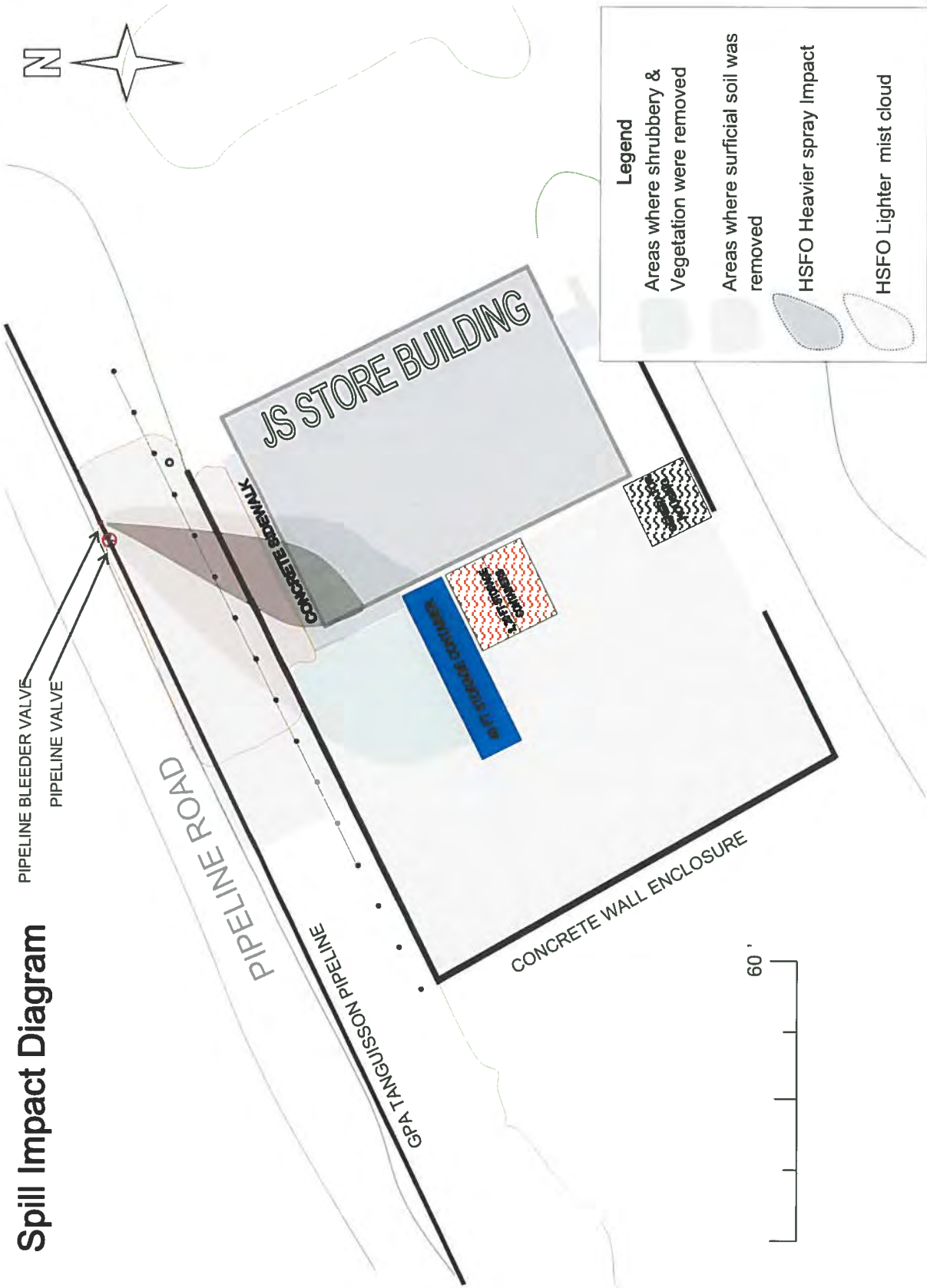
1. Appendix A Diagram-indicating areas of impact and where cleanup services took place
2. Appendix B Photos taken at the time of initial emergency response clean up
3. Appendix C Photos taken at the conclusion of the clean up services
4. Appendix D Confirmatory Sampling Services and Analytical Test Results
5. Appendix E Photos taken during and at the conclusion of high pressuring washing activities at the site.
6. Appendix F JS Store Site Inspection and Turnover Form

APPENDIX A

Spill Impact & Cleanup Diagram

**GPA TOTO TANGUISSON PIPELINE
EMERGENCY RESPONSE AND CLEANUP SERVICES REPORT**

Spill Impact Diagram



APPENDIX B

PHOTOS TAKEN AFTER THE SPILL & BEFORE CLEANUP SERVICES

**GPA TOTO TANGUISSON PIPELINE
EMERGENCY RESPONSE AND CLEANUP SERVICES REPORT**

Exhibit B Diagram

Photos taken after the spill and before clean up



Photo 1 of 6

February 10 2015

Photo taken during the initial response to the spill. Note the impact on the soil areas, the northern concrete enclosure wall of the facility as well as the northern wall of the store as shown on the picture.

(southwest view)



Photo 2 of 6

February 10 2015

Photo taken at the rooftop of the JS Store during the spill



Photo 3 of 6
February 10 2015

Closer view of the spill on the soil and shrubbery within the immediate area of the pipeline reveals surficial impact



Photo 4 of 6
February 10 2015

Closer view of the spill impact on the northern wall of JS Store



Photo 5 of 6
February 10 2015

Closer view of the spill impact on the concrete sidewalk at the northern Area of JS Store that is lined with sorbent booms to contain free flowing spill materials within concrete pavement and prevent any migration into surrounding soil areas



Photo 6 of 6
February 16 2015

Closer view of the spill impact on top of the 40 foot storage container within contrasting reference to cleaned areas.

APPENDIX C

PHOTOS TAKEN AFTER CLEAN UP SERVICES

**GPA TOTO TANGUISSON PIPELINE
EMERGENCY RESPONSE AND CLEANUP SERVICES REPORT**

Exhibit C Diagram

Photos taken after Clean up Services



Photo 1 of 8
February 24 2015

Photo taken after the conclusion of clean up services outside the JS Store property along the pipeline's immediate area (southwest view)



Photo 2 of 8
February 24 2015

Photo taken at the northern rooftop of the JS Store after cleaning efforts were done



Photo 3 of 8

February 13 2015

Closer view of the northern concrete wall of the store along with the concrete wall enclosure after clean up services.



Photo 4 of 8

February 13 2015

View of the northern wall of JS Store within the premises after the cleaning (western view)



Photo 5 of 8
February 24 2015
Photo taken at the northern concrete sidewalk after the cleanup



Photo 6 of 8
February 19 2015
View on top of the 40 foot storage container after clean up services .



