

GW - 1

REPORTS

YEAR(S):

2005



RECEIVED
SEP 21 2005
OIL CONSERVATION
DIVISION

Wayne Price
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Dr
Santa Fe, NM 87505

Certified Mail: 7004 2510 0005 1641 4569

September 19, 2005

RE: Giant Refining Company, Bloomfield Refinery
Request for Additional Information and Changes to the North Boundary
Barrier Collection System Design and Monitoring Plan Phase II
EPA # NMD089416416

Dear Mr. Price,

Giant Refining Company Bloomfield (GRCB) received the July 26, 2005 letter from the New Mexico Environmental Department (NMED) requesting additional information regarding well data, general chemistry parameters and analytical results for the North Boundary Barrier Collection System Design and Monitoring Plan Phase II. The purpose of this letter is to provide NMED with the requested additional information.

1. An updated map is in Attachment A. Well construction diagrams are in Attachment B.
2. Analytical laboratory reports are in Attachment C.
3. The Hach Spectrophotometer DR/2010 is used in conjunction with the Hach High Range Dissolved Oxygen AccuVac method to determine dissolved oxygen. The High Range Dissolved Oxygen Accuvac Ampul contains reagent vacuum-sealed in a 12-mL ampul. When the Accuvac ampul is broken open in a sample containing dissolved oxygen, it forms a yellow color, which turns purple. The purple color development is

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proportional to the concentration of dissolved oxygen. The Hach Spectrophotometer DR/2010 has been factory calibrated. This is a colorimetric method therefore the sample is filtered and used to zero the instrument before adding the reagent.

Sample collection takes place after the well is sufficiently purged. Organic compounds or salts present in our groundwater possibly cause enough interference to skew the results. Groundwater color may also affect the results. The wells were remeasured during the Annual Sampling event with similar results as the last sampling event. These results will be included in the Annual Report.

4. The discrepancy occurred due to a typographical error. The Ultrameter 6P reads electrical conductance in micromhos per centimeter. The tables have been revised to include the correct units.

5. Collection Methods

At least three well volumes are purged from the well. Purge volumes are determined using the following equation:

Well Depth – Casing Height – Depth to Liquid X Conversion Factor X Three.

The conversion factor is determined by the diameter of the well casing.

Casing	Conversion Factor
6"	1.50 gal/ft
5"	1.02 gal/ft
4"	0.74 gal/ft
3"	0.367 gal/ft
2"	0.163 gal/ft

Typically disposable bailers are used for purging and sampling. Each bailer holds one liter of liquid. Three well volumes can be calculated by counting the number of times a well is bailed.

Well Sampling and Sample Handling Procedure

Equipment and supplies needed for collecting representative groundwater samples include:

- Interface Meter
- Ultrameter 6P
- Distilled Water
- Disposable Latex Gloves
- Disposable Bailers
- String/Twine

- Cooler with Ice
- Bottle kits with Preservatives (provided by the contract laboratory)
- Disposable 0.45 micron Field Filters and Syringes
- Glass Jar (usually 4 oz.)
- Sharpie Permanent Marker
- Field Paperwork/Logsheet
- Two 5-gallon buckets
- Trash container (plastic garbage bag)
- Ziploc Bags
- Paper towels

The Ultrameter 6P is calibrated daily using a pH 7 standard and 3000 ppm conductivity standard. Water quality parameters, pH, electrical conductance, and temperature are monitored during purging using the Ultrameter 6P. Sampling occurs after the pH, conductivity, and temperature values do not vary more than 10% for at least three measurements, and at least three well casing volumes have been removed from the well. Samples are collected with the bailer and poured into the appropriate sample containers. Two people are usually utilized for sampling. Sampling takes place over a bucket to insure that spills are contained.

For dissolved metals, sample water is poured into a jar and then extracted with a syringe. The syringe is then used to push water through a field filter into the proper sample bottle to collect the dissolved metals sample. Volatile organic analysis samples are collected as to allow no head space in the container.

Samples are labeled immediately with location, date, time, analysis, preservative, and sampler. Then they are put in a Ziploc and placed in a cooler holding sufficient ice to keep them cool. The field logsheet is reviewed to verify all entries.

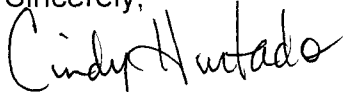
Purge and Decontamination Water Disposal

The Ultrameter 6P and the interface probe are rinsed with distilled water after every well. The rinse procedure takes place over a bucket to insure that spills are contained.

All rinse and purge water is contained and then disposed of through the refinery wastewater system.

If you need additional information, please call me at (505) 632-4161.

Sincerely,

A handwritten signature in cursive script that reads "Cindy Hurtado". The signature is written in black ink and is positioned above the printed name.

Cindy Hurtado

Environmental Coordinator – Giant Refining – Bloomfield

Cc: Randy Schmaltz – Environmental Manager – Giant Refining – Bloomfield

User:Forden.Spec:PIRNIE STANDARD File:M:\512700\1\acact\Proj\dwg\final figures\5127E10.DWG Scale:1:1 Date:09/06/2005 Time:14:25 Layout:FIGURE 3

LEGEND:

— BARRIER WALL LOCATION



● OBSERVATION WELL
● COLLECTION WELL



**MALCOLM
PIRNIE**

GIANT REFINERY
BLOOMFIELD, NEW MEXICO

CORRECTIVE MEASURES IMPLEMENTATION REPORT

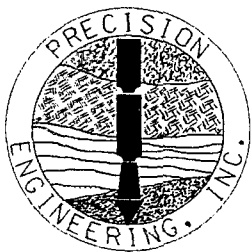
OBSERVATION AND COLLECTION WELL LOCATION MAP

SCALE: 1"=200'

MALCOLM PIRNIE, INC.

SEPTEMBER 2005

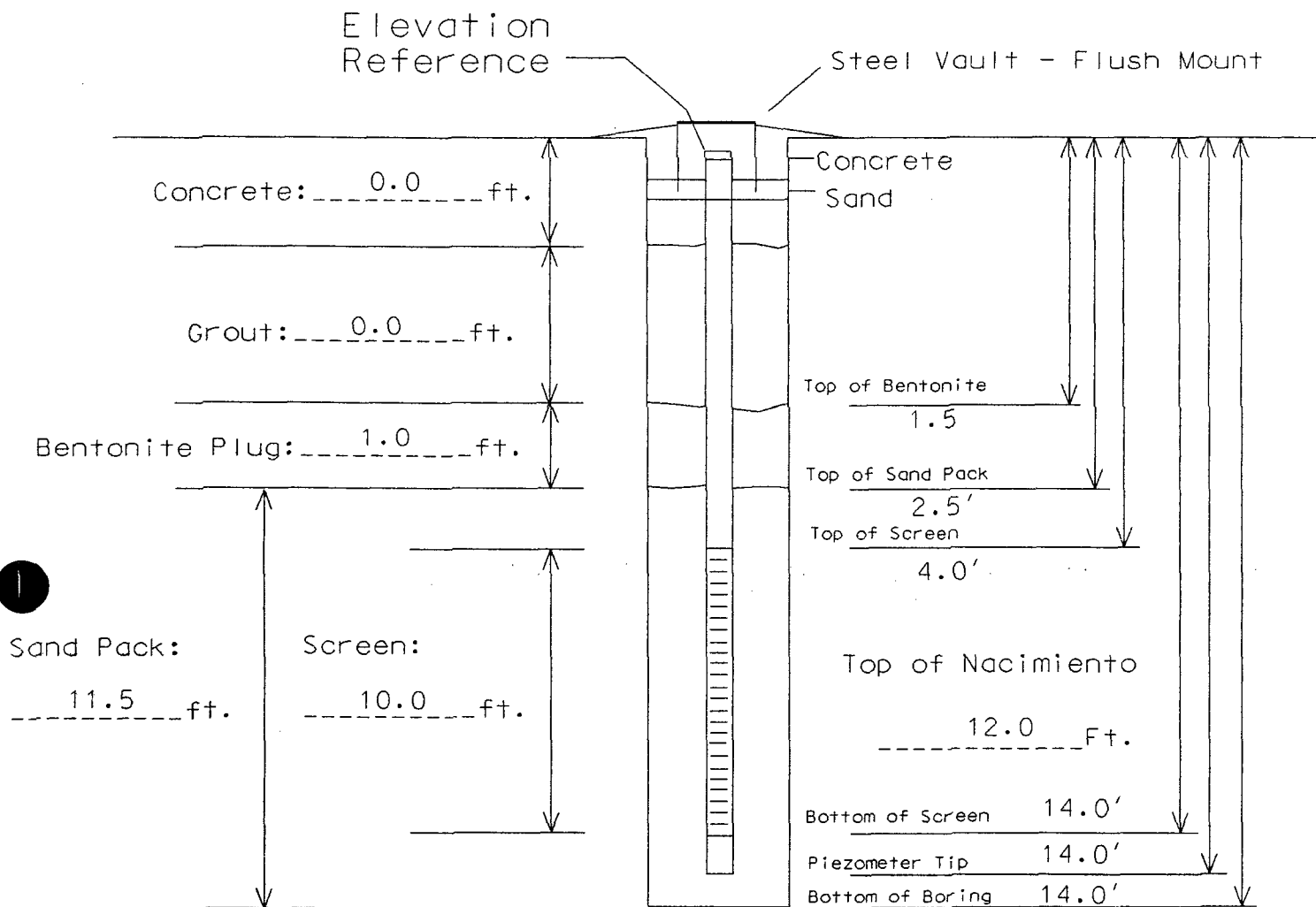
FIGURE 1



505-523-7674

Installation Diagram

Monitoring Well No. CW 0+60



Boring Diameter: 13 "

Sand Type: 10-20 Silica

Bollards. Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 6" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 6" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Other:

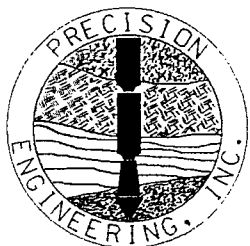
Bottom Cap Used? Yes

Site Easting: TBS

Project #: 05-038

Project Name: Bloomfield Refinery

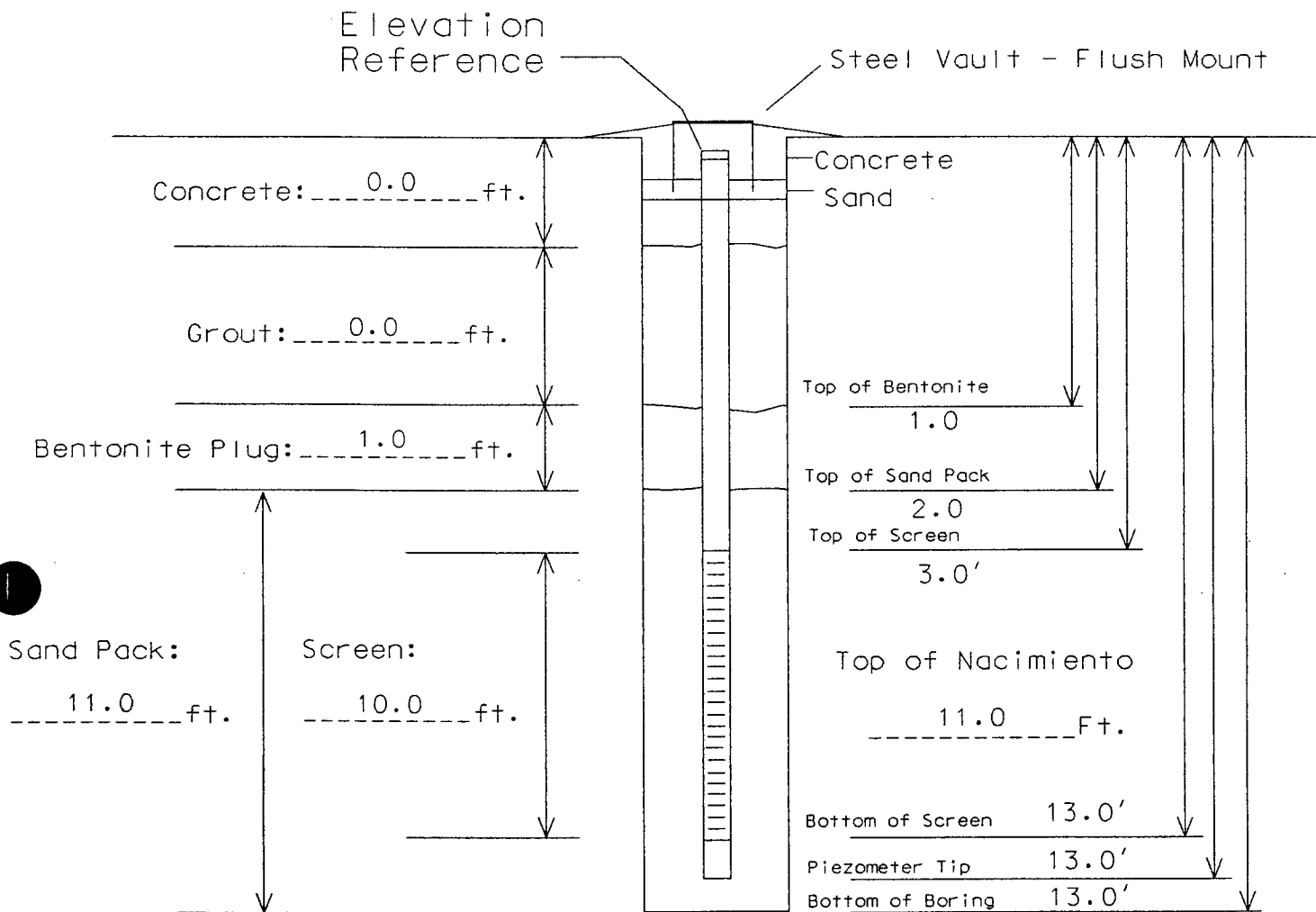
Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. CW 1+50



Boring Diameter: 13"

Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 6" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 6" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Other: _____

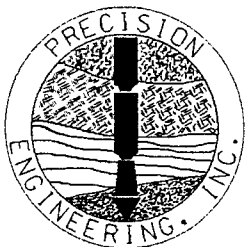
Bottom Cap Used? Yes

Site Easting: TBS

Project #: 05-038

Project Name: Bloomfield Refinery

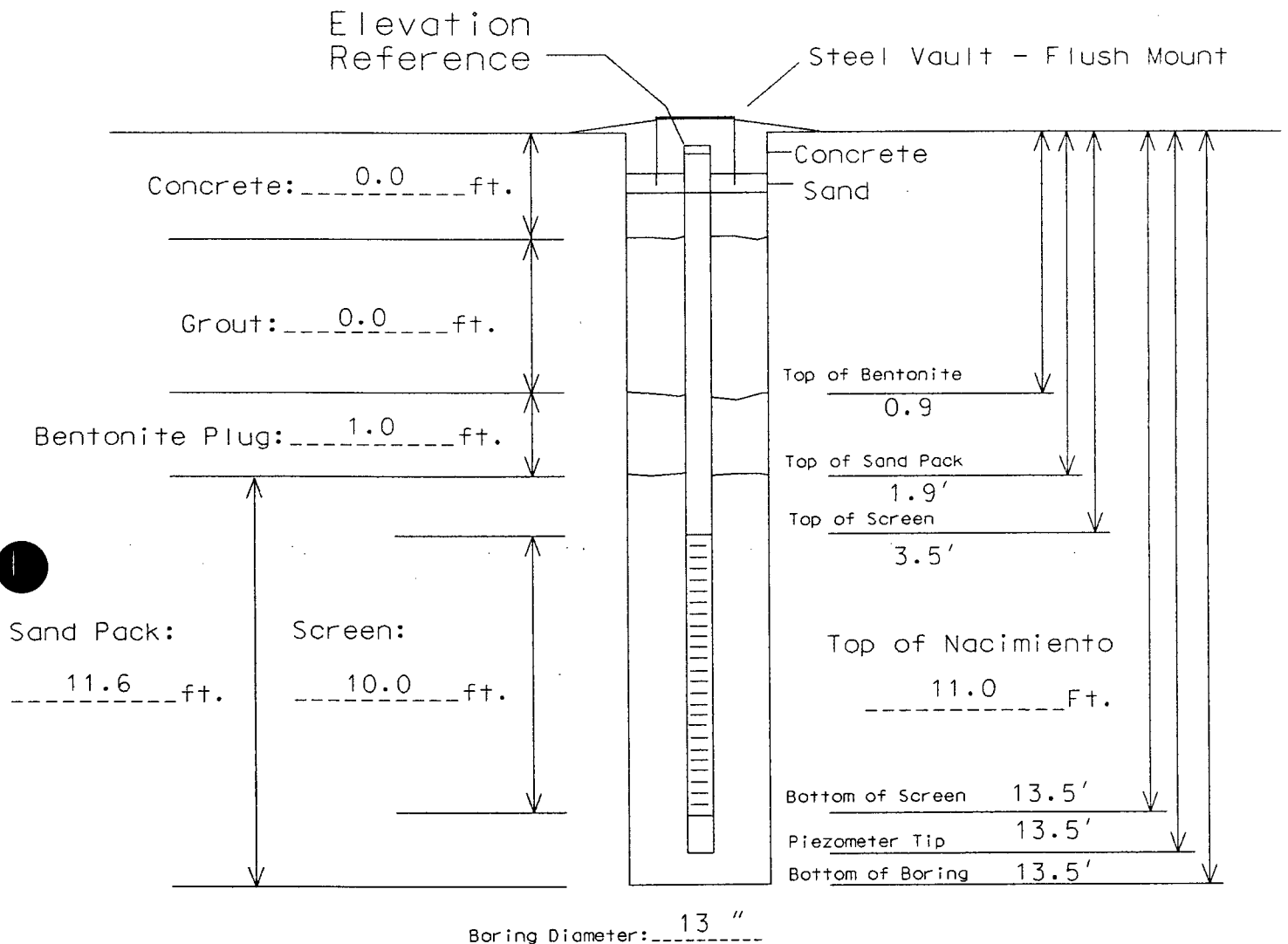
Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. CW 3+85



Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 6" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 6" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Other: _____

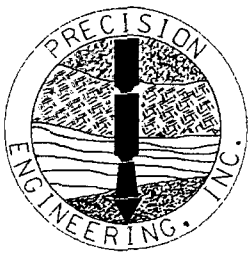
Bottom Cap Used? Yes

Site Easting: TBS

Project #: 05-038

Project Name: Bloomfield Refinery

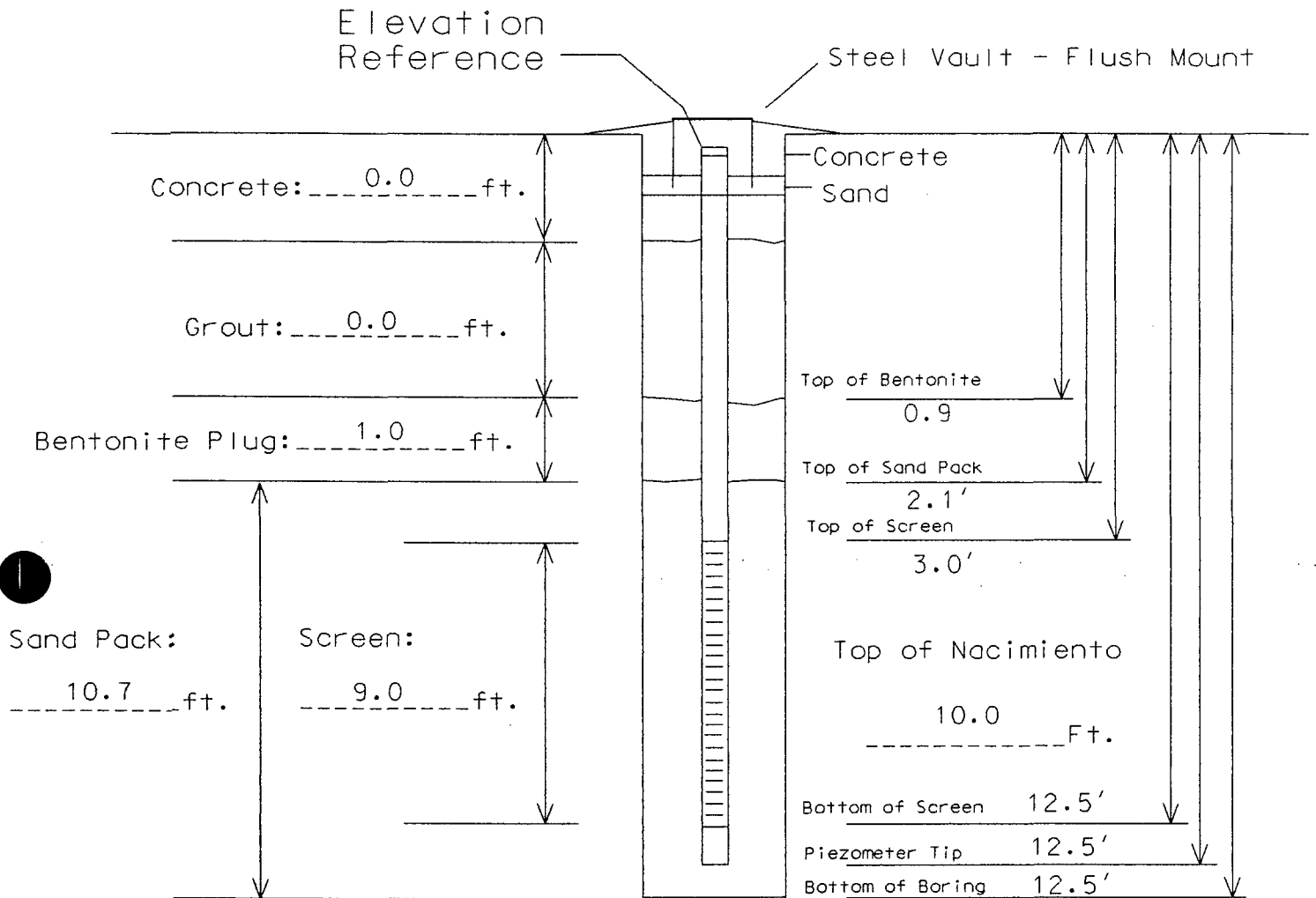
Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. CW 5+50



