



Giant Refining Company
Route 3, Box 7
Gallup, NM 87301

**Commitment for Resolution of
API Separator Storm Water Issues
Giant Industries, Inc. – Ciniza Refinery**

March 28, 2006

Introduction

The Giant Industries, Inc. Ciniza Refinery (Ciniza) has separate process waste water and storm water sewers in its refinery processing area. The storm water sewer system was installed in 1996. The process waste water sewer system dates back to 1957. Until fairly recently, the process waste water sewer and storm water sewer systems flowed into a single API separator. In October 2004, the process sewer system was tied into a new API separator (NAPIS) while the storm sewer system remained tied into the original API separator (OAPIS) which currently serves as a storm water collection/separator.

Ciniza is concerned about entry of water through the storm sewer system into the OAPIS during dry weather conditions. Ciniza has installed a pump to divert a small quantity of dry weather flow from the OAPIS into the NAPIS. Ciniza wants to assure that there is not a cross connection somewhere between the process sewer and storm sewer systems which is enabling water to enter the storm sewer system and the OAPIS and that there are no locations where dry weather flow is entering surface drains into the storm water sewer system. If any exist, the connections will be plugged.

Ciniza has recently discussed the issue with the Oil Conservation Division and New Mexico Environment Department, Hazardous Waste Bureau. Most recently, during a conference call with OCD and NMED on March 8, 2006, it was mutually agreed that Ciniza would prepare a Commitment including a schedule for submittal to OCD and NMED on March 28, 2006.

Corrective Action Plan

During the conference call with OCD and NMED on March 8, 2006, it was mutually agreed that performing a dye trace study to identify possible cross connections would be a good idea to pursue. Ciniza will bid out the dye trace study to a consulting and

engineering company. A request for proposal was sent out to URS Corporation and Trihydro Corporation on March 16, 2006. Ciniza will conduct the study during the upcoming refinery turn-around in April. The study will also identify locations where dry weather flow potentially could enter the storm sewer through surface drains and block them off to prevent the water entering the storm water sewer system.

Once Ciniza has eliminated the small amount of dry weather flow from the storm sewer system, Ciniza will pipe/route the non-hazardous storm water flows into an unused pond for temporary holding. The unused pond (dry) is the pond that Ciniza recently discussed with OCD in 2005 for use as a fire water reservoir. The pond has more than sufficient capacity (greater than 1 million gallons of water) to hold a large storm runoff event. Ciniza believes the pond would serve as an excellent choice for a surge holding reservoir for storm water and so should be included in this Commitment.

The pond itself consists of two cells; one cell is currently being used for sewage effluent and is 1/3 the size of the second cell. The second cell is larger and, to the best of our knowledge, has never been used for sewage effluent or other uses. Ciniza would use the second cell as the storm water retention basin. The cells are separated by an earthen berm measuring 15-18' at its base. The earthen berm will be re-built and strengthened prior to the use of the second cell. The dimensions of the berm are approximately 20' bottom X 10' top X 10" ASL. The soil composition is the same as our other ponds (clay) which is several feet thick with negligible permeability (as demonstrated from our other ponds).

Ciniza has procedures and policy in place to isolate contaminants from storm water. The dye trace study and storm sewer blocking activities that Ciniza will conduct will improve the isolation of contaminants from storm water by preventing contaminants from getting into the storm water sewer system. In addition, Ciniza would install a liner and piezoelectric leak detection system in the pond.

Ciniza proposes to run piping from the storm water/fire water pond to the evaporation ponds. If the storm water was ever contaminated with oil, the oil-contaminated storm water would be skimmed off of the pond by a vacuum truck. Use of the pond will render the OAPIS no longer necessary for storm water management so Ciniza will remove the OAPIS from service and decommission it after the pond is prepared.

During the conference call, OCD mentioned that clean storm water can be routed directly to the evaporation ponds. If more storm water is retained than is needed for fire suppression, the excess storm water would only be discharged to the evaporation pond after it is tested and shown to be clean. During the first couple storm events that require Ciniza to release water from the pond, Ciniza will test the discharge to show there is no contamination. During subsequent releases of storm water to the evaporation ponds, Ciniza will use visual observations for detection of contamination.