Photo 7 of 8
February 24 2015

Eastern view of the store's backyard after impacted shrubbery and vegetation has been removed



Photo 8 of 8
February 24 2015

Southern view of the store's backyard after impacted shrubbery and vegetation has been removed

APPENDIX D

GPA TOTO TANGUISSON PIPELINE SOIL SAMPLING SERVICES REPORT

**GPA TOTO TANGUISSON PIPELINE
EMERGENCY RESPONSE AND CLEANUP SERVICES REPORT**

CONFIRMATORY SOIL SAMPLING SERVICES AND ANALYTICAL TEST RESULTS FOR THE GUAM POWER AUTHORITY (GPA) TANGUISSON PIPELINE SPILL IN THE VILLAGE OF TOTO GUAM

March 24, 2015

GRESKO Inc

I OVERVIEW/SPILL SITE CHARACTERIZATION

The village of Toto, Guam is located near the center of the island. The spill site is approximately 200 feet above sea level while geological aspect of the area is made up of Barrigada limestone which is a dominant feature at this area of the island. (*Please refer to Exhibit A*)

The spill had occurred at a segment of the Tanguisson Pipeline that runs through Toto village. Access to the pipeline is provided by a road that runs parallel along the pipeline's immediate north. The area to the south is of the pipeline is a patch of vegetation. The exact spill location is located within the intersection of the pipeline road and the Kanada-Toto Loop road adjacent to the JS Store property, which is located of the pipeline. The spill originated from a bleeder valve of the pipeline, which had ejected High Sulfur Fuel Oil (HSFO) content upwards at the time of its occurrence.

Prevailing winds at the time of the spill had caused a combination of heavier HSFO spray and a lighter oily mist cloud to migrate at a southwesterly trend and was carried into the JS store property. Areas of the heavier spray impact that were readily discernible at the time of the spill was a section of soil/grassy area immediately adjacent to the pipeline. This had included the northern sections of the property's concrete perimeter wall, the store building northern wall, and a northern segment of the rooftop to include a blue storage container at store's backyard. The lighter mist cloud of the oil was carried further can only be identified via a close inspection of an extended area surrounding the easily discernible heavier HSFO spray delineation. The oily mist was present on vegetation and a grassy area outside the concrete enclosure. This was also present on the grassy area that dominates the store's backyard as well as the inner side of the northern concrete perimeter wall. (*Please refer to Appendix B Diagrams A & B*)

Spill clean up services began on February 10, 2014, immediately after the spill and entailed the removal of surficial impacted soil along with vegetation and shrubbery through a combination of manual and mechanical means. Impact on concrete areas of the adjacent store walls, concrete perimeter wall, and concrete sidewalk towards the northern periphery of the store's property were removed using simple green solution along with scrubbing, and wiping with sorbent pads. Impacted materials resulting from the cleanup services were taken to a permitted facility on island for disposal.

II SAMPLING SERVICES

A Sampling and Analysis Plan (SAP) was drafted for the confirmatory soil sampling services. Soil Sampling was necessary to verify the success of clean up services on the affected soil areas following the spill occurrence. The plan called for extraction of three (3) discreet soil samples within the areas of soil that had received the most impact at the time of the spill. Each sample was tested for Total Petroleum Hydrocarbon (TPH)- Bunker fuel at a permitted testing facility off island.

The SAP was approved by the GPA Planning and Regulatory office on February 26, 2015. The sampling services were performed on February 27, 2015 (Pls. Refer to Appendix A attachment for a copy of the approved Sampling Analysis Plan) The sampling services were scheduled late in the week as part of logistical preplanning efforts in consideration with sample core temperature requirements and shipping lead time versus sample holding time requirements.

A total of three (3) discreet soil samples were collected along a linear line within the areas of soil that had noted to have received the most impact from the HSFO spray during the date of the spill occurrence on February 10, 2015. The first soil sample, with designated ID number GTP-1S-1-1440, was extracted with the stainless steel auger within the immediate vicinity of the bleeder valve from the GPA pipeline. The subsequent soil sampling with ID number GTP-2S-1-1510 was taken southwest of the bleeder valve, towards a median area of soil between the Store's northern concrete perimeter wall and the GPA Tanguisson pipeline. The third and final soil sample with ID number GTP-3S-1-1535 was extracted within the JS Store property at a soil strip between the store's northern concrete sidewalk or pad and northern concrete wall enclosure. All samples were extracted using the pre-cleaned stainless steel auger and at a uniform dept of 10 inches below grade level. (Please refer to Appendix B Diagram C and Appendix C Soil Sampling Photos)

Soil samples were contained using eight (8) oz teflon lined sampling jars that are were pre-cleaned certified and provided by the permitted testing facility from the US mainland. GRESCO sampling personnel had utilized a fresh pairs of disposable nitrile gloves prior to the collection of each soil sample. The stainless steel auger was also decontaminated at the site prior to each successive soil sample extraction. Sample jars were immediately placed in an ice filled sampling cooler for transportation to GRESCO's facility in Sta. Rita for interim weekend storage.

As part of shipping procedures, soil sampling jars were further enclosed using zip lock bags and were each equipped with tamper evident seals. fresh frozen ice packs were packaged with the samples within the cooler and A tamper evident seal was also be utilized for the cooler before being sent out for shipping to the permitted facility in California.

IV RESULTS

The cooler was shipped out via DHL on March 2, 2014, but had encountered delays en route to the laboratory due to a Customs and Border Patrol hold in California during a routine randomized inspection. The laboratory in California had reported receipt of the sampling cooler on March 12, 2014. All tamper evident seals on the samples were also reported as intact at the time of receipt. The table below provides a summary of test results.

Test Parameter	Sample ID No. GTP-1S-1-1440	Sample ID No. GTP-2S-1-1510	Sample ID No. GTP-3S-1-1535	Reporting units	^Regulatory Limits
Total Recoverable Petroleum Hydrocarbons-Bunker Fuel	ND	ND	ND	mg/kg (ppm)	

ND- Not Detectable based on the permitted facility's detection limits
 mg/kg=parts per million

V FINDINGS

The analytical test results indicated "ND" or Not Detectable readings for Total Petroleum Hydrocarbons – Bunker Fuel in all three (3) soil samples. (please see attached Appendix D for a copy of the analytical test results from the permitted testing facility in California)

VI ATTACHMENTS

- Appendix A - Approved Sampling Analysis Plan
- Appendix B - Sampling Diagrams
- Appendix C - Sampling Photos
- Appendix D - Analytical Test Results from the permitted testing facility

VII REFERENCES

- United States Environmental Protection Agency (December 2002) *Guidance on Choosing a Sampling Design for Environmental Data Collection; for Use in Developing a Quality Assurance Project Plan* EPA QA/G-5 Washington, DC
- Topographic map of Guam Marianas Islands *US Department of Interior Geological Survey 1978*
- Geology Guam Marianas islands, *Geologic Map by S.O. Schlanger and J.I. Tracey Jr.; Based on mapping by D.B. Doan, H.G. May, S.O. Schlanger, and J.T. Stark 1959*

APPENDIX A

SAMPLING ANALYSIS PLAN

CONFIRMATORY SOIL SAMPLING ANALYSIS PLAN FOR THE GUAM POWER AUTHORITY (GPA) TANGUISSON PIPELINE SPILL IN TOTO GUAM

February 25, 2015

GRESKO Inc

I OVERVIEW/SPILL SITE CHARACTERIZATION

The village of Toto, Guam is located towards the middle part of the island. The general area where the spill occurred has an elevation of about 200 feet above sea level while geological aspect of the area is made up of Barrigada limestone which is a dominant feature at this area of the island. (*Please refer to Exhibit A*)

The spill had occurred at a segment of the Tanguisson Pipeline that runs through Toto Village in Guam. The segment of the pipeline that runs through this village is serviced via the Pipeline road that is situated and runs parallel along the pipeline's immediate north while its immediate south is bordered by a patch of soil lined with vegetation. The exact spill location is located at the intersection of the pipeline road and the Kanada-Toto Loop road adjacent to the JS Store property located towards the southern area of the pipeline. The spill source was from a bleeder valve of the pipeline, which had ejected High Sulfur Fuel Oil (HSFO) content upwards at the time of its occurrence.