Boring Diameter: 13 "

Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 6" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 6" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Other: _____

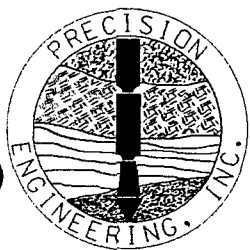
Bottom Cap Used? Yes

Site Easting: TBS

Project #: 05-038

Project Name: Bloomfield Refinery

Elevation: TBS



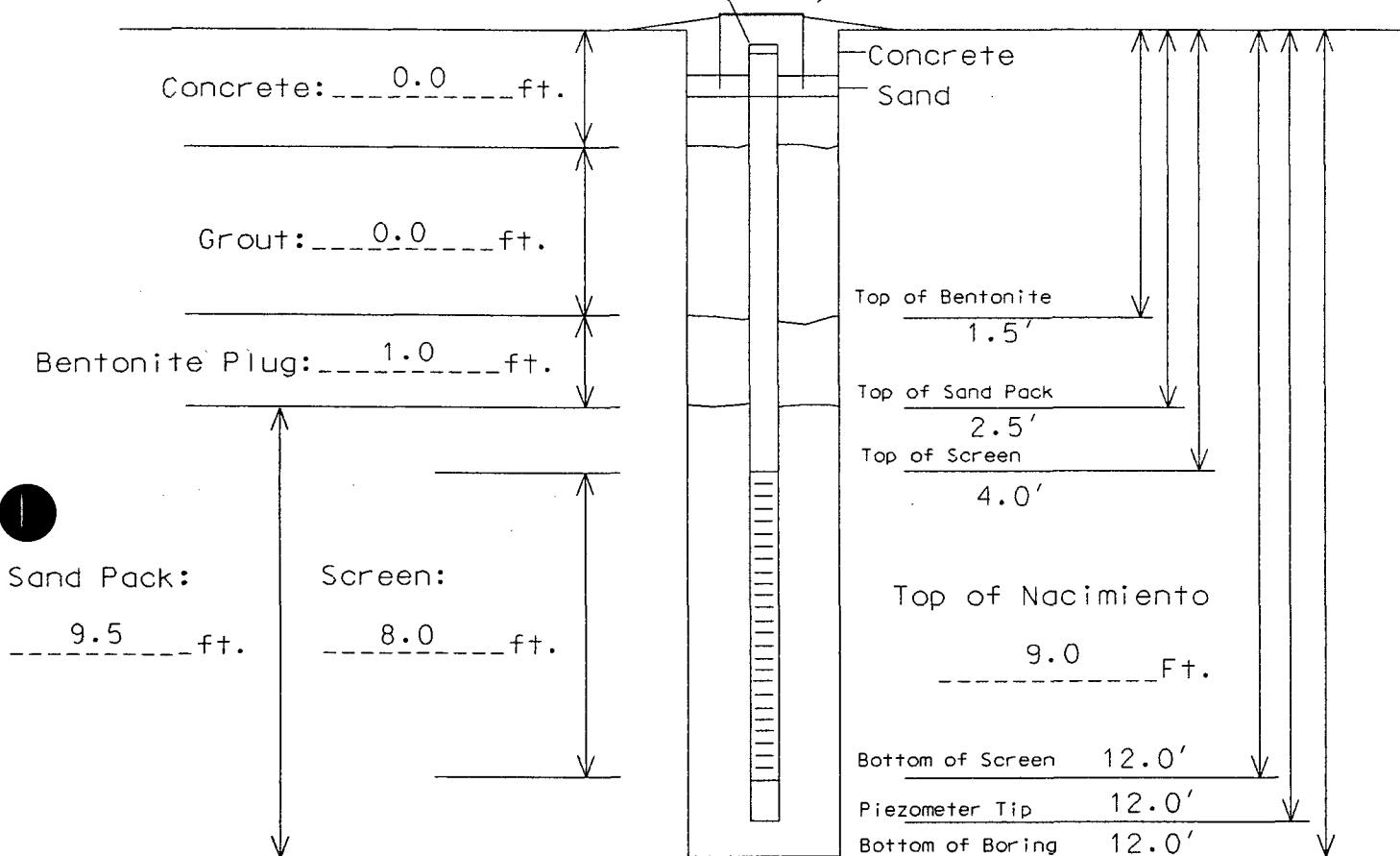
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Installation Diagram

Monitoring Well No. CW 6+70

Elevation
Reference

Steel Vault - Flush Mount



Boring Diameter: 13 "

Sand Type: 10-20 Silica

Bollards. Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 6" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 6" PVC Sch. 40

Water: Potable

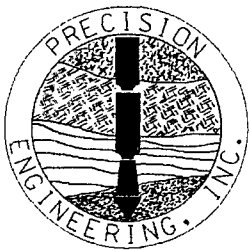
Locking Expandable Casing Plug? Yes Site Northing: TBS

Other: _____

Bottom Cap Used? Yes

Site Easting: TBS

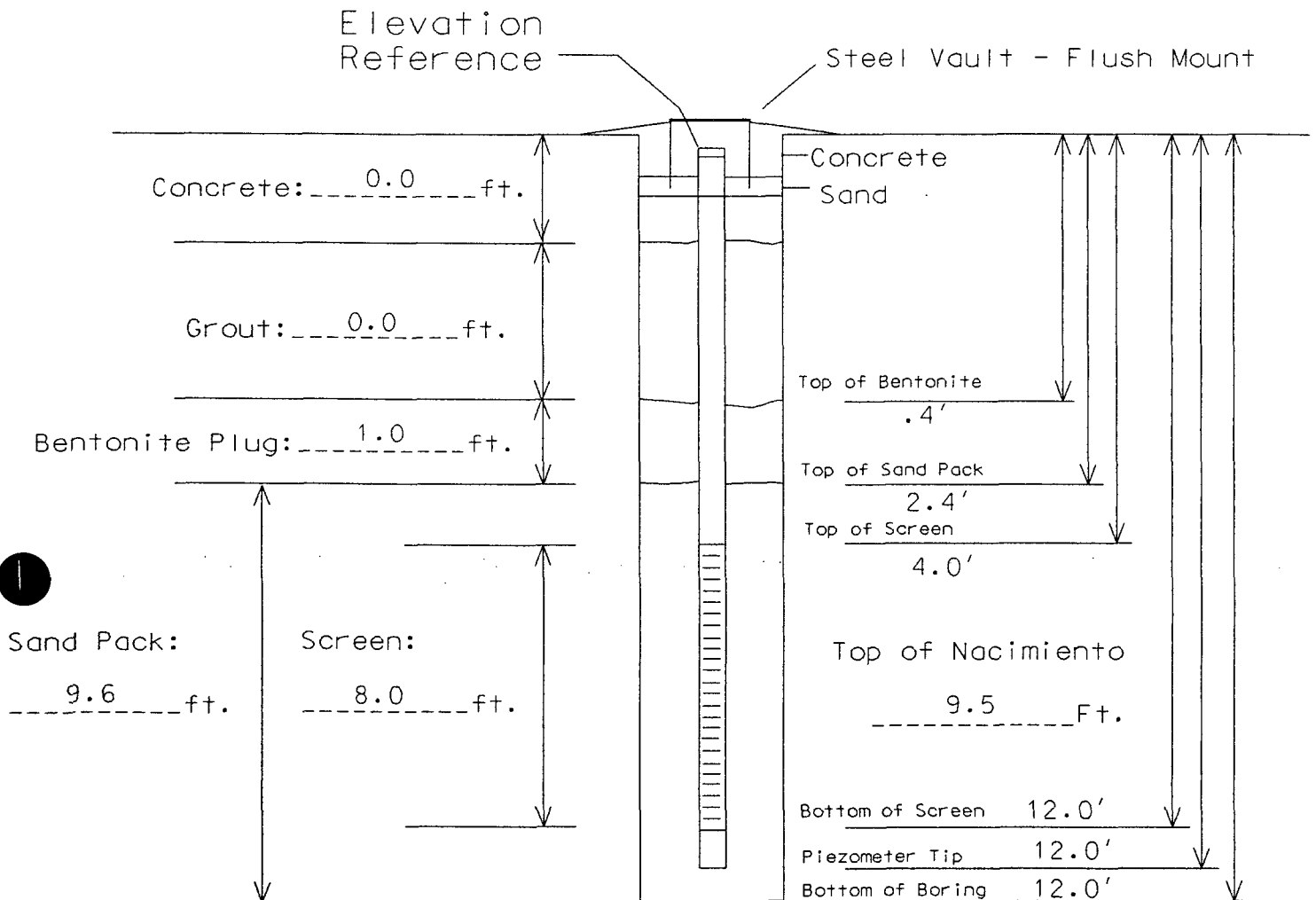
Project #: 05-038 Project Name: Bloomfield Refinery Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. CW 8+10



Boring Diameter: 13"

Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 6" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 6" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Other: _____

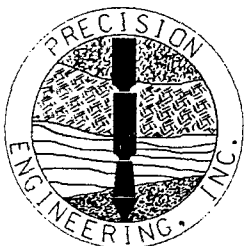
Bottom Cap Used? Yes

Site Easting: TBS

Project #: 05-038

Project Name: Bloomfield Refinery

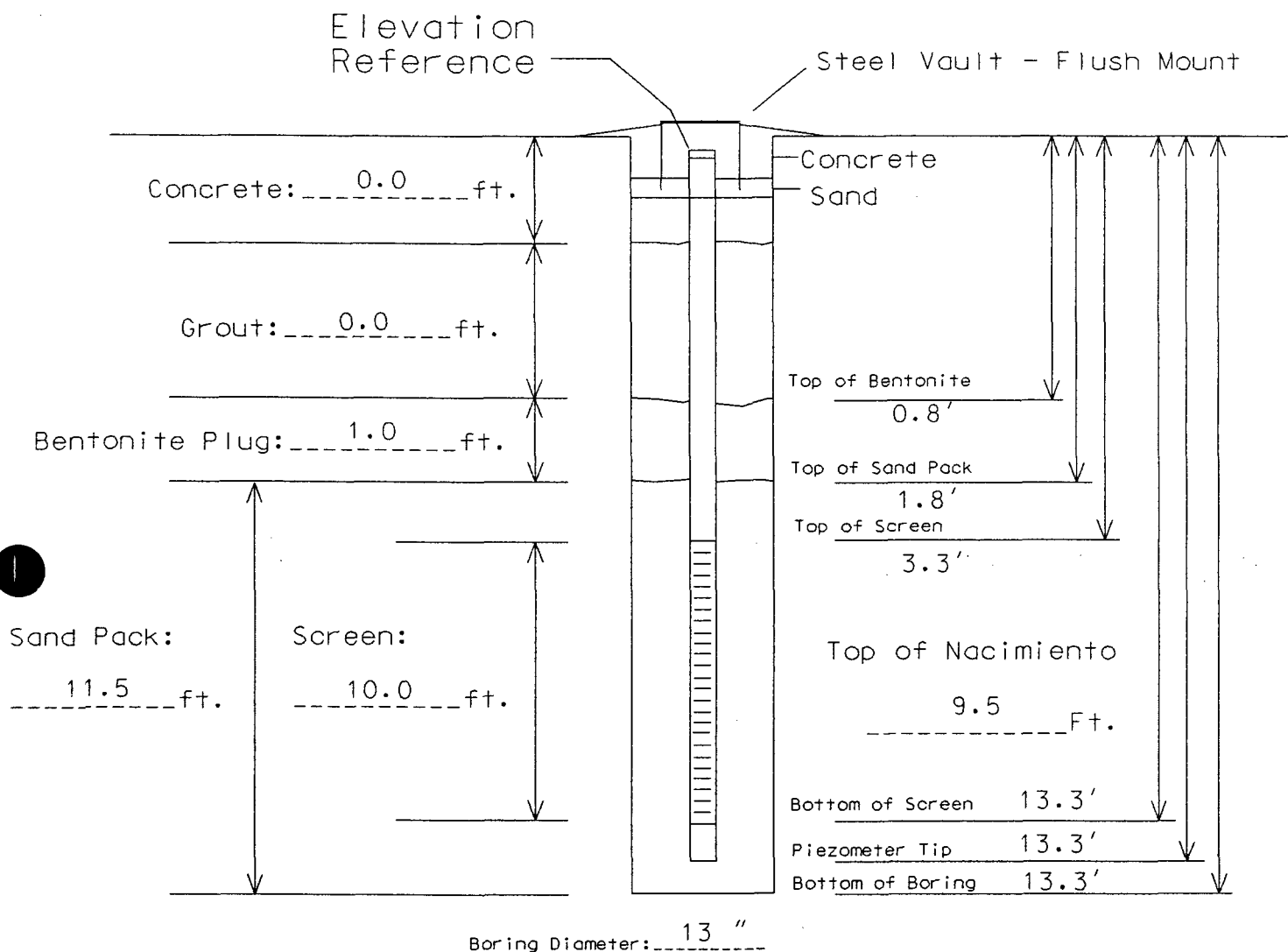
Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. CW 8+45



Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 6" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 6" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Other: _____

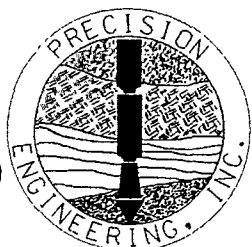
Bottom Cap Used? Yes

Site Easting: TBS

Project #: 05-038

Project Name: Bloomfield Refinery

Elevation: TBS



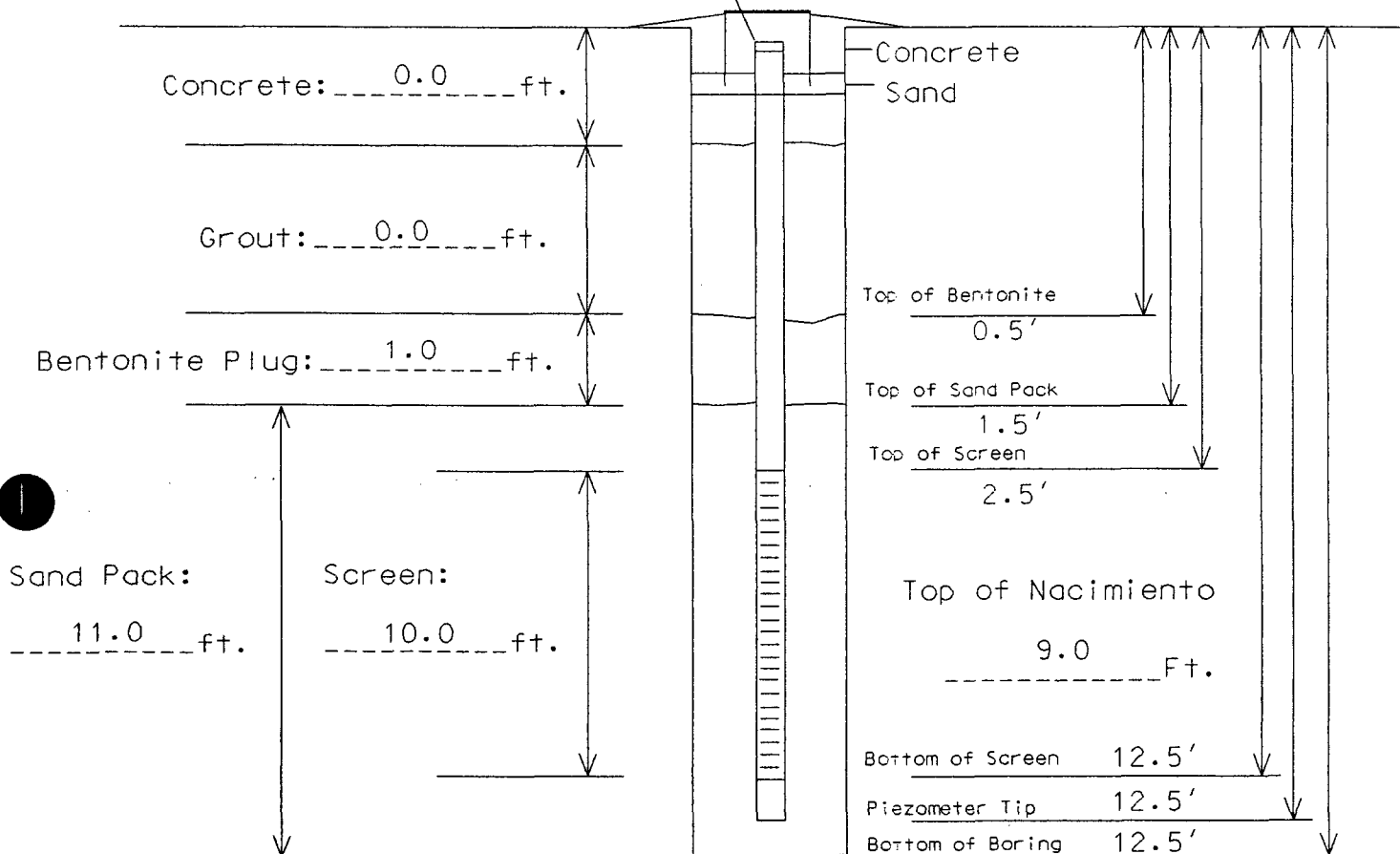
505-523-7674

Installation Diagram

Monitoring Well No. CW 11+15

Elevation
Reference

Steel Vault - Flush Mount



Boring Diameter: 13 "

Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 6" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 6" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Other: _____