Schedule

Action Item:

1. Conduct Dye Trace Study:
2. Interim Progress Report to OCD/NMED:
3. Block off storm sewer drains
4. Install piping to pond:
6. Interim Progress Report to OCD/NMED:
7. Install liner and leak detection in pond:
8. Remove OAPIS from service:
9. Final Progress Report to OCD/NMED:

Completion Date:

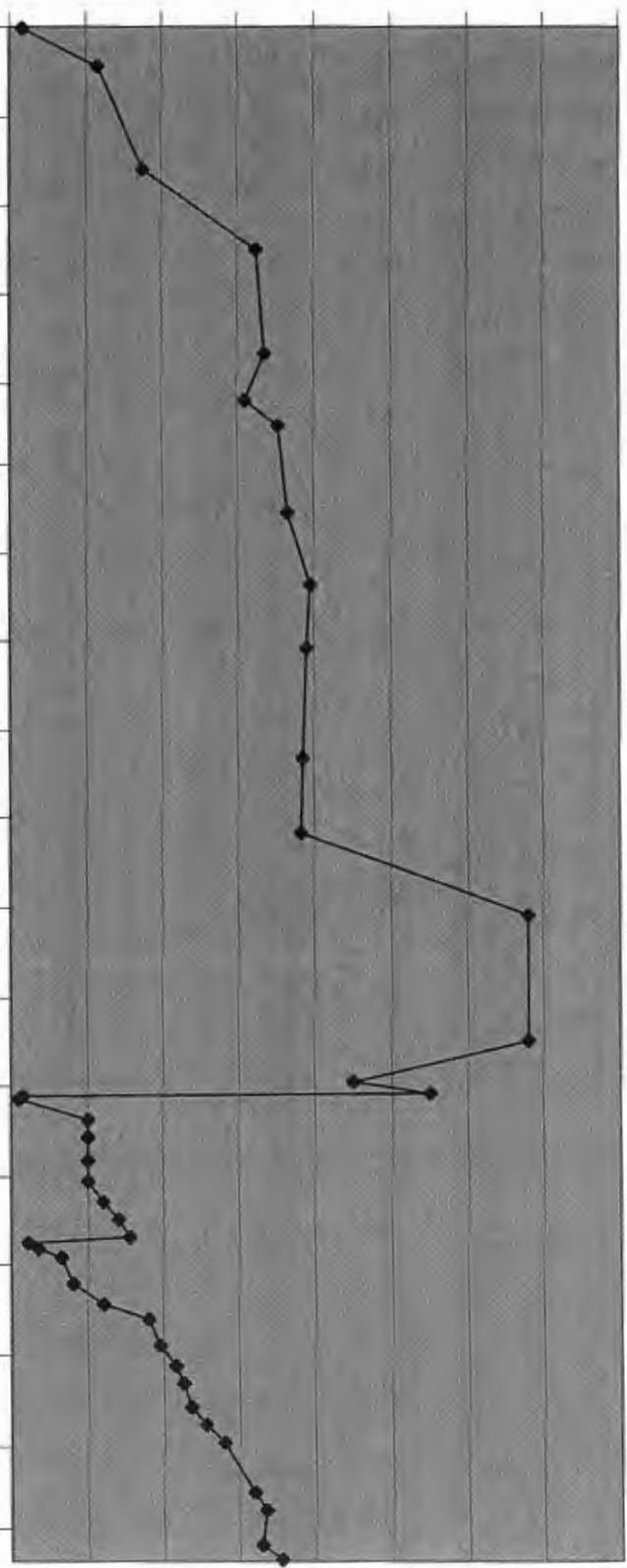
Refinery Turn-around in April 2006
May 15, 2006
June 1, 2006
July 15, 2006
July 15, 2006
July 15, 2006
July 30, 2006
August 10, 2006

Thickness (feet)

0 1 2 3 4 5 6 7 8

Date

10/1/2004
11/1/2004
12/1/2004
1/1/2005
2/1/2005
3/1/2005
4/1/2005
5/1/2005
6/1/2005
7/1/2005
8/1/2005
9/1/2005
10/1/2005
11/1/2005
12/1/2005
1/1/2006
2/1/2006
3/1/2006