Prevailing winds at the time of the spill had caused a combination of heavier RFO spray and a lighter oily mist cloud to migrate at a southwesterly trend and was carried into the JS store property. Areas of the heavier spray impact that were readily discernible at the time of the spill was a section of soil/grassy area immediately adjacent to the pipeline. This had included the northern sections of the property's concrete wall enclosure, the store building northern wall, and a northern segment of the rooftop to include a blue storage container at store's backyard. The lighter mist cloud of the oil was carried further and can only be identified via a close inspection of an extended area surrounding the easily discernible heavier RFO spray delineation. The oily mist was present on vegetation and a grassy area outside the concrete enclosure. This was also present on the grassy area that dominates the store's backyard as well as the inner side of the northern concrete wall enclosure.

Spill response clean up services that was performed since the day of the spill on February 10, 2014 had entailed the removal of surficial impacted soil along with vegetation and shrubbery through a combination of manual and mechanical means. Impact on concrete areas of the adjacent store walls, concrete wall enclosure, and concrete sidewalk towards the northern periphery of the store's property were removed using simple green solution along with scrubbing, and wiping with sorbent pads. Impacted materials resulting from the cleanup services were taken to a permitted facility on island for disposal.

II OBJECTIVE

The objective of this Sampling Analysis Plan (SAP) is to provide confirmatory soil sampling tests to verify clean up services on the affected soil areas following the spill occurrence. The plan calls for extraction of three (3) discreet soil samples within the areas of soil that had received the most impact at the time of the spill. Each sample will be tested for Total Petroleum Hydrocarbon (TPH)- Bunker fuel at a permitted testing facility off island to determine if the results are within applicable regulatory clean up goals

III SAMPLING DESIGN AND METHODOLOGY

Judgmental sampling approach will be adopted to extract the soil samples from the site. Judgmental sampling refers to the selection of sample(s) location based on professional judgment alone. Judgmental sampling for soil contamination investigation is appropriate for situations with reliable historical and physical knowledge about the feature or condition under investigation. Additionally Judgmental Sampling design is also ideal if the objective of the investigation, such as in this case, is to screen an area for the presence and absence of contamination at levels of concern, with follow up sampling likely to involve one or more statistical design if such contamination is found during the initial sampling.

Material of concern in this case is HSFO, which was ejected upward at the time of the spill creating a combination of light mist and denser spray cloud that was carried by prevailing winds at a southwesterly trend towards and within the JS store property at the time of the spill. The first soil sample will be collected beneath the bleeder valve of the pipeline which was the source of the spill, the second soil sample will be collected within the immediate soil area southwest of the bleeder valve, while the third and final sample will be at also be collected at a southwest direction but within the JS store property at an area of soil adjacent to the northern concrete sidewalk of the building. All three soil samples will be within a linear line directed towards the southwest and within the areas of soil that had received the heaviest impact the spill. (*Please see Exhibit B soil sampling diagram*)

A stainless steel auger will be utilized to extract the soil samples. The auger will be decontaminated using a soapy mixture of distilled water and a laboratory grade detergent as a requisite to the extraction. The samples will be contained in pre-labeled 8oz wide mouth sampling jars and immediately placed in sample cooler with ice packs for transportation. The three (3) soil samples will be identified using the following legend

Sample ID: GTP-1S-1-#

GTP three (3) Alpha characters referring to project site (GPA TOTO PIPELINE)

1S First character (numeric) sequential designation in reference to the order of soil samples that will be extracted throughout the duration of the sampling event.
Second character (Alpha)-refers to the sample matrix (i.e. S=Solid, L=Liquid)

1 Refers to the depth of the sampling site measured in units of feet in which the sample was taken below grade level. Numeric designation is rounded off to the nearest whole number hence a sample taken at 10 inches will be rounded off to the nearest whole number measured by feet. In this case the nearest whole number would be "1"

Military time format referring to time of extraction

The three (3) soil samples will be designated with unique identifiers as outline below:

1. GTP-1S-1-#
2. GTP-2S-1-#
3. GTP-3S-1-#

V SAMPLING SUPPLIES AND EQUIPMENT

The following sampling materials and equipment will be provided

1. Pre-cleaned certified 8 oz wide mouth sampling jars
2. Decontaminated chisel, and trowel
3. Sampling labels
4. Ice packs
5. Nitrile gloves
6. Cooler to contain the samples
7. Field data collection forms, labels, seals for QA/QC , and Chain of Custody forms
8. Pens with indelible ink
9. Tamper evident seals
10. Zip lock bags
11. Laboratory grade detergent
12. Tap water source
13. Plastic bin for decontamination
14. Stainless steel auger

GRESCO will ensure that all supplies and equipment needed for sample collections are made available during the process. The supplies and equipment for the sampling process will be stored in a cool and closed cabinet free of dust and other potential sample contaminants. Ice packs will be stored at GRESCO's environmental freezer in preparation for the samples' eventual shipping which requires temperature maintenance of at 4(\pm 2) degrees Celsius. The designated testing facility for this project, Calscience Laboratories in California, as well as the assigned freight forwarding agency for this project, DHL Express, will receive advance notification from GRESCO concerning sample shipping.

VI SAMPLING PREPARATION, QUALITY ASSURANCE AND CONTROL.

Pre-cleaned sampling equipment will be used for the sample collection to regular field decontamination of the stainless steel auger and chisel for sample extractions. The eight (8) oz teflon lined sampling jars that will be utilized to contain the soil samples will be provided by the permitted testing facility from the US mainland. The sampling jars will be pre-cleaned certified and pre-labeled with pertinent sampling information. GRESCO sampling personnel will use a fresh pair of disposable nitrile gloves prior to the collection of each soil sample. Sampling jars will be further enclosed using zip lock bags and will be equipped with a tamper evident seal. A tamper evident seal will also be utilized for the cooler containing the samples before shipping this to the permitted testing facility in California.

Below is a list of Guidelines that will be closely observed during the sampling process:

- No contact is made on the mouth and interior of the sampling bottle and cap. In the event that contact is made, the sample and the bottle will be discarded.
- During the sampling process, any operations in the immediate areas will monitored to ensure this does not impede the sampling process directly or pose potential contamination during the sampling process.
- Keep the cooler lid closed during the sampling process, opening will only be restricted to securing sampling bottles.