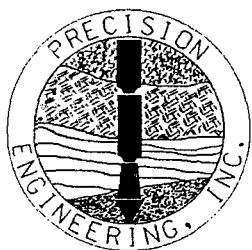
Bottom Cap Used? Yes

Site Easting: TBS

Project #: 05-038

Project Name: Bloomfield Refinery

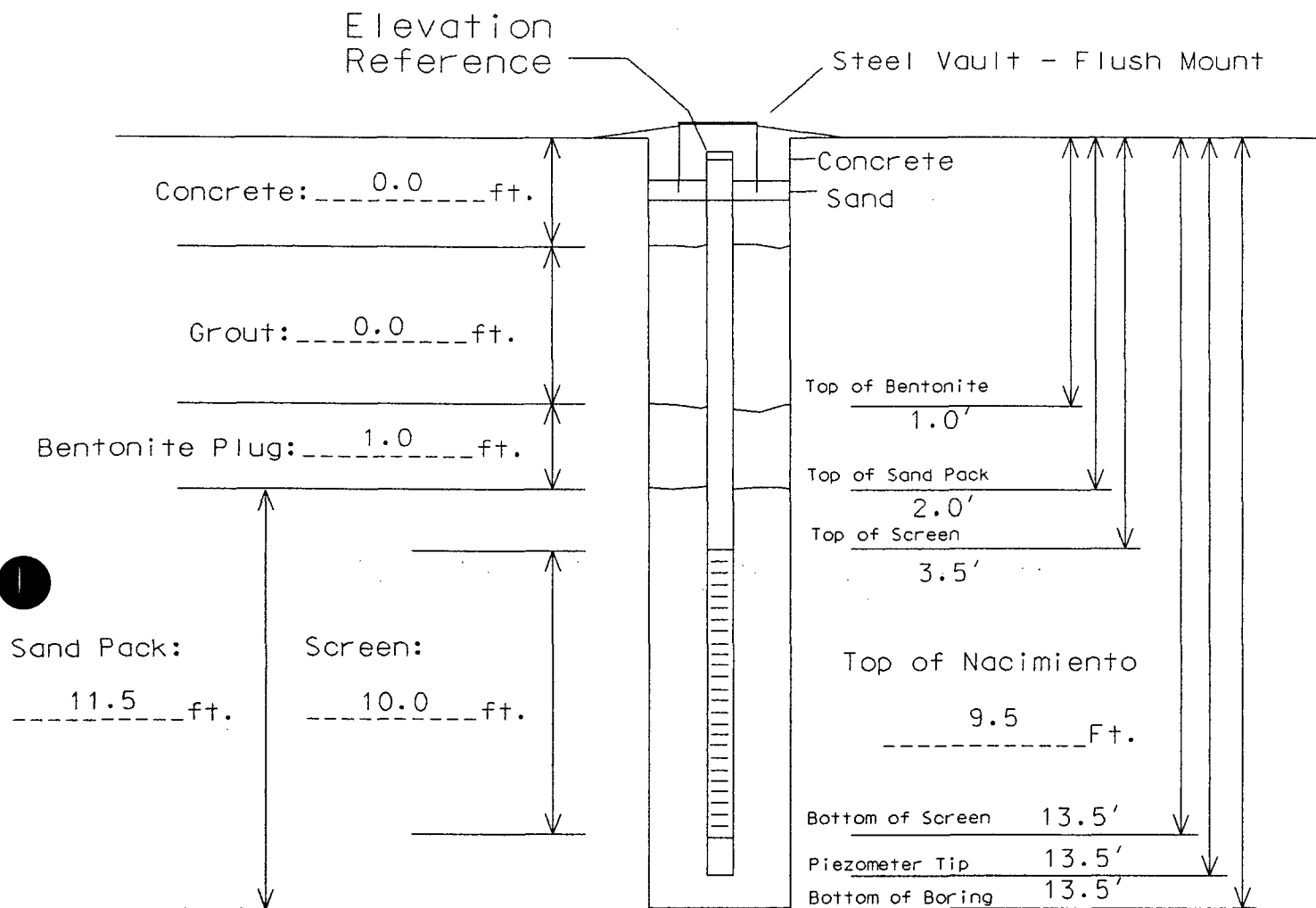
Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. CW 14+10



Boring Diameter: 13 "

Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 6" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 6" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Other:

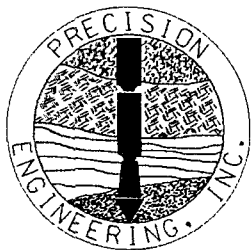
Bottom Cap Used? Yes

Site Easting: TBS

Project #: 05-038

Project Name: Bloomfield Refinery

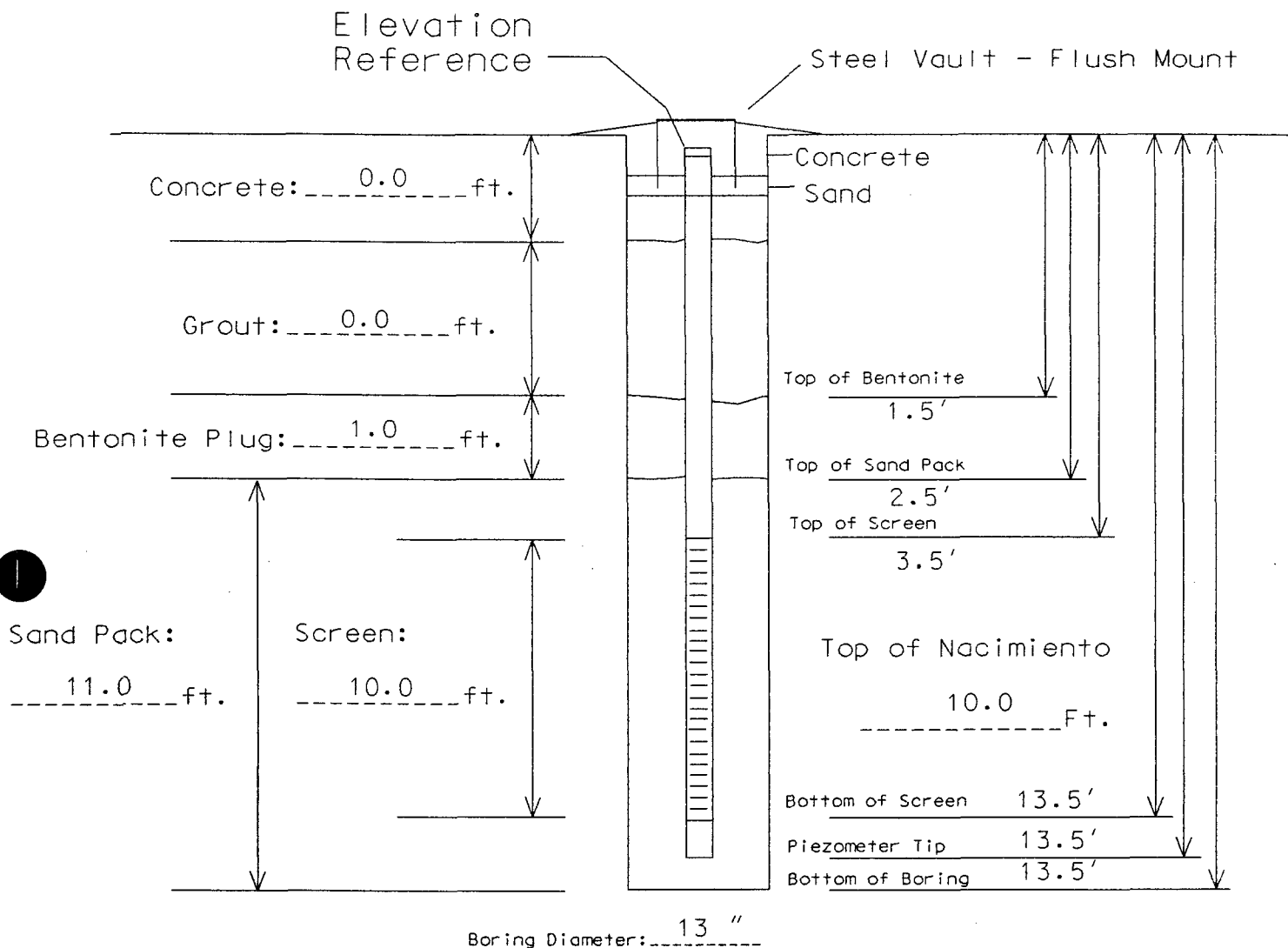
Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. CW 16+60



Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 6" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 6" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Other: _____

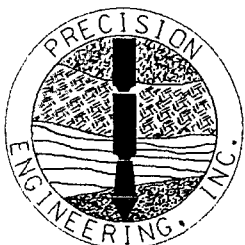
Bottom Cap Used? Yes

Site Easting: TBS

Project #: 05-038

Project Name: Bloomfield Refinery

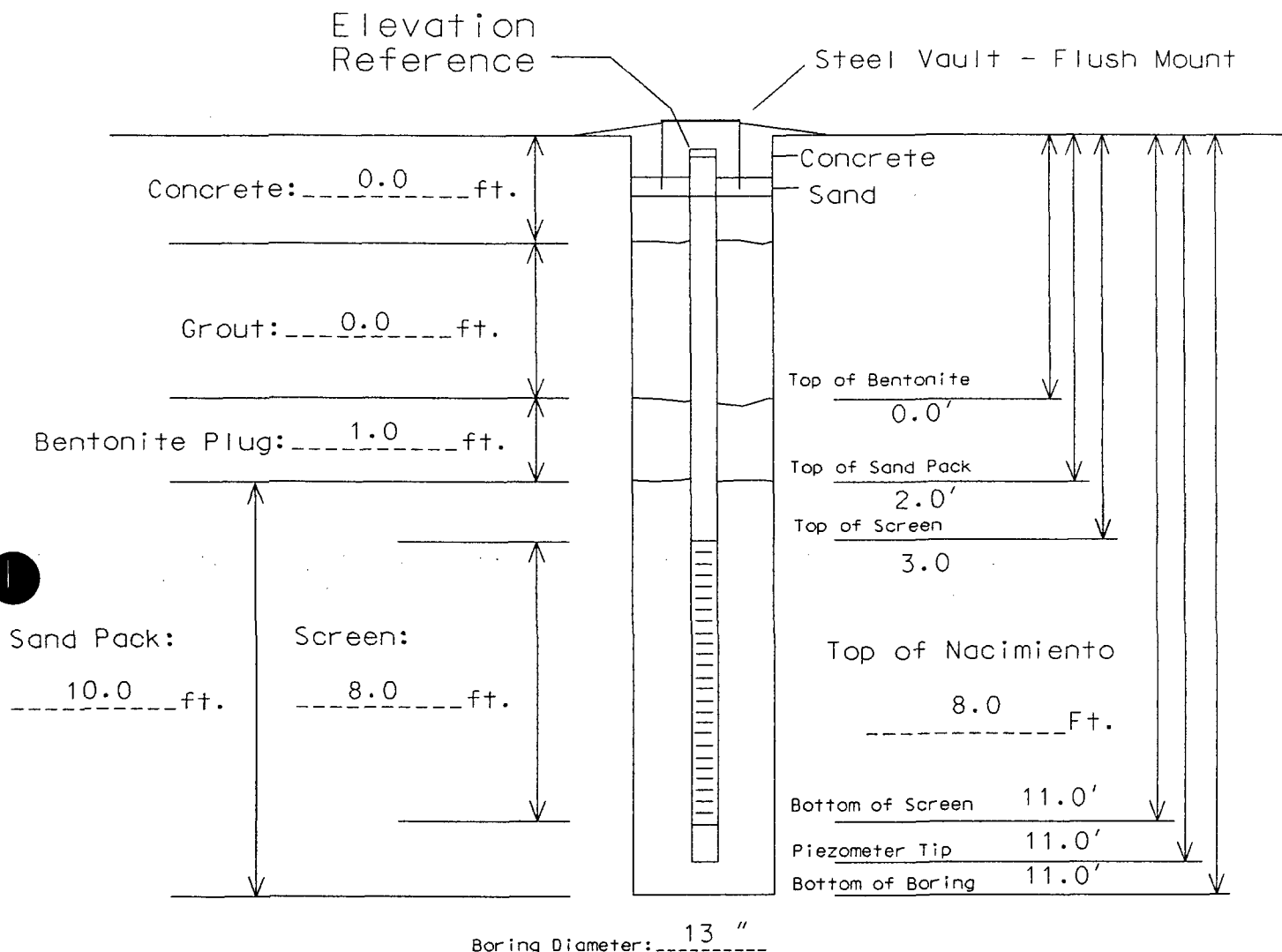
Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. CW 19+50



Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 6" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 6" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Other: _____

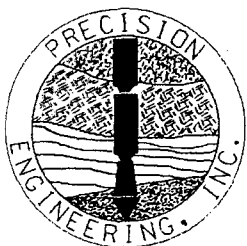
Bottom Cap Used? Yes

Site Easting: TBS

Project #: 05-038

Project Name: Bloomfield Refinery

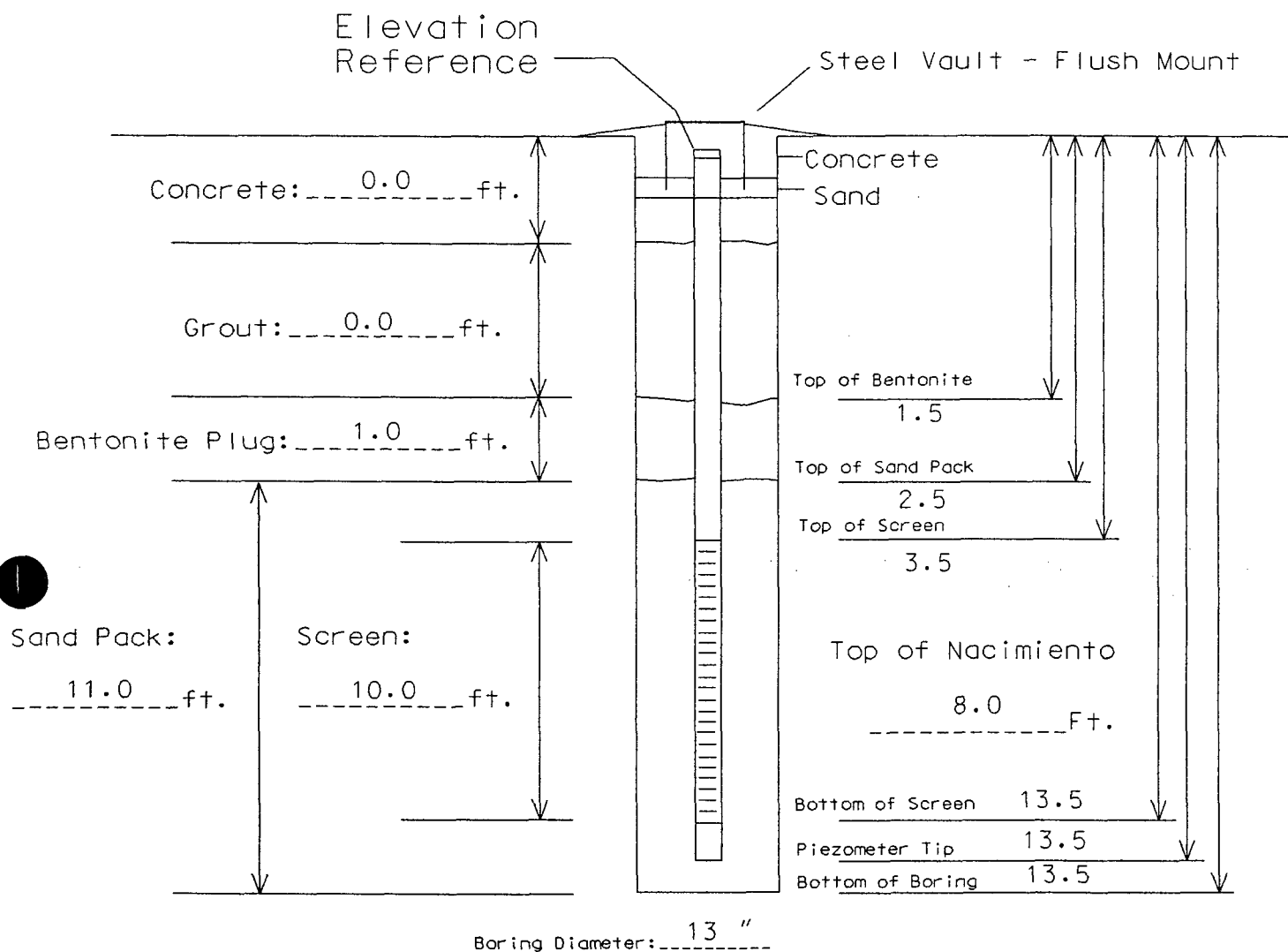
Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. CW 22+00



Sand Type: 10-20 Silica

Bollards. Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 6" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 6" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes Site Northing: TBS

Bottom Cap Used? Yes

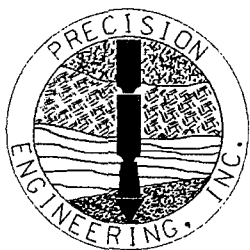
Site Easting: TBS

Other: _____

Project #: 05-038

Project Name: Bloomfield Refinery

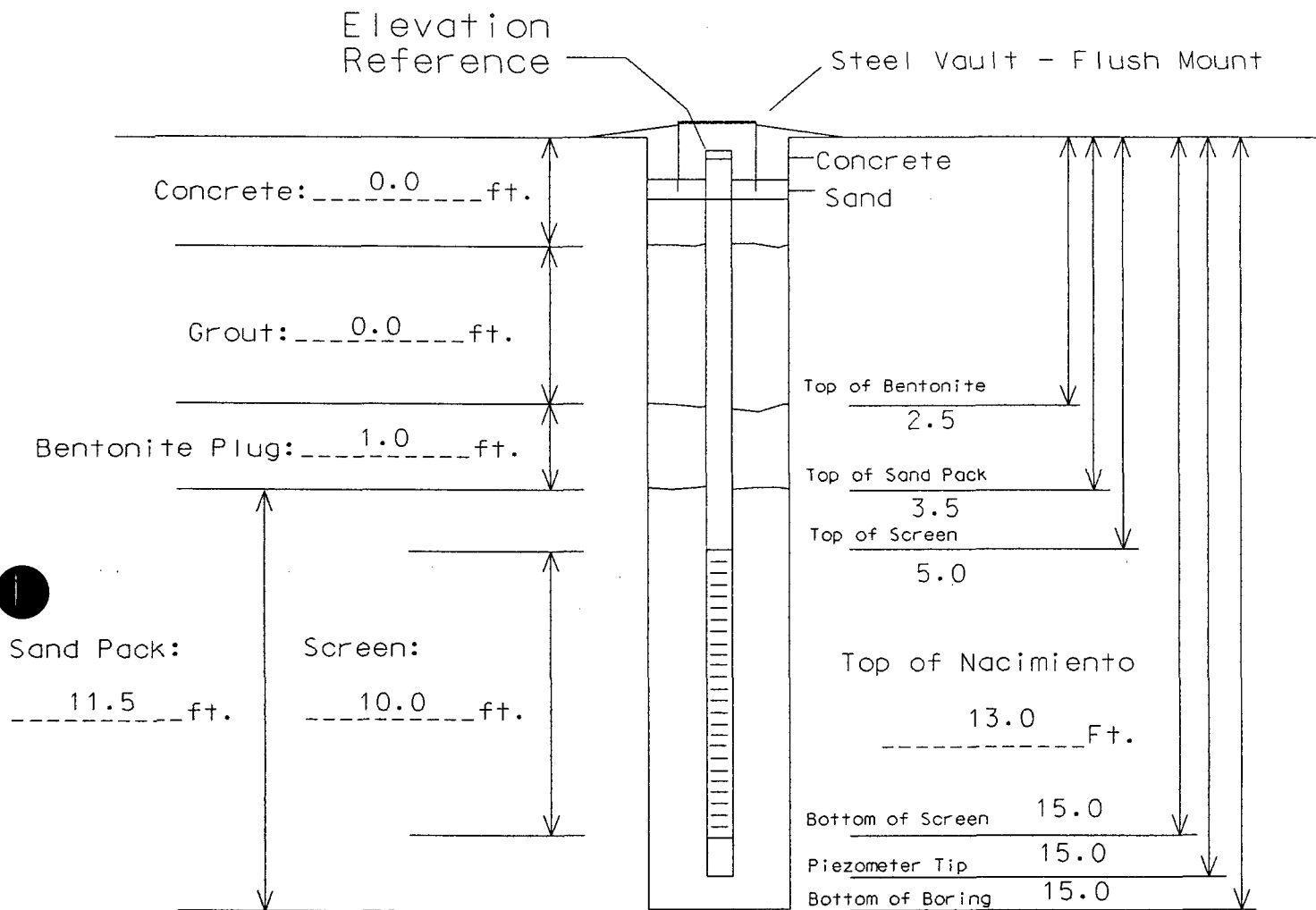
Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. CW 23+10



Boring Diameter: 13 "

Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 6" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 6" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes Site Northing: TBS