NAPIS Water Layer Thickness*

NEW OIL WATER SEPARATOR SECONDARY CONTAINMENT INSPECTIONS

START DEPTH TO BOTTOM OF SECONDARY CONTAINMENT EQUALS 13.25 FEET

DATE	WATER LAYER THICKNESS (FEET)	COMMENTS	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	MTBE (ug/L)	XYLENES, TOTAL (ug/L)
10/1/2004	*	* See attached inspection report dated 10/14/05					
10/14/2004	0.17						
11/18/2004	1.15						
12/16/2004	1.75						
1/21/2005	3.25						
2/15/2005	3.35		SAMPLED	1.1	0.9	0.62	
3/17/2005	3.53						
4/11/2005	3.65						
5/3/2005	3.95						
6/10/2005	3.9						
7/6/2005	3.85						
8/3/2005	3.825						
9/15/2005	6.8	SAMPLED	150	130	ND	1000	58
9/29/2005	6.8						
10/3/2005	4.5	Today maintenance vacuumed out some water from here, Kerry said about 5 barrels.					
10/4/2005	5.5						
10/5/2005	0.15	This was just vacuumed out now. Water taken out about 10 barrels.					
10/12/2005	0.1	Continuous pumping of below grade tank.					
10/18/2005		Air driven pump removing all water but one inch on the bottom while repairs are being made to separator.					
10/26/2005		Air driven pump removing all water but one inch on the bottom while repairs are being made to separator.					
11/2/2005	1						
11/9/2005	1						
11/15/2005	1.2						
11/21/2005	1.4						
11/23/2005	1.55	After measuring, all water was pumped out.					
11/25/2005	0.22						
11/28/2005	0.35						
12/7/2005	0.65						
12/14/2005	0.8						
12/19/2005	1.2						
12/28/2005	1.8						
1/4/2006	1.95						
1/10/2006	2.15						
1/18/2006	2.25						
1/24/2006	2.35						
1/30/2006	2.55						
2/6/2006	2.8						
2/16/2006	3.1						
2/22/2006	3.2						
3/6/2006	3.35						
3/11/2006	3.3						
3/16/2006	3.55						

Ed Riege

From: John Laurent
Sent: Tuesday, February 28, 2006 1:01 PM
To: Ed Riege
Cc: Jim Hallock
Subject: Liners Info

Attachments: Sump Liner Case Study; Old API Separator Lining System; API Secondary Liner Repair

Ed,
Attached are two e-mails I received. Nilex seems to have their act together. I also attached Jim's e-mail for the repairs to the existing liner on the new API. The main reason we need to wait for warm weather is the liner material is similar to a vinyl liner you would put in a portable pool. When it gets cold the material is brittle. Once the excavation is done around the liner at the new API there will be dirt that has to be cleaned off the liner first. If it is cold this will be difficult to do. Also applying the patches to brittle material will be difficult and lessens the chance of sealing the leaks.

My suggestion is you work with Nilex to come do the old API. If they do come, then we could get the new API excavated and they could also patch that liner while they are here. I would also want them to do a vacuum test on the new liner they install and the old liner they patch to make sure we do not have any leaks. They may be more expensive than local people but with them maybe we can avoid having to revisit problems with liners due to the installation techniques and testing Nilex does.

John



Sump Liner Case
Study



Old API Separator
Lining System...



API Secondary
Liner Repair

API Secondary Liner Repair

The new API secondary liner is made from a 40 mil polyethylene material welded at the seams. The leak detection port is located at the southwest end of the new API pit and is approximately 14 ft. deep. The maximum depth of the water in the liner is approximately 36", which indicates the hole in the secondary liner is not higher than 36" above the bottom of the liner. Please follow the following recommended steps in repairing the new liner:

1. Excavate the entire south end of the new API and shore the excavation in accordance with the appropriate OSHA regulations. The liner should be exposed to the bottom of the API on all three sides of the sludge collection pit. Extreme caution must be taken in excavating around the weir box and the liner!
2. A water sump must also be included in the excavation to drain any ground water to a specified area so it can be pumped out of the excavation. Install a temporary sump pump after an adequate water sump has been excavated.
3. Temporarily fill the liner with dyed water to approximately 3 ft. of depth. Special care must be taken to properly support the secondary liner to eliminate the possibility of damaging the liner during this step.
4. Inspect the liner carefully for any discoloration in any water around the excavated area to locate possible leak areas in the liner.
5. After the leaks have been located, drain the liner and dry the area around the leak. Repair the liner in accordance with the suppliers recommended procedures. The ambient temperature must be above 50 deg. F during all repairs. Special care must be taken if the ambient temperature is below 50 deg. F.
6. After all leaks have been located and repaired, fill in the excavation and re-compact the fill material according to GI standards.

It is highly recommended the liner be repaired during the spring or summer time periods and not during the cold winter months due to safety considerations. It would be extremely difficult to enclose the excavation since it will be so large and keep it heated above 50 degrees F so the repairs can be made.