VII SAMPLE HANDLING, DOCUMENTATION, AND SHIPPING

TPH-Bunker fuel test parameter requires 14 day maximum holding time for the samples which should be sufficient time to get the samples to the testing facility with prudent planning. In consideration to the maintenance of ideal cooler core temperature during shipping, sampling is most ideal towards the end or at the very beginning of a work week in order to maximize the chances of getting the samples to the designated facility in California before the weekend. The ideal temperature range for the sample cooler throughout the duration of transit should be between two (2) and six (6) degrees centigrade.

A Chain-of Custody (COC) document will be utilized as part of the procedures to account for sample integrity during the handing and transport. The COC will be submitted as part of the reporting process. The samples will be capped, properly labeled, and sealed in plastic bags just before final packaging in the cooler with sufficient ice packs to maintain the ideal cooler temperature at 4(\pm 2) °C.

All original data documented on sample bottle identification labels, Chain of Custody forms, and Sampling Activity Logs will be recorded using water proof ink. These will be considered accountable documents. If an error is made on a document, the corrections will be made by lining through the error and entering the correct information. The erroneous information will not be obliterated. All corrections will be initialed and dated

Sampling and field analysis will be documented using the following:

- Sample Jar Identification Labels: Sampling personnel will attach an identification label to each sample jar. At a minimum, the following information will be recorded on the label, as appropriate:
 - ✓ Client name
 - ✓ Sampler Signature
 - ✓ Unique sample identification number and location.
 - ✓ Collection date/time
 - ✓ Analysis constituent

- Sampling Activity Logs: A log of sampling events will identify:
 - ✓ Sampling date
 - ✓ Separate times for collected samples recorded to the nearest minute
 - ✓ Unique sample identification number and location
 - ✓ Analysis constituent
 - ✓ Names of sampling personnel
 - ✓ Weather conditions (including precipitation amount)

Chain-of-Custody (COC) forms: All samples to be analyzed by a laboratory will be accompanied by a COC form provided by the laboratory. Only the sample collectors will sign the COC form over to the lab. COC procedures will be strictly adhered to for QA/QC purposes.

VIII REPORTING

A report for Soil Sampling Services and Analytical Test Results will be provided upon availability of test results from the permitted testing facility. The report will outline sampling procedures, summary of test results and will also include recommendations for the subsequent course of action.

IX REFERENCE

- United States Environmental Protection Agency (December 2002) *Guidance on Choosing a Sampling Design for Environmental Data Collection; for Use in Developing a Quality Assurance Project Plan* EPA QA/G-5 Washington, DC
- Topographic map of Guam Marianas Islands *US Department of Interior Geological Survey 1978*
- Geology Guam Marianas islands, *Geologic Map by S.O. Schlanger and J.I. Tracey Jr.; Based on mapping by D.B. Doan, H.G. May, S.O. Schlanger, and J.T. Stark 1959*

APPENDIX B

SAMPLING DIAGRAMS

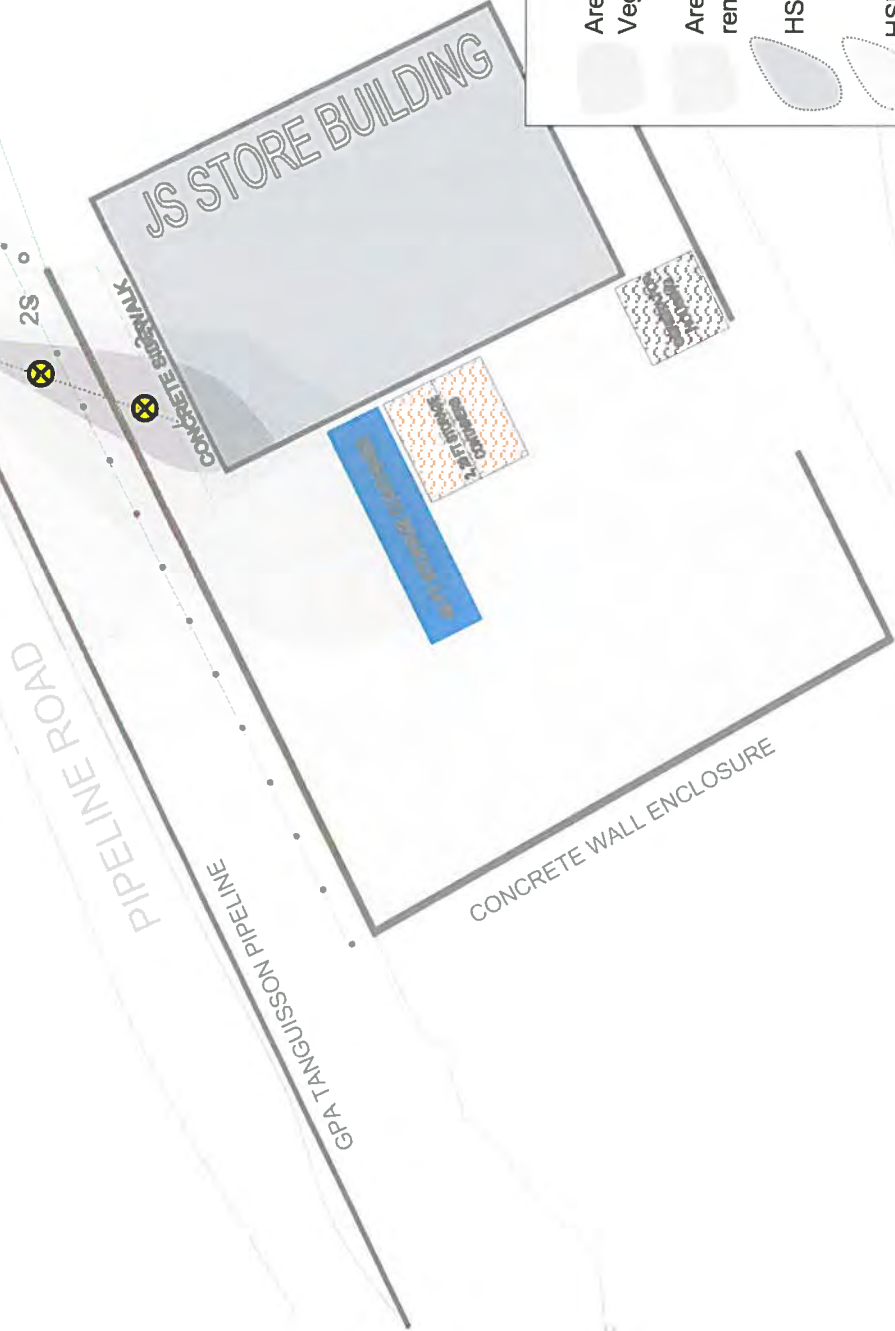


Exhibit A Diagram



PIPELINE BLEEDER VALVE
PIPELINE VALVE

Exhibit B Diagram
SOIL SAMPLING PLANNED
LOCATIONS
(not to scale)