Bottom Cap Used? Yes

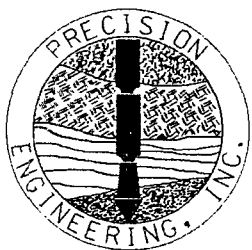
Site Easting: TBS

Other: _____

Project #: 05-038

Project Name: Bloomfield Refinery

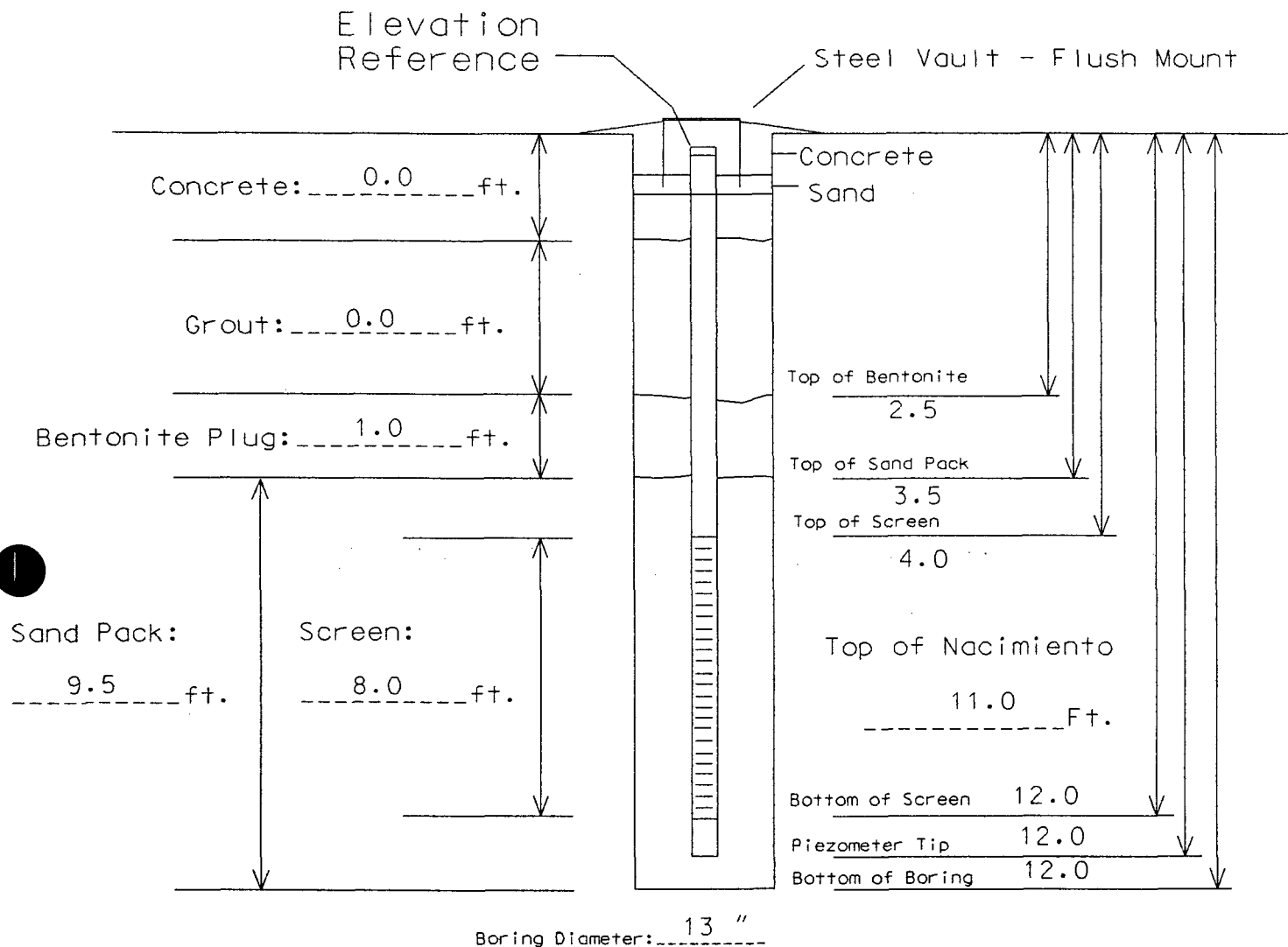
Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. CW 23+90



Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 6" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 6" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Other: _____

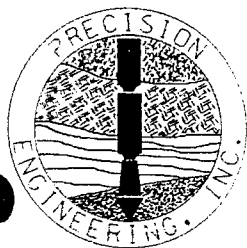
Bottom Cap Used? Yes

Site Easting: TBS

Project #: 05-038

Project Name: Bloomfield Refinery

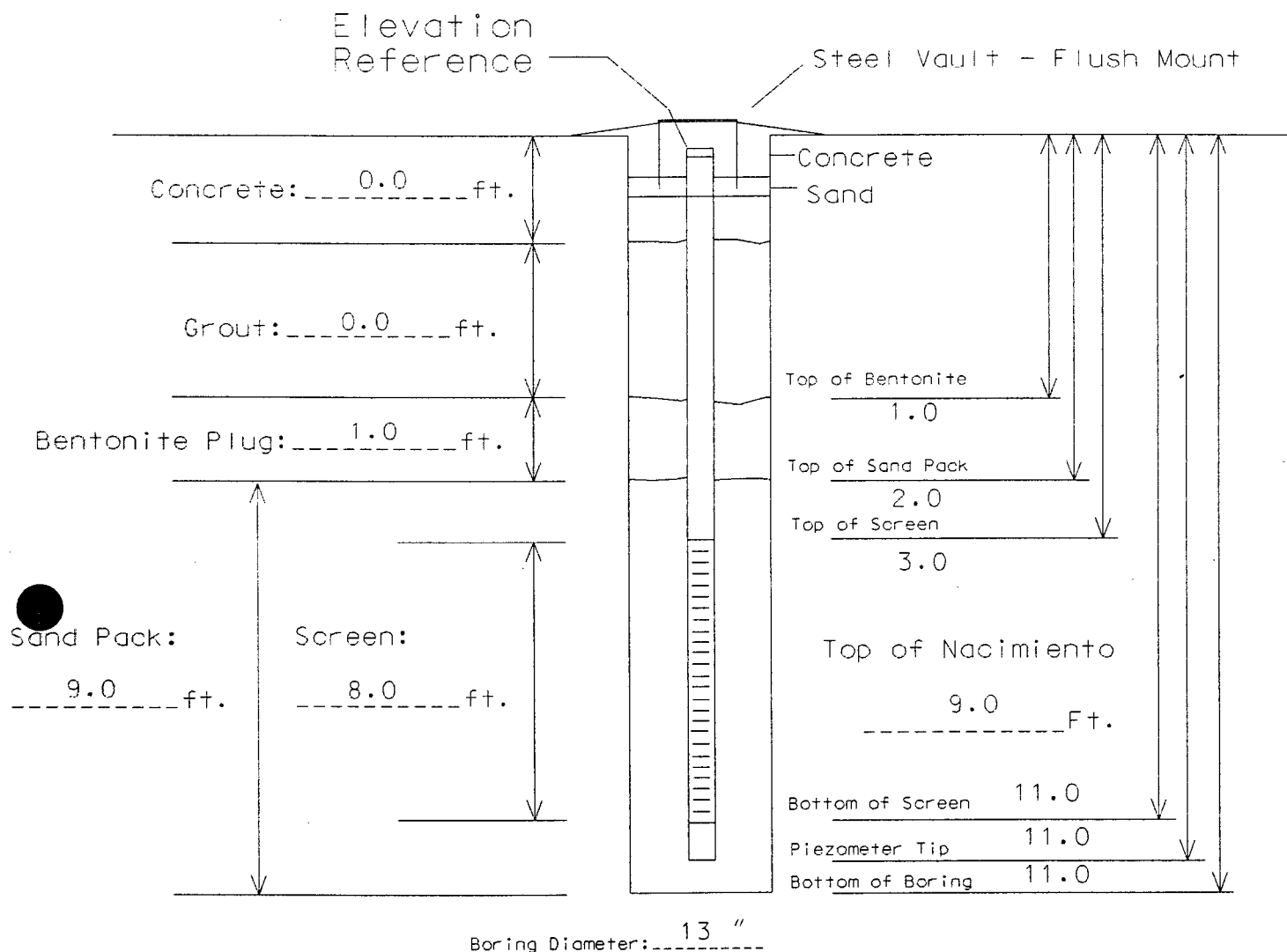
Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. CW 25+95



Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 6" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 6" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes Site Northing: TBS

Bottom Cap Used? Yes

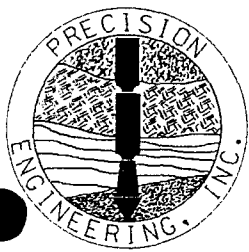
Site Easting: TBS

Other: _____

Project #: 05-038

Project Name: Bloomfield Refinery

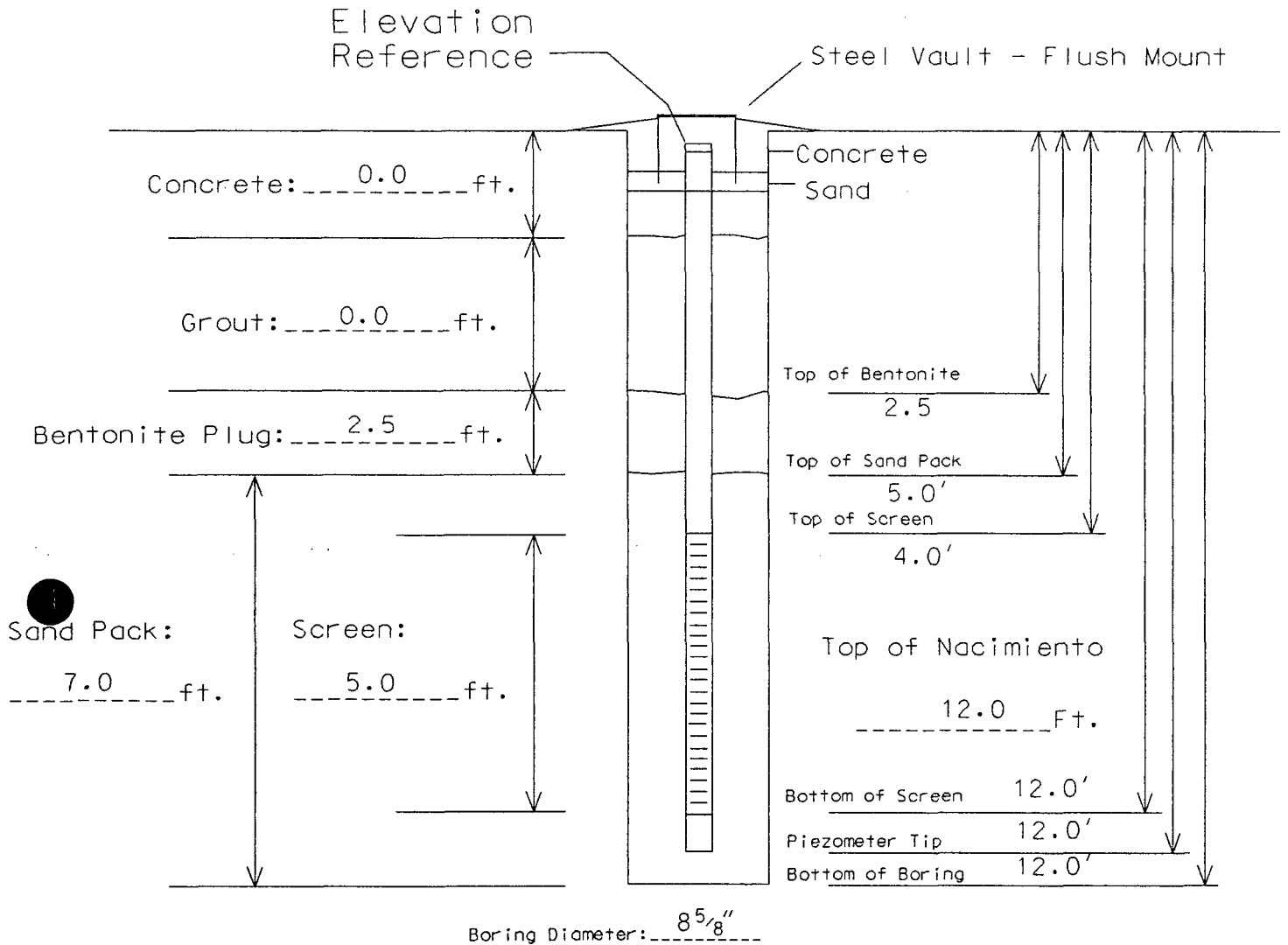
Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. DW 0+60



Sand Type: 10-20 Silica

Bollards. Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 2" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Bottom Cap Used? Yes

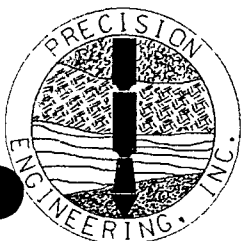
Site Easting: TBS

Other: _____

Project #: 05-038

Project Name: Bloomfield Refinery

Elevation: TBS

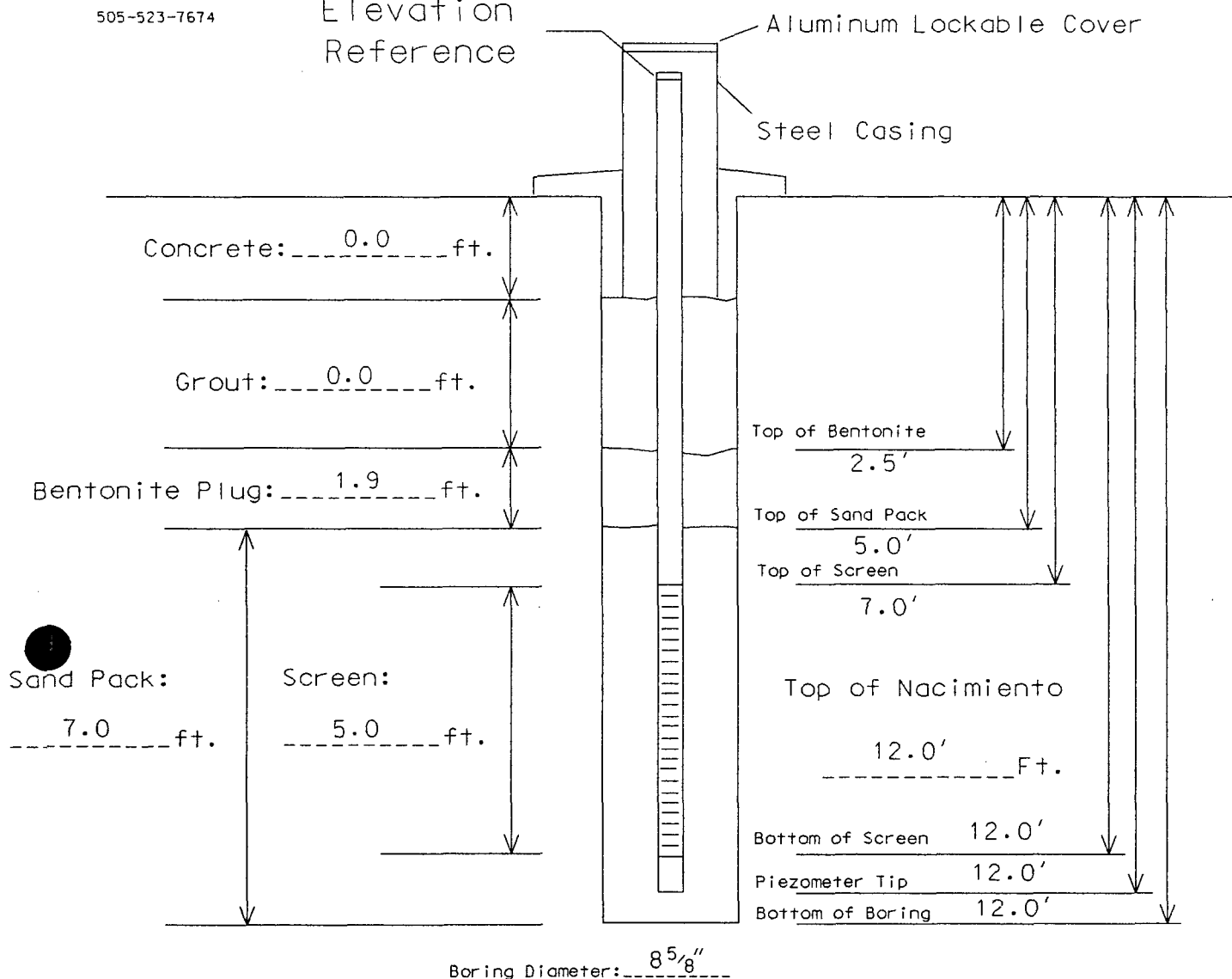


505-523-7674

Installation Diagram

Monitoring Well No. OW 1+50

Elevation
Reference



Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40, 0.010" Slotted

Cement/Grout: NA

Riser Type/Size: 2" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Bottom Cap Used? Yes

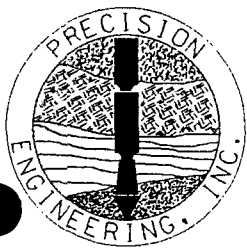
Site Easting: TBS

Other: _____

Project #: 05-038

Project Name: Bloomfield Refinery

Elevation: TBS

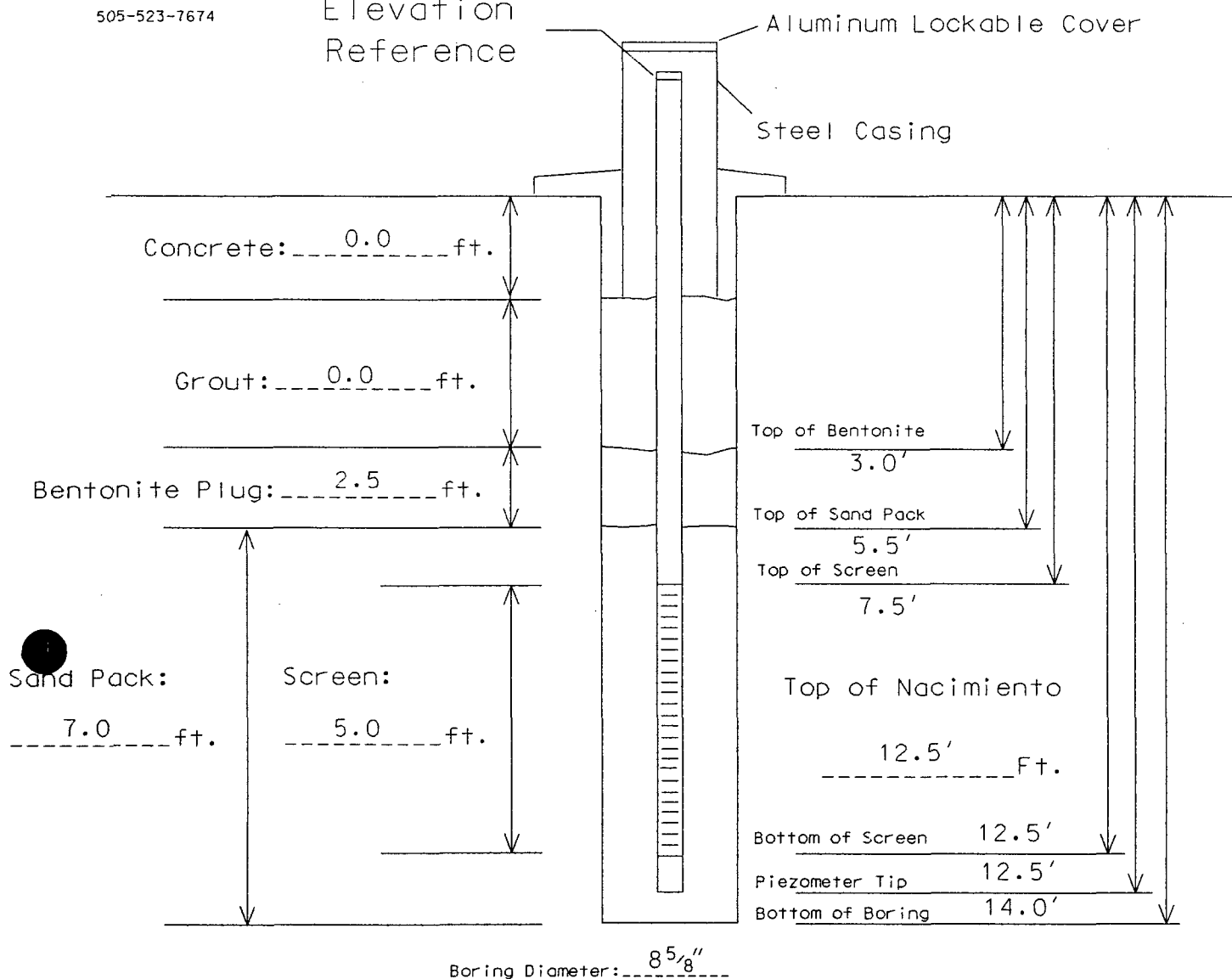


505-523-7674

Installation Diagram

Monitoring Well No. OW 3+85

Elevation
Reference



Sand Type: 10-20 Silica

Bentonite: 3/8" Chips

Cement/Grout: NA

Water: Potable

Other: _____

Bollards, Type/Size: NA

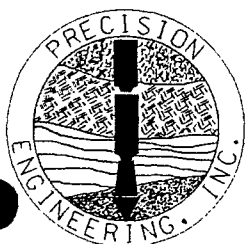
Screen Type/Size: 2" PVC Sch. 40, 0.010" Slotted