NMED's COPY

GIANT

Giant Refining Company
Route 3, Box 7
Gallup, NM 87301

**Request for Proposal
Giant Industries, Inc.
Ciniza Refinery
Storm Sewer System Dye Trace Study
Revised 3-20-06**

Introduction

The Giant Industries, Inc. Ciniza Refinery (Ciniza) has separate process waste water and storm water sewers in its refinery processing area. The storm water sewer system was installed in 1996. The process waste water sewer system dates back to 1957. Until fairly recently, the process waste water sewer and storm water sewer systems flowed into a single API separator. In 2005, the process sewer system was tied into a new API separator (NAPIS) while the storm sewer system remained tied into the OAPIS which currently serves as a storm water collection/treatment tank. Ciniza recently has had some issues concerning entry of water through the storm sewer system into the OAPIS during dry weather conditions. Giant is concerned that there may be an existing cross connection(s) somewhere between the process sewer and storm sewer systems which is enabling water to enter the storm sewer system and the OAPIS. There may also be locations where process waste water is entering surface drains into the storm water sewer system. Ciniza has recently discussed the issue with the Oil Conservation Division and New Mexico Environment Department, Hazardous Waste Bureau. During a conference call with OCD and NMED on March 8, 2006, it was mutually agreed that performing a dye trace study to identify possible cross connections would be a good idea to pursue. Also, as a related activity, conduct a study to identify locations where process water may be entering the storm sewer through surface drains and block them off to prevent the water from process equipment entering the storm water sewer system.

Scope

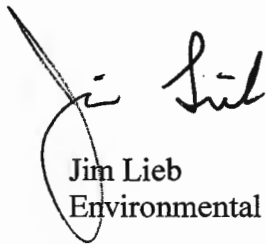
This RFP is for proposal including two scope elements. First is a dye trace study identifying possible underground cross connections between the storm sewer system and the process waste water system. Second is a study identifying locations where process waste water may leak into surface storm water drains. Due to regulatory scrutiny on these issues, Ciniza is requesting third party assistance in this project.

Please prepare your proposal to include the two elements. Your proposal should show the combined total cost for both elements. In your proposal please identify team members and qualifications including past experience with dye tracing studies. Please include billing rate information.

Information

Ciniza has diagrams showing the storm water system in the refinery process area which you may use in cost estimating. The diagrams are provided as an attachment to this RFP. If you have any questions, please contact Jim Lieb (505) 722-3227 or Ed Riege at (505) 722-3217.

Sincerely,
Giant Industries, Inc. – Ciniza

A handwritten signature in black ink, appearing to read "Jim Lieb". The signature is written in a cursive style with a large, sweeping initial "J".

Jim Lieb
Environmental Engineer



ENGINEERING + CONSTRUCTION + MAINTENANCE

"Quality Industrial Services for the 21st Century"

March 2, 2006

Giant Refining Co.
Refinery Road I-40
Jamestown, NM

Attention: Ed Riege

Reference: Demolition and installation of New Curb
Ciniza Refinery

Ref-Chem is pleased to submit this Budgetary Price for the above referenced project. The scope consists of the demolition of some existing curb, and installing 1,000 LF of new curb. Our bid is based on our verbal discussions and walk through with Giant Refining, and the Ref-Chem's attached Cost of Work Basis.

Estimated cost of demo	\$ 6,000
Estimated cost to install new curb (Includes equipment)	\$78,500
Total	<u>\$84,500</u>

We appreciate the opportunity to provide our services for Giant Refining, and look forward to working with you on this project. If you have questions concerning this proposal, or require more information, please call Joe Martinez at (432) 332-8531 or (432) 413-2938.

Sincerely,

Joe Martinez
Project Manager

Attachments

REF-CHEM, L.P.

P.O. Box 2588 + Odessa, TX 79760
 1128 S. Grandview + Odessa, TX 79761
(432) 332-8531 + Fax: (432) 332-3325

P.O. Box 262507 + Houston, TX 77207
 120 N. Munger + Pasadena, TX 77506
(713) 477-4471 + Fax: (713) 477-6456

Demolition and installation of New Curb
Ciniza Refinery
Ref-Chem's Proposal
COST OF WORK BASIS, 3/02/2006

1. Our proposal is based on working a 50-hour workweek.
2. We have not included the handling or disposal of material that could be deemed contaminated or hazardous. Our proposed schedule does not allow for any delays due to removal of contaminated soils.
3. Construction Schedule delays beyond our control will be considered as extra work. Delays on getting daily work permits to start work, plant upsets, materials and drawings provided by others, etc., will be invoiced as extra work.
4. Our proposal is based on hand and mechanical excavation for the foundation, as discussed. Backfill is based on reusing the same materials excavated. Should Ref-Chem encounter underground obstructions such as solid rock or abandoned piping, the removal cost if required shall be considered extra work. The client is responsible for identifying and locating underground lines before any excavation begins.
5. Giant Refining will furnish all materials.
6. Electrical work, painting, site work, etc., are not included in this budgetary price.
7. Ref-Chem has included the equipment required to perform this work.
8. New Mexico Gross Receipt Sales Tax, are not included in this price.