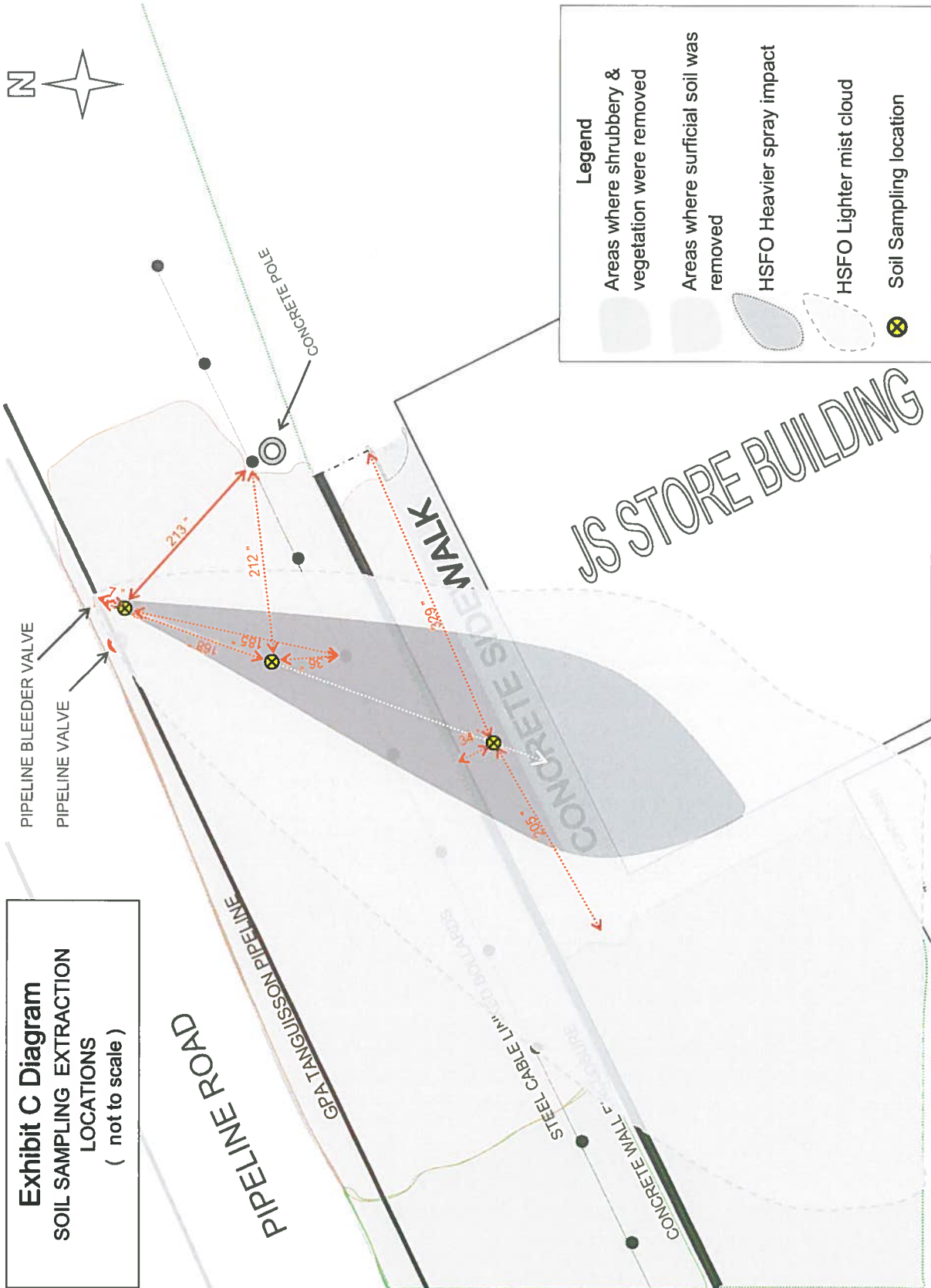


Legend

- Areas where shrubbery & Vegetation were removed
- Areas where surficial soil was removed
- HSFO Heavier spray impact
- HSFO Lighter mist cloud
- Soil Sampling location



Exhibit C Diagram
SOIL SAMPLING EXTRACTION
LOCATIONS
(not to scale)



Legend

- Areas where shrubbery & vegetation were removed
- Areas where surficial soil was removed
- HSFO Heavier spray impact
- HSFO Lighter mist cloud
- Soil Sampling location

APPENDIX C

SAMPLING PHOTOS



Photo 1 of 7

Photo shows extraction of soil sample ID number GTP-1S-1-1440 using the stainless steel auger within the immediate vicinity of the Tanguisson pipeline's bleeder valve which was the source of the spill



Photo 2 of 7

Photo shows extraction of soil sample ID number GTP-2S-1-1510 along a median area of the soil strip between the Tanguisson Pipeline and the northern concrete wall enclosure of the JS Store property in Toto



Photo 3 of 7

Photo shows extraction of soil sample ID number GTP-3S-1-1535 within the JS Store property along a soil strip between the northern concrete walk pad and the northern concrete wall enclosure



Photo 4 of 7

Photo shows field decontamination of the stainless steel auger using a soapy mixture of laboratory grade detergent and water



Photo 5 of 7

Photo shows depth of sampling at ten (10) inches below grade level



Photo 6 of 7

Photo shows labeled soil sampling jars along with tamper evident seals



Photo 7 of 7

Photo sampling jars with bubble wrap and fully enclosed with zip lock plastic bags

APPENDIX D

ANALYTICAL TEST RESULTS



Calscience



WORK ORDER NUMBER: 15-03-0923

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: GRESO

Client Project Name: GPA Toto Tanguisson Pipeline Cleanup

Attention: Dennis Penaflorida
P.O. Box 6307
Tamuning, Guam 96931-6307

Ranjit K. Clarke

Approved for release on 03/19/2015 by:
Ranjit Clarke
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: GPA Toto Tanguisson Pipeline Cleanup
Work Order Number: 15-03-0923

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	3.1 EPA 8015B (M) TPH Bunker Fuel (Solid).	5
4	Quality Control Sample Data.	6
	4.1 MS/MSD.	6
	4.2 LCS/LCSD.	7
5	Sample Analysis Summary.	8
6	Glossary of Terms and Qualifiers.	9
7	Chain-of-Custody/Sample Receipt Form.	10

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 03/12/15. They were assigned to Work Order 15-03-0923.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: GRESCO	Work Order:	15-03-0923
P.O. Box 6307	Project Name:	GPA Toto Tanguisson Pipeline Cleanup
Tamuning, Guam 96931-6307	PO Number:	
	Date/Time Received:	03/12/15 12:00
	Number of Containers:	3

Attn: Dennis Penafloida

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
GTP-1S-1-1440	15-03-0923-1	02/27/15 14:40	1	Solid
GTP-2S-1-1510	15-03-0923-2	02/27/15 15:10	1	Solid
GTP-3S-1-1535	15-03-0923-3	02/27/15 15:35	1	Solid

Analytical Report

GRESKO	Date Received: 03/12/15
P.O. Box 6307	Work Order: 15-03-0923
Tamuning, Guam 96931-6307	Preparation: EPA 3550B
	Method: EPA 8015B (M)
	Units: mg/kg