Riser Type/Size: 2" PVC Sch. 40

Locking Expandable Casing Plug? Yes Site Northing: TBS

Bottom Cap Used? Yes Site Easting: TBS

Project #: 05-038 Project Name: Bloomfield Refinery Elevation: TBS

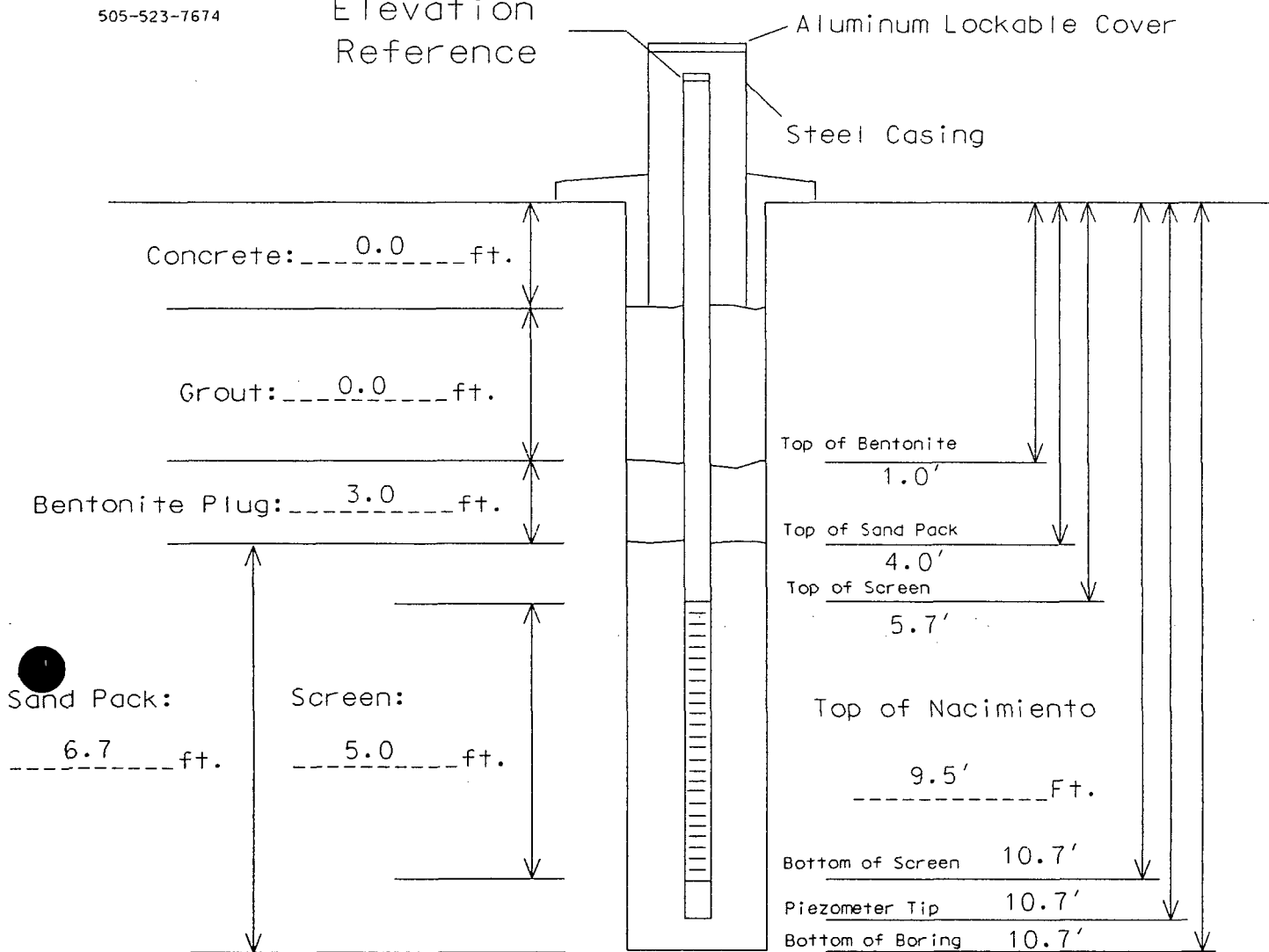


505-523-7674

Installation Diagram

Monitoring Well No. OW 5+50

Elevation
Reference



Boring Diameter: 8 5/8"

Sand Type: 10-20 Silica

Bollards. Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40, 0.010" Slotted

Cement/Grout: NA

Riser Type/Size: 2" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Bottom Cap Used? Yes

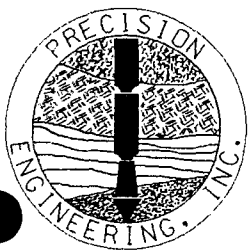
Site Easting: TBS

Other: _____

Project #: 05-038

Project Name: Bloomfield Refinery

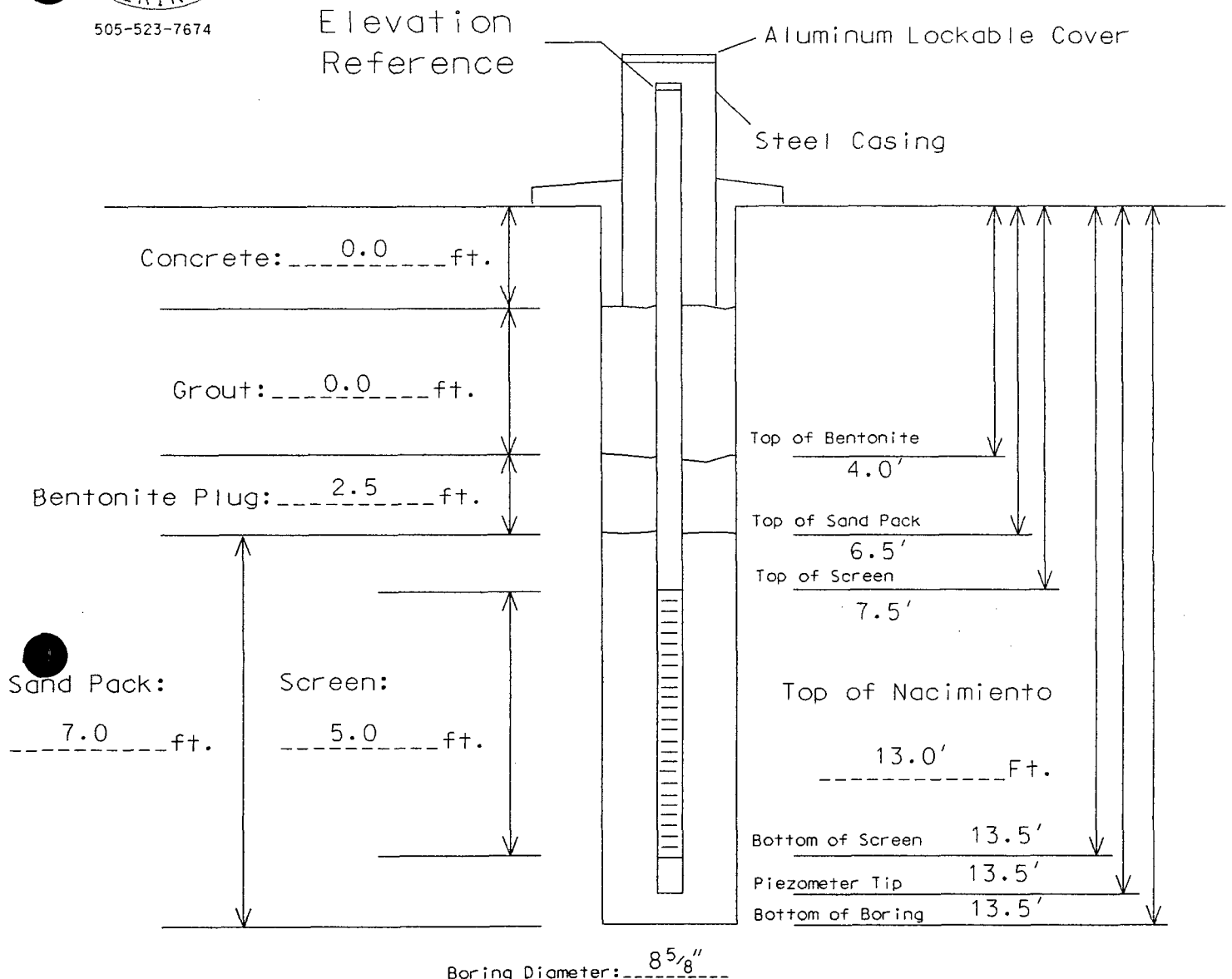
Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. DW 6+70



Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40, 0.010" Slotted

Cement/Grout: NA

Riser Type/Size: 2" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes Site Northing: TBS

Bottom Cap Used? Yes

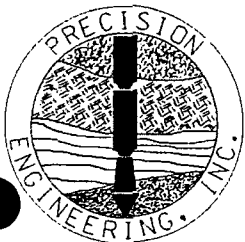
Site Easting: TBS

Other: _____

Project #: 05-038

Project Name: Bloomfield Refinery

Elevation: TBS

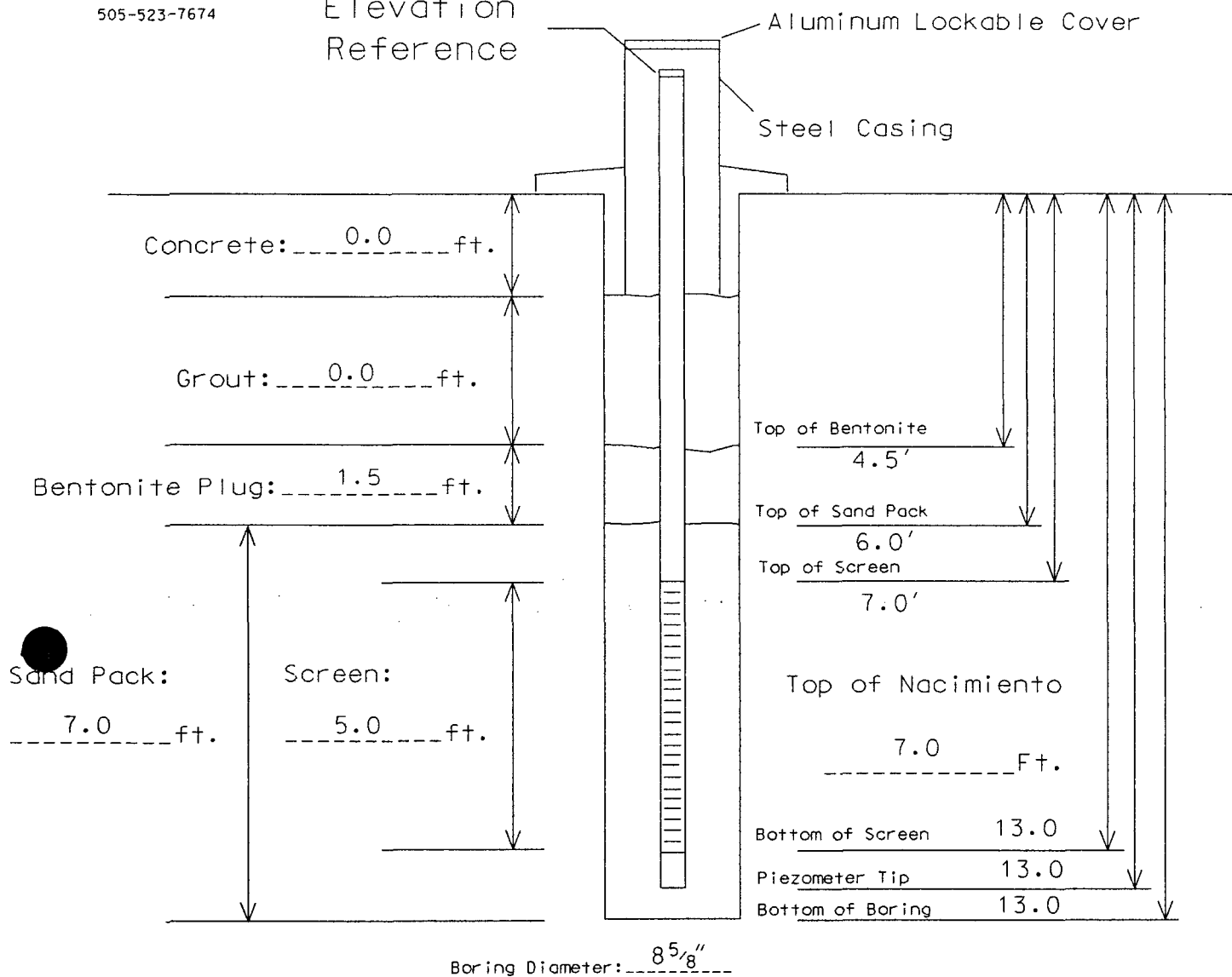


505-523-7674

Installation Diagram

Monitoring Well No. DW 8+10

Elevation
Reference



Boring Diameter: 8 5/8"

Sand Type: 10-20 Silica

Bollards. Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40. 0.010" Slotted

Cement/Grout: NA

Riser Type/Size: 2" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Bottom Cap Used? Yes

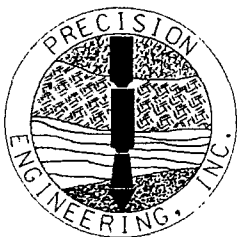
Site Easting: TBS

Other: _____

Project #: 05-038

Project Name: Bloomfield Refinery

Elevation: TBS

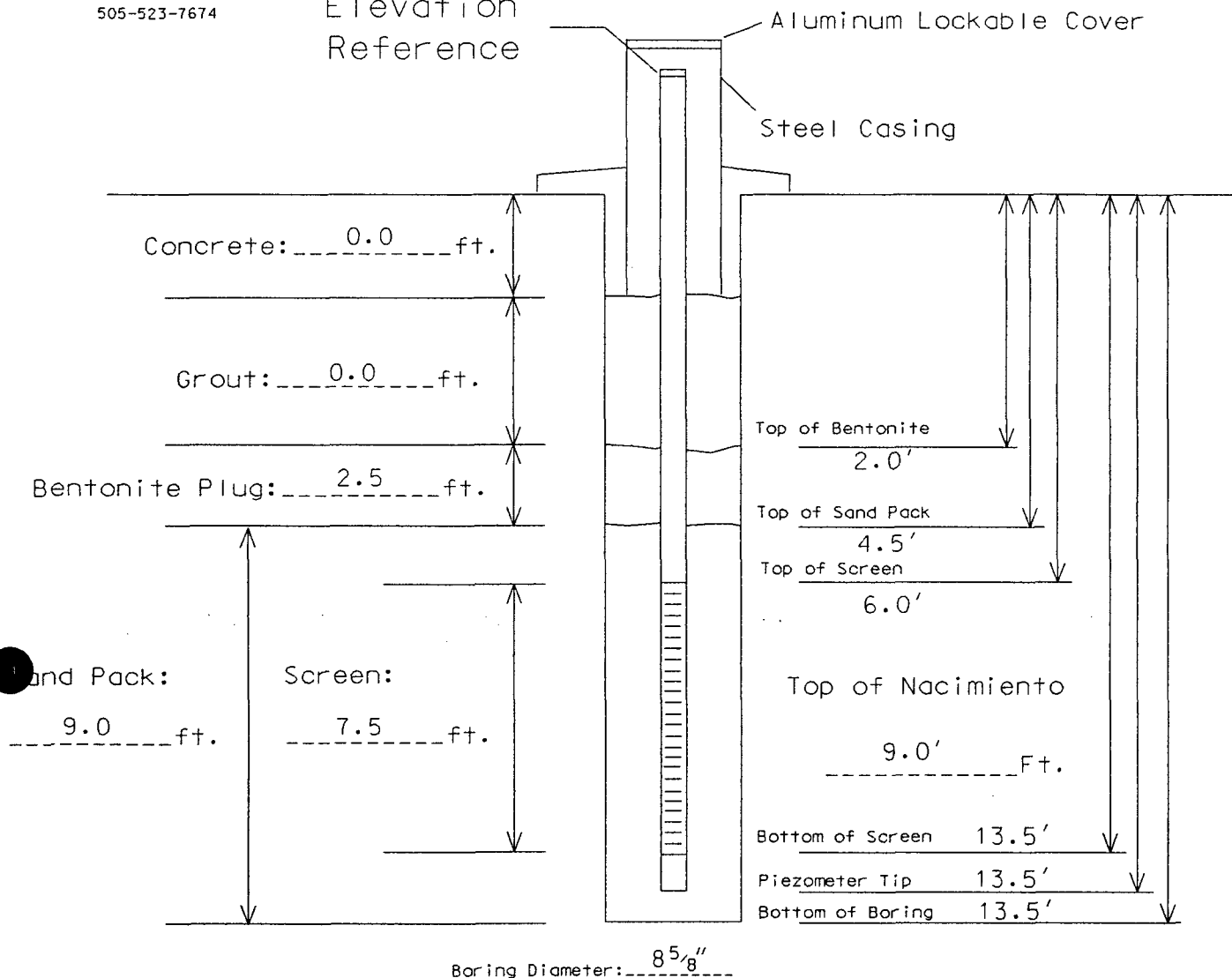


505-523-7674

Installation Diagram

Monitoring Well No. DW 11+15

Elevation
Reference



Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40, 0.010" Slotted

Cement/Grout: NA

Riser Type/Size: 2" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Other: _____