Project: GPA Toto Tanguisson Pipeline Cleanup Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GTP-1S-1-1440	15-03-0923-1-A	02/27/15 14:40	Solid	GC 47	03/12/15	03/12/15 23:21	150312B14
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Bunker Fuel		ND		26		1.00	
<u>Surrogate</u>		<u>Rec. (%)</u>		<u>Control Limits</u>		<u>Qualifiers</u>	
n-Octacosane		103		61-145			
GTP-2S-1-1510	15-03-0923-2-A	02/27/15 15:10	Solid	GC 47	03/12/15	03/12/15 23:38	150312B14
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Bunker Fuel		ND		25		1.00	
<u>Surrogate</u>		<u>Rec. (%)</u>		<u>Control Limits</u>		<u>Qualifiers</u>	
n-Octacosane		104		61-145			
GTP-3S-1-1535	15-03-0923-3-A	02/27/15 15:35	Solid	GC 47	03/12/15	03/12/15 23:55	150312B14
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Bunker Fuel		ND		25		1.00	
<u>Surrogate</u>		<u>Rec. (%)</u>		<u>Control Limits</u>		<u>Qualifiers</u>	
n-Octacosane		102		61-145			
Method Blank	099-15-450-7	N/A	Solid	GC 47	03/12/15	03/12/15 22:15	150312B14
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
TPH as Bunker Fuel		ND		25		1.00	
<u>Surrogate</u>		<u>Rec. (%)</u>		<u>Control Limits</u>		<u>Qualifiers</u>	
n-Octacosane		111		61-145			

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Quality Control - Spike/Spike Duplicate

GRESKO	Date Received:	03/12/15
P.O. Box 6307	Work Order:	15-03-0923
Tamuning, Guam 96931-6307	Preparation:	EPA 3550B
	Method:	EPA 8015B (M)
Project: GPA Toto Tanguisson Pipeline Cleanup		Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
GTP-1S-1-1440	Sample	Solid	GC 47	03/12/15	03/12/15 23:21	150312S14
GTP-1S-1-1440	Matrix Spike	Solid	GC 47	03/12/15	03/12/15 22:48	150312S14
GTP-1S-1-1440	Matrix Spike Duplicate	Solid	GC 47	03/12/15	03/12/15 23:05	150312S14

<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Bunker Fuel	ND	400.0	406.5	102	360.4	90	64-130	12	0-15	

Quality Control - LCS

GRESCO P.O. Box 6307 Tamuning, Guam 96931-6307 Project: GPA Toto Tanguisson Pipeline Cleanup	Date Received: 03/12/15 Work Order: 15-03-0923 Preparation: EPA 3550B Method: EPA 8015B (M)
---	--

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-450-7	LCS	Solid	GC 47	03/12/15	03/12/15 22:31	150312B14
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Bunker Fuel		400.0	336.6	84	75-123	

Sample Analysis Summary Report

Work Order: 15-03-0923

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8015B (M)	EPA 3550B	682	GC 47	1


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<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



7440 LINCOLN WAY
 GARDEN GROVE, CA 92841-1432
 TEL: (714) 895-5494 FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD
 DATE: February 27, 2015
 PAGE: 1 OF 1

LABORATORY CLIENT: GRESKO INC		CLIENT PROJECT NAME / NUMBER: GPA Toto Tanguisson Pipeline Cleanup		P.O. NO.:		
ADDRESS: P. O. Box 6307		PROJECT CONTACT: Dennis Penaflojida		QUOTE NO.:		
CITY: Tamuning, Guam 96931		SAMPLER(S) SIGNATURE: <i>[Signature]</i>		LAB USE ONLY 15-03-0923		
TEL: 671-565-74783	FAX: 671-565-7575	E-MAIL dennisp@teleguam.net				
TURNAROUND TIME <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS <input type="checkbox"/> RWQCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL / / SPECIAL INSTRUCTIONS PLEASE E-MAIL RESULTS TO dennisp@teleguam.net and davetaiano@teleguam.net or fax to 671.565.7575		REQUESTED ANALYSIS				
COC SAMPLE SEAL #		TPH-BUNKER FUEL				
LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.
1	GTP-1S-1-1440	T Pipeline Toto	02/27/15	1440	Solid	1
2	GTP-2S-1-1510	T Pipeline Toto	02/27/15	1510	Solid	1
3	GTP-3S-1-1535	JS Store Toto	02/27/15	1535	Solid	1
4						
5						
6						
7						
8						
9						
10						
11						
12						
Relinquished by: (Signature & Company Name) <i>[Signature]</i> GRESKO INC		Relinquished by: (Signature & Company Name) <i>[Signature]</i> D.U.		Date: 3/2/2015	Time: 3:18 P	
Relinquished by: (Signature & Company Name)		Relinquished by: (Signature & Company Name)		Date:	Time:	
Relinquished by: (Signature & Company Name)		Relinquished by: (Signature & Company Name)		Date: 3/12/15	Time: 1200	

Calscience

WORK ORDER #: **15-03-0923**

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: GRESKO

DATE: 03/12/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature 20.4 °C + 0.2°C (CF) = 20.6 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: IS)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter Checked by: IS

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: IS

Sample _____ No (Not Intact) Not Present Checked by: 965

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels. <input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CONTAINER TYPE:			
Solid: <input type="checkbox"/> 4ozCGJ <input checked="" type="checkbox"/> 8ozCGJ <input type="checkbox"/> 16ozCGJ <input type="checkbox"/> Sleeve (____) <input type="checkbox"/> EnCores® <input type="checkbox"/> TerraCores® <input type="checkbox"/> _____			
Aqueous: <input type="checkbox"/> VOA <input type="checkbox"/> VOA _h <input type="checkbox"/> VOAn ₂ <input type="checkbox"/> 125AGB <input type="checkbox"/> 125AGB _h <input type="checkbox"/> 125AGB _p <input type="checkbox"/> 1AGB <input type="checkbox"/> 1AGBna ₂ <input type="checkbox"/> 1AGBs			
<input type="checkbox"/> 500AGB <input type="checkbox"/> 500AGJ <input type="checkbox"/> 500AGJs <input type="checkbox"/> 250AGB <input type="checkbox"/> 250CGB <input type="checkbox"/> 250CGBs <input type="checkbox"/> 1PB <input type="checkbox"/> 1PBna <input type="checkbox"/> 500PB			
<input type="checkbox"/> 250PB <input type="checkbox"/> 250PBn <input type="checkbox"/> 125PB <input type="checkbox"/> 125PBz _{na} <input type="checkbox"/> 100PJ <input type="checkbox"/> 100PJna ₂ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____			
Air: <input type="checkbox"/> Tedlar® <input type="checkbox"/> Canister Other: <input type="checkbox"/> _____ Trip Blank Lot#: _____ Labeled/Checked by: <u>965</u>			
Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: <u>681</u>			
Preservative: h: HCL n: HNO ₃ na ₂ : Na ₂ S ₂ O ₃ na: NaOH p: H ₃ PO ₄ s: H ₂ SO ₄ u: Ultra-pure z _{na} : ZnAc ₂ +NaOH f: Filtered Scanned by: <u>681</u>			

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APPENDIX E

**PHOTOS TAKEN DURING AND
AFTER HIGH PRESURE WATER
WASH AT THE NORTHERN
CONCRETE PAD OF JS STORE**

Exhibit E Photos

Photos taken after Clean up Services



Photo 1 of 5
March 25 2015

Photo Shows the use of High Pressure Wash Surface Cleaner on the Northern Concrete Sidewalk of the JS Store



Photo 2 of 5
March 25 2015

Photo Shows the use of High Pressure Turbo Tip Wand on the Northern Concrete Sidewalk of the JS Store



Photo 3 of 5
March 25 2015

Photo Shows High Density Polyethylene Enclosure of External Air-conditioning
and Chiller Units for Protection during the Wash Cleaning



Photo 4 of 5
March 25 2015

Photo Shows Northern Concrete Sidewalk of the JS Store at the Conclusion of High Pressure Wash Activities



Photo 5 of 5
March 25 2015

Photo Shows Northern Concrete Sidewalk of the JS Store at the Conclusion of High Pressure Wash Activities

APPENDIX F

JS STORE SITE INSPECTION AND TURN OVER FORM

**GPA TOTO TANGUISSON PIPELINE
EMERGENCY RESPONSE AND CLEANUP SERVICES REPORT**



SITE INSPECTION AND TURNOVER FORM

1. SITE DESCRIPTION

Site Description : North Eastern Property Area of the JS Store

Site Location: JS Store Premises at Kanada-Toto Intersection in Toto Village, Guam

Special notations GPA Tanguisson Pipe line High Sulfur Fuel Oil HSFO) spill incident 02/10/15

Product of Concern: High Sulfur Fuel Oil impact from Tanguisson Pipeline spill

Site Owner: JS Store

February 10-24 & March 25 2015

Dates of Clean up Services

2. DESCRIPTION OF CLEANUP EFFORTS

- Removal of impacted surficial soil at a narrow strip in between the northern concrete fence and concrete pad walkway of the property
- Removal of impacted shrubbery and vegetation at the eastern areas of the store's property (store's back yard)
- Wipe down of northern concrete fence and store wall along with the 40 foot container at the eastern area of the property using Simple Green Solution and sorbent materials
- Scraping of impacted elastomeric coating and wipe down of the parapets at the northern area of the store's roof top.
- Scrubbing, wipe down, and eventual high pressure washing of the northern concrete walk pad

3. INSPECTED AND ACKNOWLEDGED BY:

Sharon Tarranto
Signature of Authorized JS Store Representative

03/26/2015
Date

Sharon Tarranto
Print Name

President
Title

4. CONCURRENCE

Dennis Periafloridaz
Signature of Authorized GRESKO Rep

03/26/2015
Date

Dennis Periafloridaz
Print Name

Project Mgr.
Title

GRESKO Mailing Address: PO Box 6307, Tamuning, Guam 96931

REFINERY/ENVIRONMENTAL
320 South East Santa Rita Industrial Dr.
Santa Rita, Guam
Tel: (671) 565-7474 Fax: (671) 565-7575

L.P. GAS DIVISION (Yigo)
330 Chalan Pale Ramon Lagu
Yigo, Guam
Tel: (671) 653-4888 Fax: (671) 653-4889

L.P. Gas DIVISION (Mangilao)
482 Rte 10 Vietnam Veterans Hwy
Mangilao, Guam 96913
Tel: (671) 734-4887 Fax: (671) 734-4889

CNMI OFFICE
PMB 327, Box 10000
Salpan, MP 96950
Tel/Fax: (670) 234-2000



GUAM POWER AUTHORITY

ATURIDÁT ILEKTRESEDÁT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

February 11, 2015

MEMORANDUM

TO: General Manager

VIA: Environmental Manager, Planning and Regulatory *mo*

FROM: Engineer III, Planning & Regulatory

SUBJECT: Oil spill summary report

On February 10, 2015 at approximately 10:00 am, a pipeline release of approximately 20 to 30 gallons occurred while GPA Central Maintenance personnel were conducting depressurization of the pipeline section located along Toto-Canada road adjacent to JS store. Due to the fast response of Central Maintenance personnel, the release was controlled immediately and contamination was minimized. Initial cleanup was conducted by GPA personnel while GRESCO, GPA's Emergency Response Contractor, was activated. Attached is a copy of the Incident Report for your information.

It is highly recommended that the Workplan for the Tanguisson Pipeline Draining be followed to include full coordination between Generation, SPORD and P & R in all draining activities to avoid this incident from happening again.


Norbert M. Madrazo

Cc: Manager of Generation
P&R File

SPILL RESPONSE NOTIFICATION FORM

Spill Date and Time: 02/10/15 ; 10:00 a.m.

Date of Report: 02/10/15

Location of Spill: Toto Pipeline adjacent to JS Store

Individual Who Discovered the Spill: Plant Maintenance Mechanic Joshua A. C. Lujan and Machinist II Jesse R. Cruz

Volume of Oil Spilled: Estimated to be less than 25 - 30 gallons

Type of Oil Spilled: Bunker Fuel Oil No. 6

Estimated Volume to Reach Waters: None

Estimated Area Affected: J. S. Store , Apartment complex adjacent to Pipeline and a residential dwelling w/vehicle

Cleanup Action Taken: Initially, dispatched men from Central Maintenance to spill site with Absorbent pads, Absorbent booms, rags. Assistant Superintendent Peter Blas issued Biodegradable solvent and spray bottles with a roll of Plastic Bags.

Actions Taken to Correct, Control or Mitigate Incident: The initial immediate action taken by the two men was to contain the spill. This was done by ensuring that the 1 1/2" gate valve was immediately installed to one of our draining outlets. Then closing the 8" gate valve adjacent to the 1 1/2" gate valve outlets. This would isolate and prevent additional spillage. After that, assess the affected immediate surroundings to ensure that any possible hazards are identified and there is no immediate threat to the environment and to the public. The two men notified their First Line Supervisor of the incident. Thus notifying the spill officer, which would be Planning and Regulatory. Also contacted Safety thereafter.

- Drip pan Surrounded by Absorbent boom and Absorbent pads were in their proper places. Meaning the drip pan surrounded by Absorbent boom was directly below the 1 1/2" gate valve.

Failure Analysis of Cause of Spill : This would be difficult to determine. Considering the operation of draining the Pipeline by means of pressurizing with Compressed Air to push the existing Fuel. My analysis would be to secure an outlet valve permanently in lieu of threaded plug that screws into a thread-o-let.

Measures Necessary to Prevent Recurrence: As mentioned above, permanently install and outlet valve during these kind of operation.

Government Agencies Contacted: Fire Department, Ambulance, EPA, Homeland Security, Department of Public Works were all contacted by a anonymous individual. Not to exclude PDN.