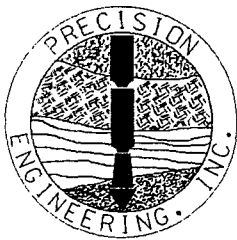
Bottom Cap Used? Yes

Site Easting: TBS

Project #: 05-038

Project Name: Bloomfield Refinery

Elevation: TBS

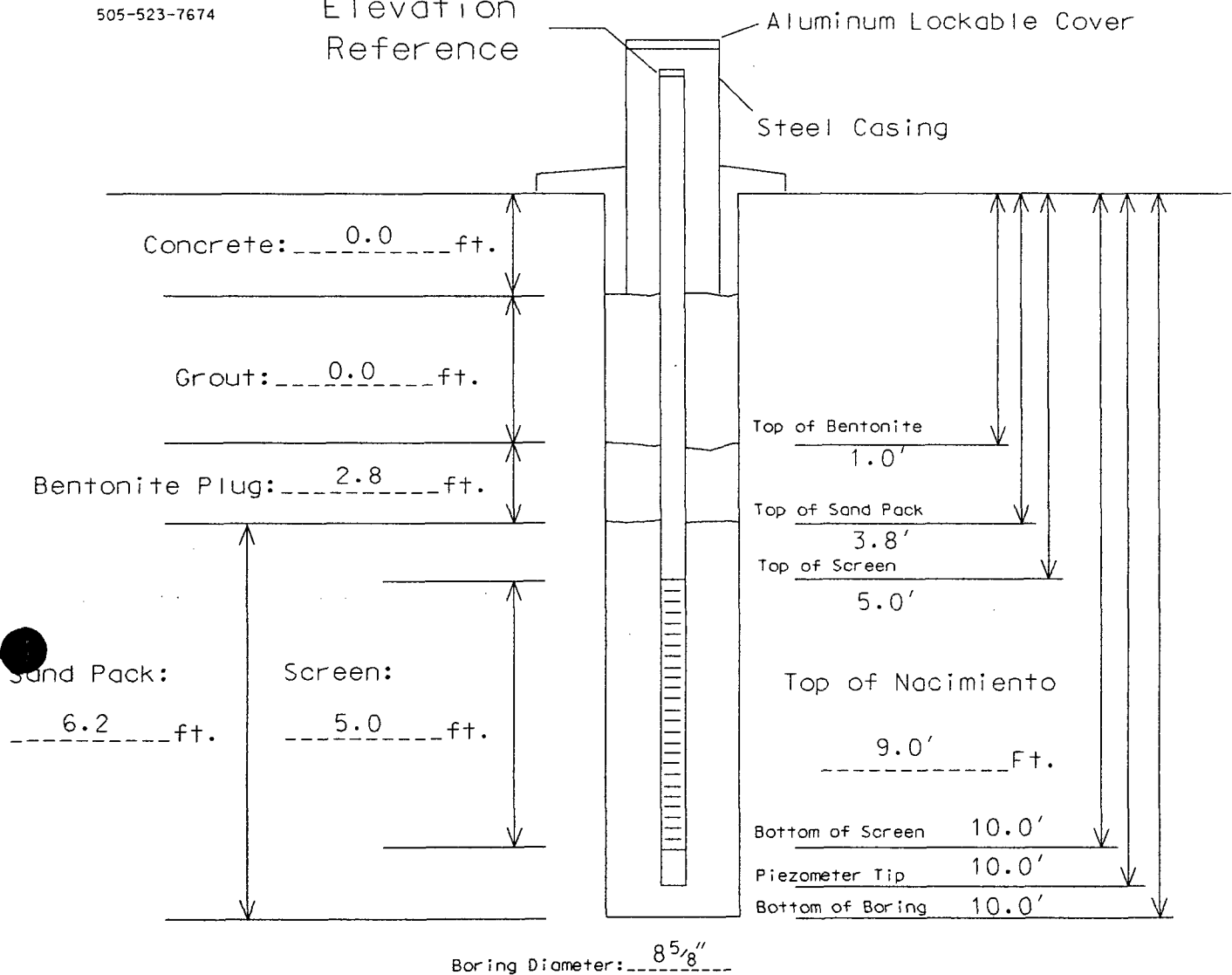


505-523-7674

Installation Diagram

Monitoring Well No. OW 14+10

Elevation
Reference



Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40, 0.010" Slotted

Cement/Grout: NA

Riser Type/Size: 2" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Bottom Cap Used? Yes

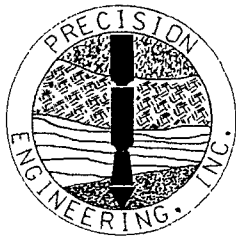
Site Easting: TBS

Other: _____

Project #: 05-038

Project Name: Bloomfield Refinery

Elevation: TBS

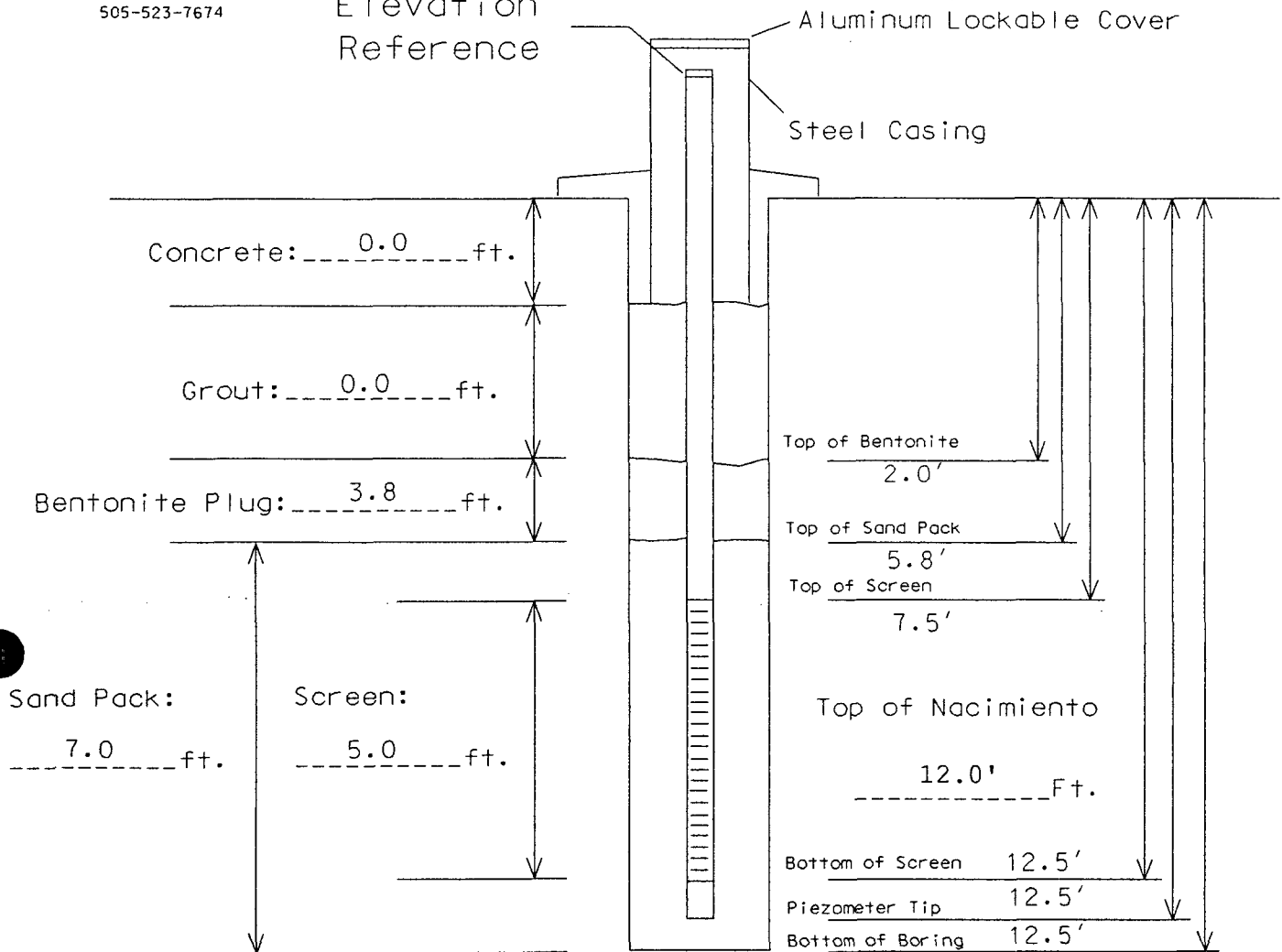


505-523-7674

Installation Diagram

Monitoring Well No. OW 16+60

Elevation
Reference



Boring Diameter: 8 5/8"

Sand Type: 10-20 Silica

Bollards. Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40, 0.010" Slotted

Cement/Grout: NA

Riser Type/Size: 2" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Bottom Cap Used? Yes

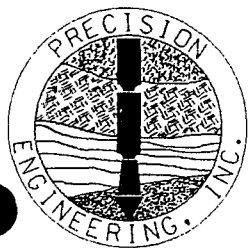
Site Easting: TBS

Other: _____

Project #: 05-038

Project Name: Bloomfield Refinery

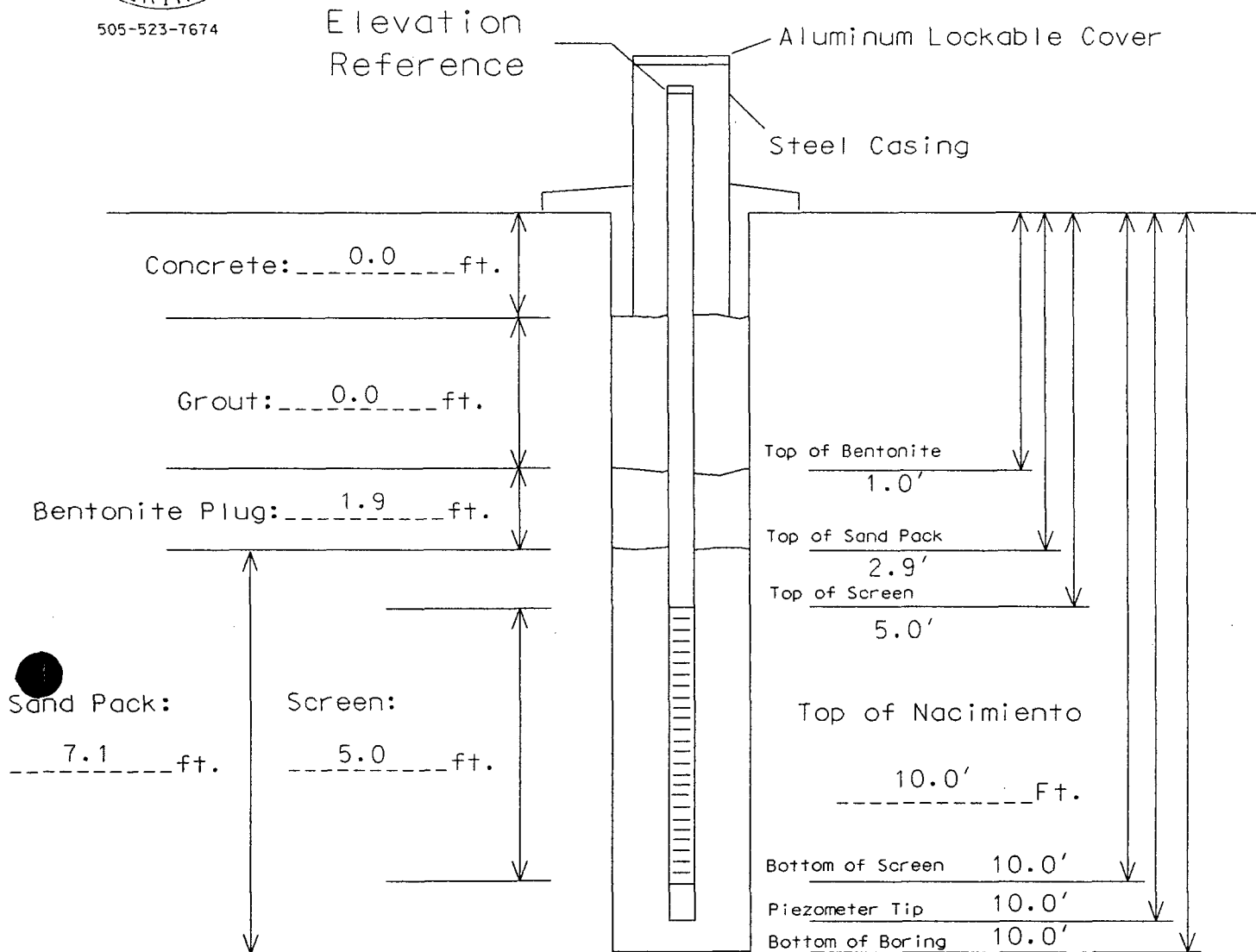
Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. OW 19+50



Boring Diameter: 8⁵/₈"

Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40, 0.010" Slotted

Cement/Grout: NA

Riser Type/Size: 2" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes Site Northing: TBS

Bottom Cap Used? Yes

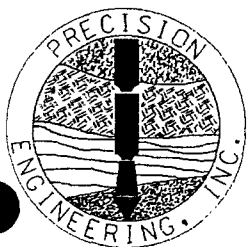
Site Easting: TBS

Other: _____

Project #: 05-038

Project Name: Bloomfield Refinery

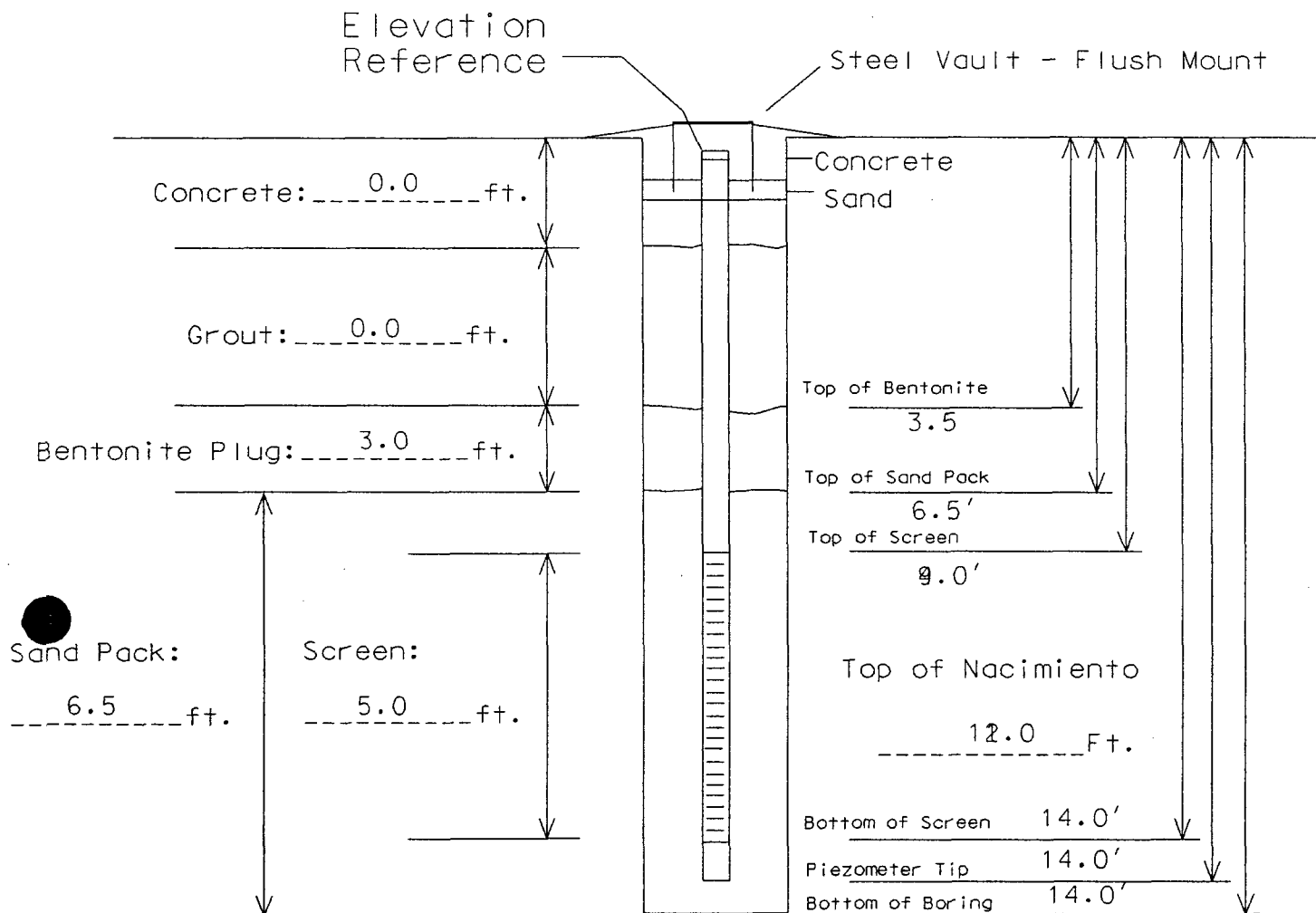
Elevation: TBS



505-523-7674

Installation Diagram

Monitoring Well No. OW 22+00



Boring Diameter: 8⁵/₈"

Sand Type: 10-20 Silica

Bollards. Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40, 0.40" Slotted

Cement/Grout: NA

Riser Type/Size: 2" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Bottom Cap Used? Yes

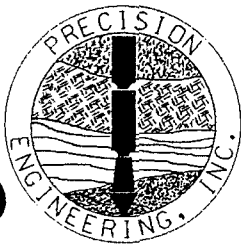
Site Easting: TBS

Other: _____

Project #: 05-038

Project Name: Bloomfield Refinery

Elevation: TBS

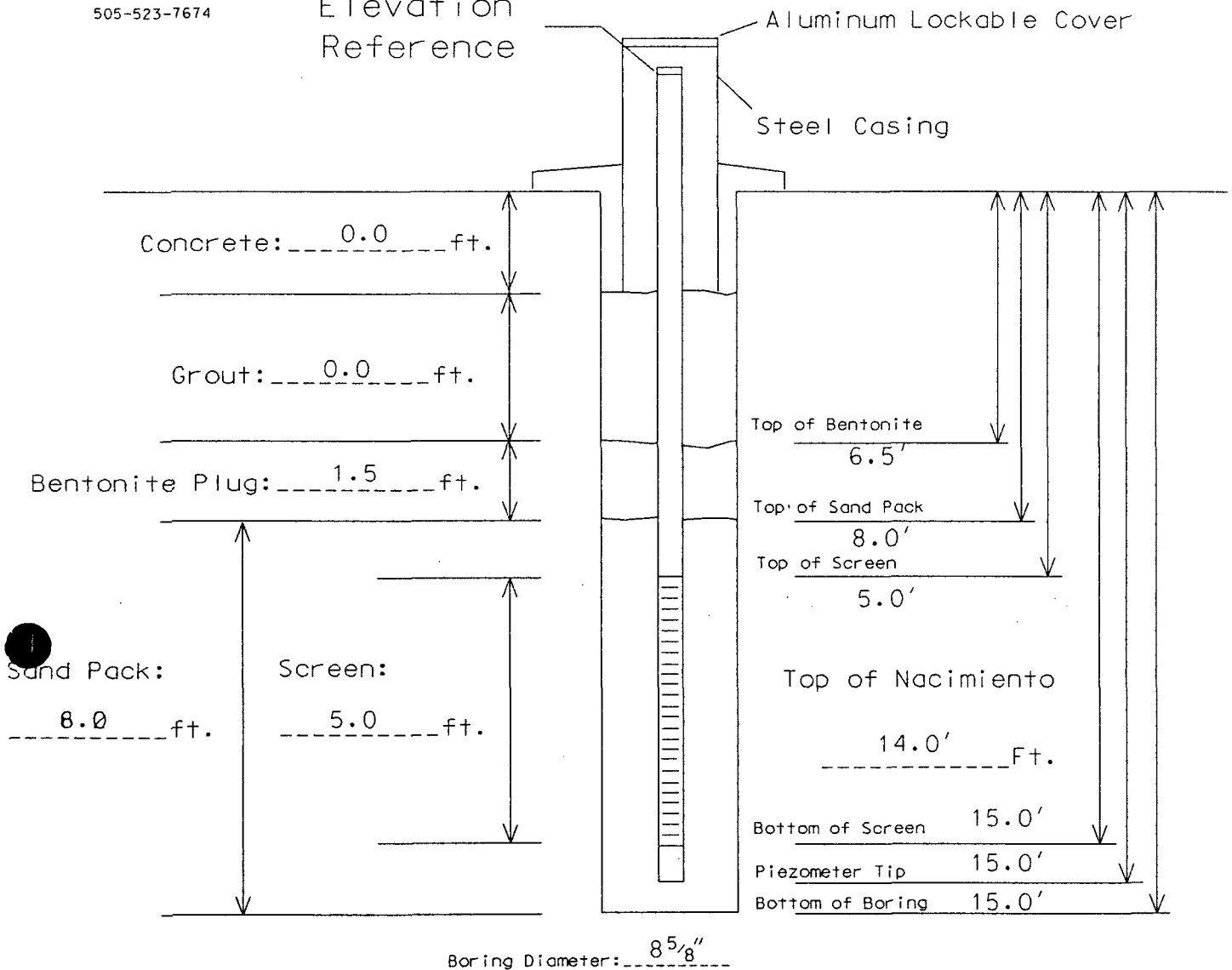


505-523-7674

Installation Diagram

Monitoring Well No. OW 23+10

Elevation
Reference



Boring Diameter: 8 5/8"

Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40, 0.010" Slotted

Cement/Grout: NA

Riser Type/Size: 2" PVC Sch. 40

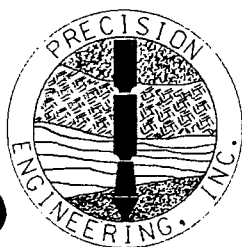
Water: Potable

Locking Expandable Casing Plug? Yes Site Northing: TBS

Other: _____

Bottom Cap Used? Yes Site Easting: TBS

Project #: 05-038 Project Name: Bloomfield Refinery Elevation: TBS



505-523-7674

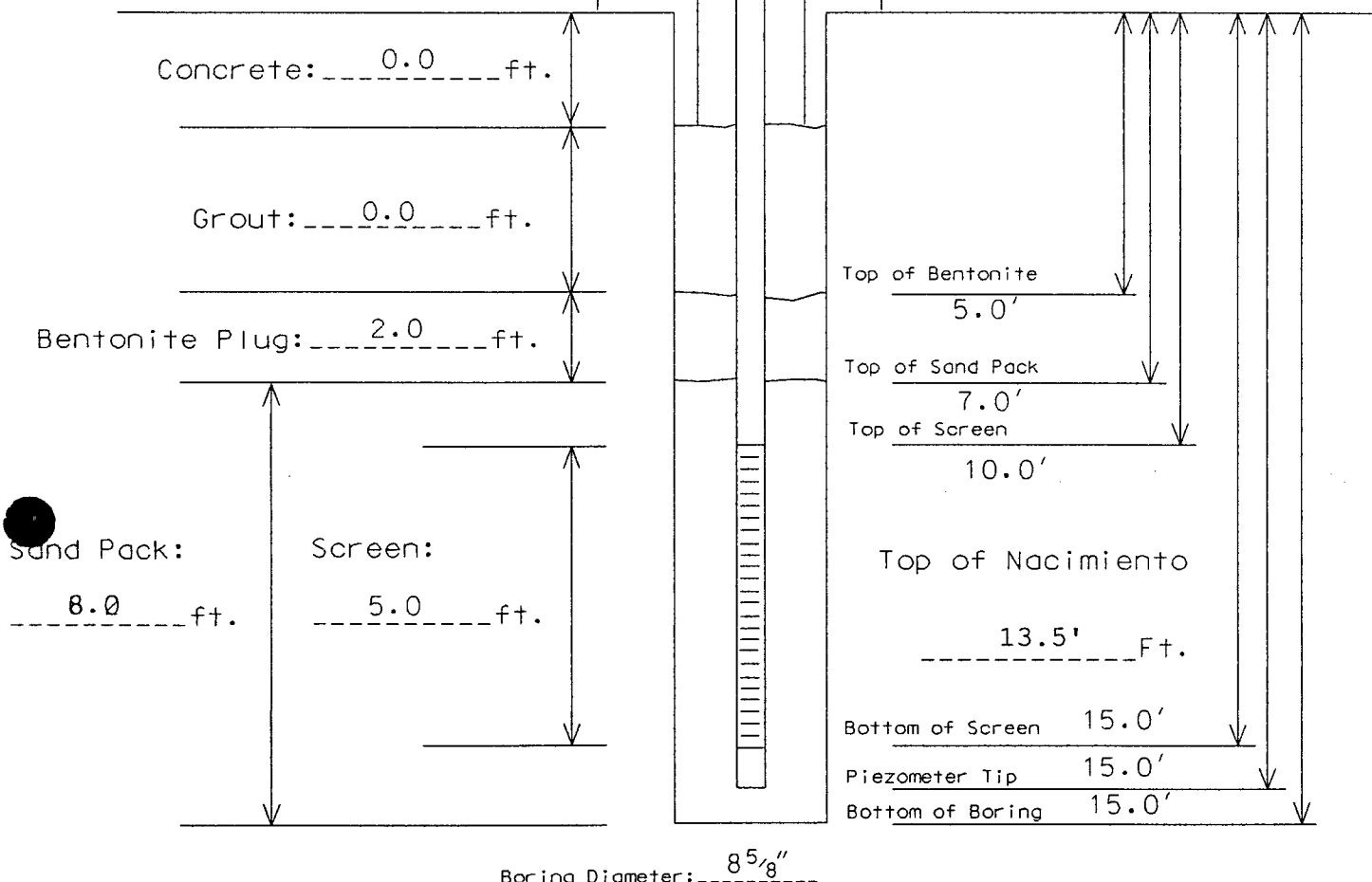
Installation Diagram

Monitoring Well No. OW 23+90

Elevation
Reference

Aluminum Lockable Cover

Steel Casing



Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40, 0.010" Slotted

Cement/Grout: NA

Riser Type/Size: 2" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Other: _____

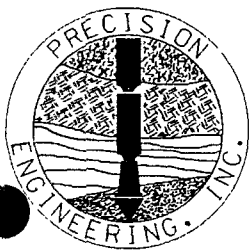
Bottom Cap Used? Yes

Site Easting: TBS

Project #: 05-038

Project Name: Bloomfield Refinery

Elevation: TBS

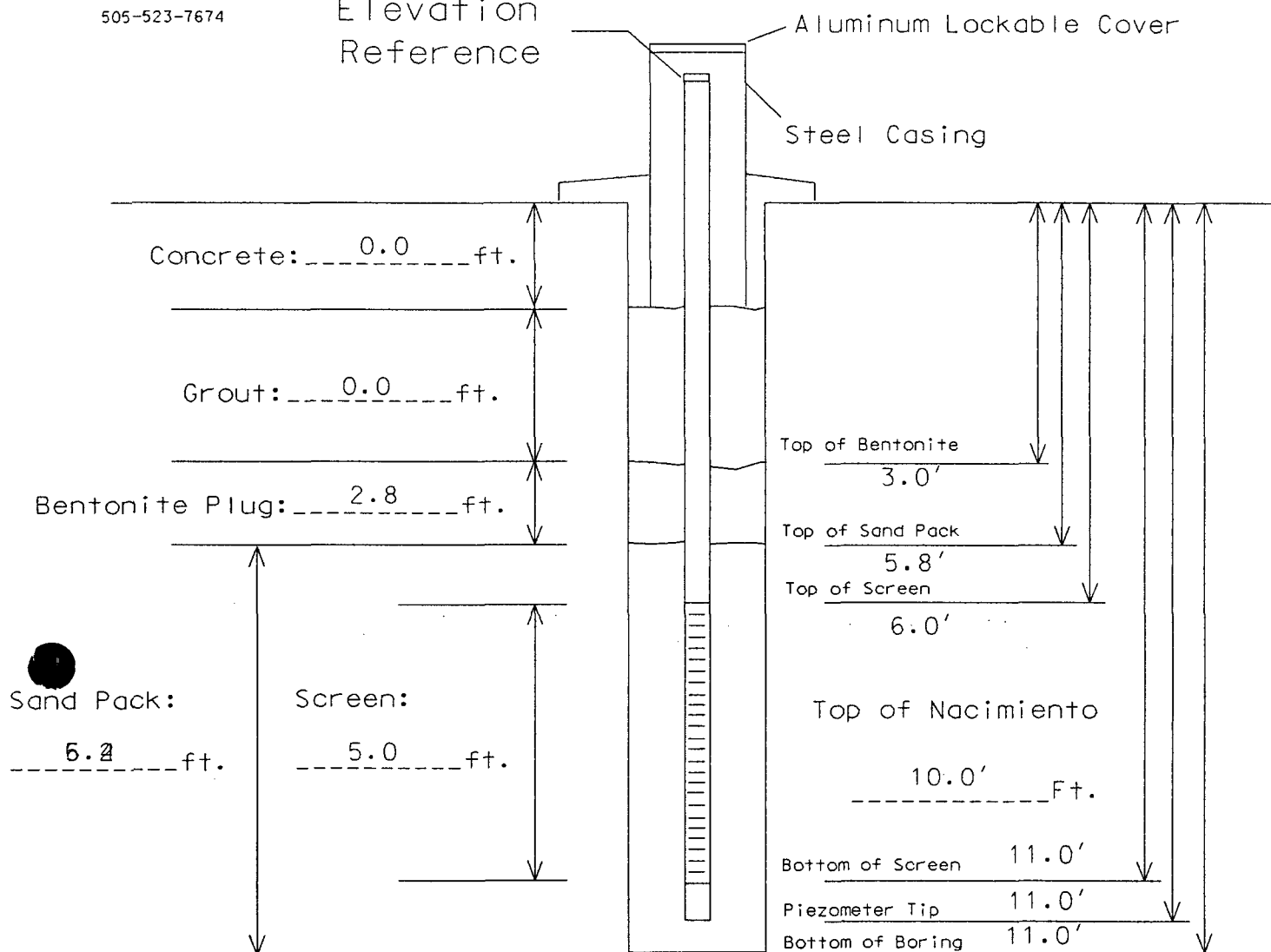


505-523-7674

Installation Diagram

Monitoring Well No. OW 25+70

Elevation
Reference



Boring Diameter: 8 5/8"

Sand Type: 10-20 Silica

Bollards. Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40, 0.010" Slotted

Cement/Grout: NA

Riser Type/Size: 2" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: TBS

Bottom Cap Used? Yes

Site Easting: TBS

Other: _____

Project #: 05-038

Project Name: Bloomfield Refinery

Elevation: TBS

COVER LETTER

May 27, 2005

Cindy Hurtado
San Juan Refining
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: Phase II Monitoring

Order No.: 0505104

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 7 samples on 5/12/2005 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Lab Order: 0505104
Project: Phase II Monitoring
Lab ID: 0505104-01

Client Sample ID: CW 6 + 70
Collection Date: 5/11/2005 9:15:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	ND	0.50		mg/L	5	5/24/2005
Chloride	2400	10		mg/L	100	5/24/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/12/2005
Sulfate	170	2.5		mg/L	5	5/24/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	5/24/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	2.7	0.50		µg/L	1	5/16/2005 4:54:42 PM
Toluene	ND	0.50		µg/L	1	5/16/2005 4:54:42 PM
Ethylbenzene	ND	0.50		µg/L	1	5/16/2005 4:54:42 PM
Xylenes, Total	1.3	0.50		µg/L	1	5/16/2005 4:54:42 PM
Surr: 4-Bromofluorobenzene	100	83.3-121		%REC	1	5/16/2005 4:54:42 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.020		mg/L	1	5/16/2005 2:09:29 PM
Barium	0.34	0.020		mg/L	1	5/16/2005 2:09:29 PM
Cadmium	ND	0.0020		mg/L	1	5/16/2005 2:09:29 PM
Chromium	ND	0.0060		mg/L	1	5/16/2005 2:09:29 PM
Lead	ND	0.0050		mg/L	1	5/16/2005 2:09:29 PM
Selenium	ND	0.050		mg/L	1	5/16/2005 2:09:29 PM
Silver	ND	0.0050		mg/L	1	5/16/2005 2:09:29 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Lab Order: 0505104
Project: Phase II Monitoring
Lab ID: 0505104-02

Client Sample ID: CW 8 + 10
Collection Date: 5/11/2005 10:30:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.29	0.10		mg/L	1	5/24/2005
Chloride	1100	10		mg/L	100	5/24/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/12/2005
Sulfate	720	50		mg/L	100	5/24/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	5/24/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	430	25		µg/L	50	5/16/2005 5:26:08 PM
Toluene	ND	25		µg/L	50	5/16/2005 5:26:08 PM
Ethylbenzene	51	25		µg/L	50	5/16/2005 5:26:08 PM
Xylenes, Total	660	25		µg/L	50	5/16/2005 5:26:08 PM
Surr: 4-Bromofluorobenzene	102	83.3-121		%REC	50	5/16/2005 5:26:08 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.020		mg/L	1	5/16/2005 2:13:35 PM
Barium	0.49	0.020		mg/L	1	5/16/2005 2:13:35 PM
Cadmium	ND	0.0020		mg/L	1	5/16/2005 2:13:35 PM
Chromium	ND	0.0060		mg/L	1	5/16/2005 2:13:35 PM
Lead	ND	0.0050		mg/L	1	5/16/2005 2:13:35 PM
Selenium	ND	0.050		mg/L	1	5/16/2005 2:13:35 PM
Silver	ND	0.0050		mg/L	1	5/16/2005 2:13:35 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Lab Order: 0505104
Project: Phase II Monitoring
Lab ID: 0505104-03

Client Sample ID: OW 11 + 15
Collection Date: 5/11/2005 11:45:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.43	0.10		mg/L	1	5/24/2005
Chloride	320	5.0		mg/L	50	5/24/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/12/2005
Sulfate	130	5.0		mg/L	10	5/24/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	5/24/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	420	25		µg/L	50	5/16/2005 5:57:32 PM
Toluene	ND	25		µg/L	50	5/16/2005 5:57:32 PM
Ethylbenzene	140	25		µg/L	50	5/16/2005 5:57:32 PM
Xylenes, Total	520	25		µg/L	50	5/16/2005 5:57:32 PM
Surr: 4-Bromofluorobenzene	104	83.3-121		%REC	50	5/16/2005 5:57:32 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	0.037	0.020		mg/L	1	5/16/2005 2:17:47 PM
Barium	1.9	0.20		mg/L	10	5/16/2005 3:06:50 PM
Cadmium	ND	0.0020		mg/L	1	5/16/2005 2:17:47 PM
Chromium	0.020	0.0060		mg/L	1	5/16/2005 2:17:47 PM
Lead	0.028	0.0050		mg/L	1	5/16/2005 2:17:47 PM
Selenium	ND	0.050		mg/L	1	5/16/2005 2:17:47 PM
Silver	ND	0.0050		mg/L	1	5/16/2005 2:17:47 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Lab Order: 0505104
Project: Phase II Monitoring
Lab ID: 0505104-04

Client Sample ID: CW 14 + 10
Collection Date: 5/11/2005 1:45:00 PM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	2.1	0.10		mg/L	1	5/24/2005
Chloride	78	2.0		mg/L	20	5/24/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/12/2005
Sulfate	2300	25		mg/L	50	5/27/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	5/26/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	9800	25		µg/L	50	5/16/2005 6:28:57 PM
Toluene	ND	25		µg/L	50	5/16/2005 6:28:57 PM
Ethylbenzene	2100	25		µg/L	50	5/16/2005 6:28:57 PM
Xylenes, Total	1300	25		µg/L	50	5/16/2005 6:28:57 PM
Surr: 4-Bromofluorobenzene	108	83.3-121		%REC	50	5/16/2005 6:28:57 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.10		mg/L	5	5/16/2005 3:09:42 PM
Barium	0.33	0.10		mg/L	5	5/16/2005 3:09:42 PM
Cadmium	ND	0.010		mg/L	5	5/16/2005 3:09:42 PM
Chromium	ND	0.030		mg/L	5	5/16/2005 3:09:42 PM
Lead	ND	0.025		mg/L	5	5/16/2005 3:09:42 PM
Selenium	ND	0.25		mg/L	5	5/16/2005 3:09:42 PM
Silver	ND	0.025		mg/L	5	5/16/2005 3:09:42 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Lab Order: 0505104
Project: Phase II Monitoring
Lab ID: 0505104-05

Client Sample ID: OW 14 + 10
Collection Date: 5/11/2005 2:15:00 PM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.53	0.10		mg/L	1	5/24/2005
Chloride	73	2.0		mg/L	20	5/24/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/12/2005
Sulfate	350	10		mg/L	20	5/24/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	5/26/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	10000	50		µg/L	100	5/16/2005 8:02:40 PM
Toluene	ND	50		µg/L	100	5/16/2005 8:02:40 PM
Ethylbenzene	3900	50		µg/L	100	5/16/2005 8:02:40 PM
Xylenes, Total	3200	50		µg/L	100	5/16/2005 8:02:40 PM
Surr: 4-Bromofluorobenzene	106	83.3-121		%REC	100	5/16/2005 8:02:40 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	0.11	0.020		mg/L	1	5/16/2005 2:30:31 PM
Barium	11	0.40		mg/L	20	5/16/2005 3:35:50 PM
Cadmium	ND	0.0020		mg/L	1	5/16/2005 2:30:31 PM
Chromium	0.090	0.0060		mg/L	1	5/16/2005 2:30:31 PM
Lead	0.73	0.0050		mg/L	1	5/16/2005 2:30:31 PM
Selenium	ND	0.050		mg/L	1	5/16/2005 2:30:31 PM
Silver	ND	0.0050		mg/L	1	5/16/2005 2:30:31 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Lab Order: 0505104
Project: Phase II Monitoring
Lab ID: 0505104-06

Client Sample ID: CW 16 + 60
Collection Date: 5/11/2005 3:00:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.42	0.10		mg/L	1	5/24/2005
Chloride	150	2.0		mg/L	20	5/24/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/12/2005
Sulfate	150	10		mg/L	20	5/24/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	5/26/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	5300	25		µg/L	50	5/16/2005 8:33:39 PM
Toluene	75	25		µg/L	50	5/16/2005 8:33:39 PM
Ethylbenzene	3800	25		µg/L	50	5/16/2005 8:33:39 PM
Xylenes, Total	7300	25		µg/L	50	5/16/2005 8:33:39 PM
Surr: 4-Bromofluorobenzene	106	83.3-121		%REC	50	5/16/2005 8:33:39 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.020		mg/L	1	5/16/2005 3:18:45 PM
Barium	0.60	0.020		mg/L	1	5/16/2005 3:18:45 PM
Cadmium	ND	0.0020		mg/L	1	5/16/2005 3:18:45 PM
Chromium	ND	0.0060		mg/L	1	5/16/2005 3:18:45 PM
Lead	0.010	0.0050		mg/L	1	5/16/2005 3:18:45 PM
Selenium	ND	0.050		mg/L	1	5/16/2005 3:18:45 PM
Silver	ND	0.0050		mg/L	1	5/16/2005 3:18:45 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Lab Order: 0505104
Project: Phase II Monitoring
Lab ID: 0505104-07

Client Sample ID: Trip Blank
Collection Date:

Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	5/16/2005 9:04:43 PM
Toluene	ND	0.50		µg/L	1	5/16/2005 9:04:43 PM
Ethylbenzene	ND	0.50		µg/L	1	5/16/2005 9:04:43 PM
Xylenes, Total	ND	0.50		µg/L	1	5/16/2005 9:04:43 PM
Surr: 4-Bromofluorobenzene	98.2	83.3-121		%REC	1	5/16/2005 9:04:43 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Work Order: 0505104
Project: Phase II Monitoring

QC SUMMARY REPORT

Method Blank

Sample ID	MBLK	Batch ID: R15380	Test Code: E300	Units: mg/L	Analysis Date 5/12/2005	Prep Date					
Client ID:		Run ID: LC_050512A			SeqNo: 361746						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride	ND		0.1								
Chloride	ND		0.1								
Phosphorus, Orthophosphate (As P)	ND		0.5								
Sulfate	ND		0.5								
Nitrate (As N)+Nitrite (As N)	ND		0.1								

Sample ID	MB	Batch ID: R15380	Test Code: E300	Units: mg/L	Analysis Date 5/12/2005	Prep Date					
Client ID:		Run ID: LC_050512A			SeqNo: 361769						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride	ND		0.1								
Chloride	ND		0.1								
Phosphorus, Orthophosphate (As P)	ND		0.5								
Sulfate	ND		0.5								
Nitrate (As N)+Nitrite (As N)	ND		0.1								

Sample ID	MB	Batch ID: R15380	Test Code: E300	Units: mg/L	Analysis Date 5/14/2005	Prep Date					
Client ID:		Run ID: LC_050512A			SeqNo: 362063						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride	ND		0.1		0	0	0	0	0	0	
Chloride	ND		0.1		0	0	0	0	0	0	
Phosphorus, Orthophosphate (As P)	ND		0.5		0	0	0	0	0	0	
Sulfate	0.1124		0.5		0	0	0	0	0	0	J
Nitrate (As N)+Nitrite (As N)	ND		0.1		0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

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CLIENT: San Juan Refining
Work Order: 0505104
Project: Phase II Monitoring

QC SUMMARY REPORT
 Method Blank

Sample ID	MBLK	Batch ID: R15492	Test Code: E300	Units: mg/L	Analysis Date	5/24/2005	Prep Date					
Client ID:			Run ID: LC_050524A		SeqNo:	365448						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride		ND		0.1								
Chloride		ND		0.1								
Phosphorus, Orthophosphate (As P)		ND		0.5								
Sulfate		ND		0.5								
Nitrate (As N)+Nitrite (As N)		ND		0.1								