Report Prepared By: Frankie C. SanNicolas; Plant Maintenance Supervisor Central Maintenance Date: 02/10/15

Tanguisson Pipeline oil Recovery
Phase I (Nimitz-Vital)

PHASE I
Tango to Nimitz

Date	Fuel Oil Recovered			Remarks
	bbls	gals	Location	
12/10/14	206	8,643	Nimitz Hill	Air Push from Nimitz to Tango Tank
12/11/14	26	1,092	Nimitz Hill	Air Push from Nimitz to Tango Tank
12/12/14	20	837	Nimitz Hill	Air Push from Nimitz to Tango Tank
1/16/15	117	4,900	Nimitz Hill	Air Push from Nimitz to Tango Tank
1/20/15	3	126	Nimitz Hill	Air Push from Nimitz to Tango Tank
1/21/15	248	10,410	Nimitz Hill	Air Push from Nimitz to Tango Tank
1/22/15	188	7,913	Nimitz Hill	Air Push from Nimitz to Tango Tank
1/23/15	58	2,439	Nimitz Hill	Air Push from Nimitz to Tango Tank
1/23/15	48	2,000	Nimitz Hill	P/L draining by Vacuum Truck to Cabras WOT
1/26/15	238	10,000	Nimitz Hill	P/L draining by Vacuum Truck to Cabras WOT
1/27/15	310	13,000	Nimitz Hill	P/L draining by Vacuum Truck to Cabras WOT
1/28/15	286	12,000	Nimitz Hill	P/L draining by Vacuum Truck to Cabras WOT
1/29/15	255	10,700	Nimitz Hill	P/L draining by Vacuum Truck to Cabras WOT
1/30/15	302	12,700	Nimitz Hill	P/L draining by Vacuum Truck to Cabras WOT
2/2/15	302	12,700	Nimitz Hill	P/L draining by Vacuum Truck to Cabras WOT
2/3/15	148	6,200	Nimitz Hill	P/L draining by Vacuum Truck to Cabras WOT
2/4/15	57	2,400	Nimitz Hill	P/L draining by Vacuum Truck to Cabras WOT
2/5/15	40	1,700	Nimitz Hill	P/L draining by Vacuum Truck to Cabras WOT
6/30/2015	62	2,600	Toto Village	P/L draining by Vacuum Truck to Cabras WOT
7/1/2015	18	750	Toto Village	P/L draining by Vacuum Truck to Cabras WOT
7/8/2015	14	600	Tiyan	P/L draining by Vacuum Truck to Cabras WOT
7/9/2015	29	1,200	Tiyan	P/L draining by Vacuum Truck to Cabras WOT
7/10/2015	21	900	Tiyan	P/L draining by Vacuum Truck to Cabras WOT
7/29/2015	11	450	Restricted Area Airport	P/L draining by Vacuum Truck to Cabras WOT

Tanguisson Pipeline oil Recovery
Phase I (Nimitz-Vital)

7/30/2015	24	1,000	Restricted Area Airport	P/L draining by Vacuum Truck to Cabras WOT
7/31/2015	45	1,900	Tanguisson Valve Pit	P/L draining by Vacuum Truck to Cabras WOT
8/10/2015	36	1,500	Tanguisson Valve Pit	P/L draining by Vacuum Truck to Cabras WOT
8/11/2015	21	900	Tanguisson Valve Pit	P/L draining by Vacuum Truck to Cabras WOT
8/12/2015	0	15	Tanguisson Cliff Line	P/L draining by Vacuum Truck to Cabras WOT
8/13/2015	19	800	MTM	P/L draining by Vacuum Truck to Cabras WOT
8/14/2015	10	400	MTM	P/L draining by Vacuum Truck to Cabras WOT
8/17/2015	17	700	MTM	P/L draining by Vacuum Truck to Cabras WOT
8/18/2015	12	500	MTM	P/L draining by Vacuum Truck to Cabras WOT

WOT Receipts	3,190	133,975
Target Quantity	3,500	147,000
Remaining	310	13,025
Oil Recovery in %	91%	91%

Tanguisson Pipeline oil Recovery
Phase II (Nimitz-Cabras)

PHASE II
NIMITZ - FUEL FARM

Date	Fuel Oil Recovered			Remarks
	bbls	gals	Location	
3/10/15	262	11,004	Nimitz Hill	P/L Gravity transfer from Nimitz to Vital
3/11/15	31	1,307	Nimitz Hill	P/L Gravity transfer from Nimitz to Vital
4/21/15	54	2,266	Nimitz Hill	P/L draining by Gravity Draining, 1,766 gal. to Vital, Vacuum Truck 500 gal to Cabras WOF
4/22/15	36	1,500	Nimitz Hill	P/L draining by Vacuum Truck to Vital
4/28/15	33	1,400	Nimitz Hill	P/L draining by Vacuum Truck to Vital
4/30/15	38	1,600	Nimitz Hill	P/L draining by Vacuum Truck to Vital
5/1/15	36	1,500	Nimitz Hill	P/L draining by Vacuum Truck to Vital
5/4/15	21	900	Nimitz Hill	P/L draining by Vacuum Truck to Vital
5/5/15	21	900	Nimitz Hill	P/L draining by Vacuum Truck to Vital
5/6/15	52	2,200	Nimitz Hill	P/L draining by Vacuum Truck to Vital
5/7/15	21	900	Nimitz Hill	P/L draining by Vacuum Truck to Vital
5/8/15	81	3,400	Nimitz Hill	P/L draining by Vacuum Truck to Vital
6/26/15	24	1,000	Nimitz Hill	P/L draining by Vacuum Truck to Vital
6/30/15	62	2,600	Toto Village	P/L draining by Vacuum Truck to Vital
7/1/15	18	750	Toto Village	P/L draining by Vacuum Truck to Vital
7/8/15	14	600	Next to PO Tiyan	P/L draining by Vacuum Truck to Vital
7/9/15	29	1,200	Next to PO Tiyan	P/L draining by Vacuum Truck to Vital
7/10/15	21	900	Next to PO Tiyan	P/L draining by Vacuum Truck to Vital
7/29/15	11	450	Airport Restricted Area	P/L draining by Vacuum Truck to Vital
7/30/15	24	1,000	Airport Restricted Area	P/L draining by Vacuum Truck to Vital
7/31/15	45	1,900	Tanguisson Valve Pit	P/L draining by Vacuum Truck to Vital
8/10/15	36	1,500	Tanguisson Valve Pit	P/L draining by Vacuum Truck to Vital

Tanguisson Pipeline oil Recovery
Phase II (Nimitz-Cabras)

8/11/15	21	900	Tanguisson Valve Pit	P/L draining by Vacuum Truck to Vital
8/12/15	0	15	Tanguisson Cliff Line	P/L draining by Vacuum Truck to Vital
8/13/15	19	800	MTM Pangelinan Pole	P/L draining by Vacuum Truck to Vital
8/14/15	10	400	MTM Pangelinan Pole	P/L draining by Vacuum Truck to Vital
8/17/15	11	450	MTM Pangelinan Pole	P/L draining by Vacuum Truck to Vital
8/18/15	12	500	Toto Village Store	P/L draining by Vacuum Truck to Vital
8/28/15	5	200	Toto Village Store	P/L draining by Vacuum Truck to Vital

WOT Receipts	1,049	44,042
Target Quantity	1,500	63,000
Remaining	451	18,958
Oil Recovery in %	70%	70%