Sample ID	MBLK	Batch ID: R15502	Test Code: E300	Units: mg/L	Analysis Date	5/25/2005	Prep Date					
Client ID:			Run ID: LC_050525A		SeqNo:	365704						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride		ND										
Chloride		ND										
Phosphorus, Orthophosphate (As P)		ND										
Sulfate		ND										
Nitrate (As N)+Nitrite (As N)		ND										

Sample ID	MBLK	Batch ID: R15517	Test Code: E300	Units: mg/L	Analysis Date	5/26/2005	Prep Date					
Client ID:		Run ID:	LC_050526A		SeqNo:	366186						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride		ND										
Chloride		ND										
Phosphorus, Orthophosphate (As P)		ND										
Sulfate		ND										
Nitrate (As N)+Nitrite (As N)		ND										

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0505104
 Project: Phase II Monitoring

Sample ID	Reagent Blank 5m	Batch ID: R15402	Test Code: SW8021	Units: µg/L	Analysis Date	5/16/2005 7:08:29 AM	Prep Date				
Client ID:			Run ID: PIDFID_050516A		SeqNo:	362600					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	20.29	0	20	0	101	83.3	121	0			

Sample ID	MB-7989	Batch ID: 7989	Test Code: SW7470	Units: mg/L	Analysis Date	5/17/2005	Prep Date	5/17/2005			
Client ID:			Run ID: MI-LA254_050517A		SeqNo:	362937					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Sample ID	MB-7969	Batch ID: 7969	Test Code: SW6010A	Units: mg/L	Analysis Date	5/16/2005 1:06:22 PM	Prep Date	5/13/2005			
Client ID:			Run ID: ICP_050516B		SeqNo:	362840					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Lead	ND	0.005									
Selenium	ND	0.05									
Silver	ND	0.005									

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Work Order: 0505104
Project: Phase II Monitoring

QC SUMMARY REPORT

Sample Duplicate

Sample ID	0505104-01B DUP	Batch ID: R15380	Test Code: E300	Units: mg/L	Analysis Date	5/12/2005	Prep Date	
Client ID:	CW 6 + 70	Run ID:	LC_050512A		SeqNo:	361758		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
Phosphorus, Orthophosphate (As P)	ND	0.5	0	0	0	0	0	0
								20

Sample ID	0505104-06C DUP	Batch ID: 7969	Test Code: SW6010A	Units: mg/L	Analysis Date	5/16/2005 3:22:52 PM	Prep Date	5/13/2005
Client ID:	CW 16 + 60	Run ID:	ICP_050516B		SeqNo:	362863		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val

Arsenic	0.01937	0.02	0	0	0	0	0	0	30	J
Barium	0.6666	0.02	0	0	0	0	0	0.6004	10.4	30
Cadmium	ND	0.002	0	0	0	0	0	0	0	30
Chromium	ND	0.006	0	0	0	0	0	0	0	30
Lead	0.01333	0.005	0	0	0	0	0	0.01022	26.4	30
Selenium	ND	0.05	0	0	0	0	0	0	0	30
Silver	0.0007985	0.005	0	0	0	0	0	0	0	30

Qualifiers: ND - Not Detected at the Reporting Limit
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 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Work Order: 0505104
Project: Phase II Monitoring

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0505104-01B MS	Batch ID: R15380	Test Code: E300	Units: mg/L	Analysis Date	5/12/2005	Prep Date					
Client ID:	CW 6 + 70		Run ID: LC_050512A		SeqNo:	361759						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P)		5.075	0.5	5	0	102	80	120	0			

Sample ID	0505104-01B MSD	Batch ID: R15380	Test Code: E300	Units: mg/L	Analysis Date 5/12/2005		Prep Date					
Client ID:	CW 6 + 70		Run ID: LC_050512A		SeqNo: 361760							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P)		4.964	0.5	5	0	99.3	80	120	5.075	2.22	20	

Sample ID	0505104-01a.ms	Batch ID: R15402	Test Code: SW8021	Units: µg/L	Analysis Date	5/16/2005 9:35:32 PM	Prep Date					
Client ID:	CW 6 + 70		Run ID: PIDFID_050516A		SeqNo:	362634						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		22.01	0.5	20	2.675	96.7	88.7	114	0			
Toluene		19.67	0.5	20	0.297	96.9	89.3	112	0			
Ethylbenzene		20.06	0.5	20	0.4584	98.0	88.6	113	0			
Xylenes, Total		58.06	0.5	60	1.266	94.7	89.4	112	0			
Surr: 4-Bromofluorobenzene		23.36	0	24	0	97.3	83.3	121	0			

Sample ID	0505104-01a msd	Batch ID: R15402	Test Code: SW8021	Units: µg/L	Analysis Date	5/16/2005 10:06:25 PM	Prep Date					
Client ID:	CW 6 + 70		Run ID: PIDFID_050516A		SeqNo:	362635						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		22.12	0.5	20	2.675	97.2	88.7	114	22.01	0.464	27	
Toluene		19.48	0.5	20	0.297	95.9	89.3	112	19.67	0.966	19	
Ethylbenzene		20.23	0.5	20	0.4584	98.8	88.6	113	20.06	0.802	10	
Kylenes, Total		57.92	0.5	60	1.266	94.4	89.4	112	58.06	0.242	13	
Surr: 4-Bromofluorobenzene		23.49	0	24	0	97.9	83.3	121	23.36	0.547	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0505104
Project: Phase II Monitoring

QC SUMMARY REPORT
 Sample Matrix Spike

Sample ID	0505104-06C MS	Batch ID: 7969	Test Code: SW6010A	Units: mg/L	Analysis Date	5/16/2005 2:55:37 PM	Prep Date	5/13/2005			
Client ID:	CW 16 + 60		Run ID: ICP_050516B		SeqNo:	362856					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5693	0.02	0.5	0.02032	110	75	125	0			
Cadmium	0.5242	0.002	0.5	0	105	75	125	0			
Chromium	0.5004	0.006	0.5	0	100	75	125	0			
Lead	0.5047	0.005	0.5	0.01022	98.9	75	125	0			
Selenium	0.4651	0.05	0.5	0	93.0	75	125	0			
Silver	0.5375	0.005	0.5	0	107	75	125	0			

Sample ID	0505104-06C MSD	Batch ID: 7969	Test Code: SW6010A	Units: mg/L	Analysis Date	5/16/2005 2:59:49 PM	Prep Date	5/13/2005			
Client ID:	CW 16 + 60		Run ID: ICP_050516B		SeqNo: 362857						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.567	0.02	0.5	0.02032	109	75	125	0.5693	0.415	20	
Cadmium	0.5172	0.002	0.5	0	103	75	125	0.5242	1.33	20	
Chromium	0.4934	0.006	0.5	0	98.7	75	125	0.5004	1.42	20	
Lead	0.4987	0.005	0.5	0.01022	97.7	75	125	0.5047	1.21	20	
Selenium	0.4678	0.05	0.5	0	93.6	75	125	0.4651	0.575	20	
Silver	0.528	0.005	0.5	0	106	75	125	0.5375	1.79	20	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining

Work Order: 0505104

Project: Phase II Monitoring

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS	Batch ID: R15380	Test Code: E300	Units: mg/L	Analysis Date 5/12/2005	Prep Date					
Client ID:		Run ID: LC_050512A			SeqNo: 361747						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5047	0.1	0.5	0	101	90	110	0			
Chloride	4.755	0.1	5	0	95.1	90	110	0			
Phosphorus, Orthophosphate (As P)	4.836	0.5	5	0	96.7	90	110	0			
Sulfate	9.669	0.5	10	0	96.7	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.386	0.1	3.5	0	96.7	90	110	0			

Sample ID	LCS	Batch ID: R15380	Test Code: E300	Units: mg/L	Analysis Date 5/12/2005		Prep Date				
Client ID:		Run ID: LC_050512A			SeqNo: 361770						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5233	0.1	0.5	0	105	90	110	0			
Chloride	4.89	0.1	5	0	97.8	90	110	0			
Phosphorus, Orthophosphate (As P)	5.19	0.5	5	0	104	90	110	0			
Sulfate	9.994	0.5	10	0	99.9	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.485	0.1	3.5	0	99.6	90	110	0			

Sample ID	LCS	Batch ID: R15380	Test Code: E300	Units: mg/L	Analysis Date 5/14/2005	Prep Date					
Client ID:		Run ID: LC_050512A			SeqNo: 362064						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.516	0.1	0.5	0	103	90	110	0			
Chloride	4.744	0.1	5	0	94.9	90	110	0			
Phosphorus, Orthophosphate (As P)	4.845	0.5	5	0	96.9	90	110	0			
Sulfate	9.712	0.5	10	0.1124	96.0	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.383	0.1	3.5	0	96.7	90	110	0			

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

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CLIENT: San Juan Refining
Work Order: 0505104
Project: Phase II Monitoring

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID	LCS	Batch ID: R15492	Test Code: E300	Units: mg/L	Analysis Date	5/24/2005	Prep Date				
Client ID:		Run ID:	LC_050524A		SeqNo:	365449					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5042	0.1	0.5	0	101	90	110	0			
Chloride	4.586	0.1	5	0	91.7	90	110	0			
Phosphorus, Orthophosphate (As P)	4.653	0.5	5	0	93.1	90	110	0			
Sulfate	9.322	0.5	10	0	93.2	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.255	0.1	3.5	0	93.0	90	110	0			

Sample ID	LCS	Batch ID: R15502	Test Code: E300	Units: mg/L	Analysis Date	5/25/2005	Prep Date				
Client ID:		Run ID:	LC_050525A		SeqNo:	365705					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5249	0.1	0.5	0	105	90	110	0			
Chloride	4.589	0.1	5	0	91.8	90	110	0			
Phosphorus, Orthophosphate (As P)	4.656	0.5	5	0	93.1	90	110	0			
Sulfate	9.366	0.5	10	0	93.7	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.236	0.1	3.5	0	92.4	90	110	0			

Sample ID	LCS	Batch ID: R15517	Test Code: E300	Units: mg/L	Analysis Date	5/26/2005	Prep Date				
Client ID:		Run ID:	LC_050526A		SeqNo:	366187					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4586	0.1	0.5	0	91.7	90	110	0			
Chloride	4.665	0.1	5	0	93.3	90	110	0			
Phosphorus, Orthophosphate (As P)	4.688	0.5	5	0	93.8	90	110	0			
Sulfate	9.338	0.5	10	0	93.4	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.306	0.1	3.5	0	94.5	90	110	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0505104
Project: Phase II Monitoring

QC SUMMARY REPORT
 Laboratory Control Spike - generic

Sample ID	BTEX Ics 100ng	Batch ID: R15402	Test Code: SW8021	Units: µg/L	Analysis Date	5/17/2005 2:41:13 AM	Prep Date				
Client ID:			Run ID: PIDFID_050516A		SeqNo:	362606					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.62	0.5	20	0	98.1	88.7	114	0			
Toluene	19.42	0.5	20	0	97.1	89.3	112	0			
Ethylbenzene	19.56	0.5	20	0	97.8	88.6	113	0			
Xylenes, Total	58.39	0.5	60	0	97.3	89.4	112	0			

Sample ID	LCS-7989	Batch ID: 7989	Test Code: SW7470	Units: mg/L	Analysis Date	5/17/2005	Prep Date	5/17/2005			
Client ID:			Run ID: MI-LA254_050517A		SeqNo:	362938					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004839	0.0002	0.005	0	96.8	75.2	134	0			

Sample ID	LCSD-7989	Batch ID: 7989	Test Code: SW7470	Units: mg/L	Analysis Date	5/17/2005	Prep Date	5/17/2005			
Client ID:			Run ID: MI-LA254_050517A		SeqNo:	362962					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004773	0.0002	0.005	0	95.5	75.2	134	0.004839	1.35	0	

Sample ID	LCS-7969	Batch ID: 7969	Test Code: SW6010A	Units: mg/L	Analysis Date	5/16/2005 1:09:21 PM	Prep Date	5/13/2005			
Client ID:			Run ID: ICP_050516B		SeqNo: 362841						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.526	0.02	0.5	0	105	80	120	0			
Barium	0.5109	0.02	0.5	0	102	80	120	0			
Cadmium	0.5159	0.002	0.5	0	103	80	120	0			
Chromium	0.5079	0.006	0.5	0	102	80	120	0			
Lead	0.5041	0.005	0.5	0	101	80	120	0			
Selenium	0.5057	0.05	0.5	0	101	80	120	0			
Silver	0.5122	0.005	0.5	0	102	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit
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 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
 Work Order: 0505104
 Project: Phase II Monitoring

Sample ID	LCSD-7969	Batch ID: 7969	Test Code: SW6010A	Units: mg/L	Analysis Date	5/16/2005 1:12:23 PM	Prep Date	5/13/2005			
Client ID:			Run ID: ICP_050516B		SeqNo:	362842					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5106	0.02	0.5	0	102	80	120	0.526	2.97	20	
Barium	0.4946	0.02	0.5	0	98.9	80	120	0.5109	3.23	20	
Cadmium	0.5016	0.002	0.5	0	100	80	120	0.5159	2.82	20	
Chromium	0.4943	0.006	0.5	0	98.9	80	120	0.5079	2.71	20	
Lead	0.4894	0.005	0.5	0	97.9	80	120	0.5041	2.95	20	
Selenium	0.4864	0.05	0.5	0	97.3	80	120	0.5057	3.89	20	
Silver	0.4958	0.005	0.5	0	99.2	80	120	0.5122	3.26	20	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

5/12/2005

Work Order Number 0505104

Received by AT

Checklist completed by

Signature

Date

5/12/05

Matrix

Carrier name UPS

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☒

N/A ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☒

No ☐

N/A ☐

Container/Temp Blank temperature?

21°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

QA/QC Packe
Std ☐ Level 1 ☐

Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Sampler: Indy Hustedo / Azuela FO/K

Sample Temperature: 11.50

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HgCl ₂	HNO ₃	
5-11-05	2:15pm	H ₂ O	OW14 + 10	2-VOA	X		050504-5
				1-250ml		H ₂ SO ₄	
				1-250ml			
				1-500ml	X		
5-11-05	3pm	H ₂ O	CW16 + 60	2-VOA	X		- 6
				1-250ml		H ₂ SO ₄	
				1-250ml			
				1-500ml	X		
			Trip Blank				- 7

Received By: (Signature) S/12/05

Jan 1415-

Received By: (Signature)

ANALYSIS LABOUR

4901 Hawkins NE, Suite D

Albuquerque, New Mexico 87109

Tel. 505.345.3975 Fax 505.345.4107

www.hallenvironmental.com

ANALYSIS REQUEST

	BTEX + MTBE - TMB's (802L)	X	-	
	BTEX + MTBE + TPH (Gasoline Only)			
	TPH Method 8015B (Gas/Diesel)			
	TPH (Method 418.1)			
	EDB (Method 504.1)			
	EDC (Method 8021)			
	8310 (PMA or PAH)			
	HCPA 8 Metals	X		
	Anions (F^- , Cl^- , NO_3^- , NO_2^- , $P O_4^{=}$, $S O_4^{=}.$)	X	X	
	8081 Pesticides / PCB's (8082)			
	8260B (VOA)			
	8270 (Semi-VOA)			
Air Bubbles or Headspace (Y or N)				

Remarks:

COVER LETTER

May 27, 2005

Cindy Hurtado
San Juan Refining
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: Phase II Monitoring

Order No.: 0505088

Dear Cindy Hurtado:

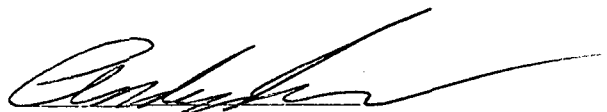
Hall Environmental Analysis Laboratory received 9 samples on 5/11/2005 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Lab Order: 0505088
Project: Phase II Monitoring
Lab ID: 0505088-01

Client Sample ID: CW 0+60
Collection Date: 5/10/2005 8:30:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: IC
Fluoride	0.51	0.10		mg/L	1	5/11/2005
Chloride	39	0.50		mg/L	5	5/16/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/11/2005
Sulfate	75	0.50		mg/L	1	5/11/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	5/26/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	200	10		µg/L	20	5/13/2005 7:01:46 PM
Toluene	32	10		µg/L	20	5/13/2005 7:01:46 PM
Ethylbenzene	180	10		µg/L	20	5/13/2005 7:01:46 PM
Xylenes, Total	1000	10		µg/L	20	5/13/2005 7:01:46 PM
Surr: 4-Bromofluorobenzene	108	83.3-121		%REC	20	5/13/2005 7:01:46 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.020		mg/L	1	5/16/2005 1:24:22 PM
Barium	0.33	0.020		mg/L	1	5/16/2005 1:24:22 PM
Cadmium	ND	0.0020		mg/L	1	5/16/2005 1:24:22 PM
Chromium	ND	0.0060		mg/L	1	5/16/2005 1:24:22 PM
Lead	0.012	0.0050		mg/L	1	5/16/2005 1:24:22 PM
Selenium	ND	0.050		mg/L	1	5/16/2005 1:24:22 PM
Silver	ND	0.0050		mg/L	1	5/16/2005 1:24:22 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
 Lab Order: 0505088
 Project: Phase II Monitoring
 Lab ID: 0505088-02

Client Sample ID: CW 1+50
 Collection Date: 5/10/2005 9:15:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: IC
Fluoride	0.59	0.10		mg/L	1	5/11/2005
Chloride	43	0.50		mg/L	5	5/16/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/11/2005
Sulfate	5.8	0.50		mg/L	1	5/11/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	5/26/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	1200	10		µg/L	20	5/13/2005 7:32:51 PM
Toluene	41	10		µg/L	20	5/13/2005 7:32:51 PM
Ethylbenzene	240	10		µg/L	20	5/13/2005 7:32:51 PM
Xylenes, Total	2300	10		µg/L	20	5/13/2005 7:32:51 PM
Surr: 4-Bromofluorobenzene	109	83.3-121		%REC	20	5/13/2005 7:32:51 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.020		mg/L	1	5/16/2005 1:28:17 PM
Barium	0.59	0.020		mg/L	1	5/16/2005 1:28:17 PM
Cadmium	ND	0.0020		mg/L	1	5/16/2005 1:28:17 PM
Chromium	ND	0.0060		mg/L	1	5/16/2005 1:28:17 PM
Lead	0.0070	0.0050		mg/L	1	5/16/2005 1:28:17 PM
Selenium	ND	0.050		mg/L	1	5/16/2005 1:28:17 PM
Silver	ND	0.0050		mg/L	1	5/16/2005 1:28:17 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
 Lab Order: 0505088
 Project: Phase II Monitoring
 Lab ID: 0505088-03

Client Sample ID: OW 19+50
 Collection Date: 5/10/2005 10:15:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: IC
Fluoride	0.35	0.10		mg/L	1	5/11/2005
Chloride	290	2.0		mg/L	20	5/16/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/11/2005
Sulfate	290	10		mg/L	20	5/16/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	5/26/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	1900	10		µg/L	20	5/13/2005 8:03:34 PM
Toluene	13	10		µg/L	20	5/13/2005 8:03:34 PM
Ethylbenzene	860	10		µg/L	20	5/13/2005 8:03:34 PM
Xylenes, Total	3200	10		µg/L	20	5/13/2005 8:03:34 PM
Surr: 4-Bromofluorobenzene	109	83.3-121		%REC	20	5/13/2005 8:03:34 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.020		mg/L	1	5/16/2005 1:32:07 PM
Barium	0.23	0.020		mg/L	1	5/16/2005 1:32:07 PM
Cadmium	ND	0.0020		mg/L	1	5/16/2005 1:32:07 PM
Chromium	ND	0.0060		mg/L	1	5/16/2005 1:32:07 PM
Lead	0.024	0.0050		mg/L	1	5/16/2005 1:32:07 PM
Selenium	ND	0.050		mg/L	1	5/16/2005 1:32:07 PM
Silver	ND	0.0050		mg/L	1	5/16/2005 1:32:07 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Lab Order: 0505088
Project: Phase II Monitoring
Lab ID: 0505088-04

Client Sample ID: CW 19+50
Collection Date: 5/10/2005 10:45:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: IC
Fluoride	0.35	0.10		mg/L	1	5/11/2005
Chloride	230	2.0		mg/L	20	5/16/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/11/2005
Sulfate	260	10		mg/L	20	5/16/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	5/26/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	4800	100		µg/L	200	5/16/2005 9:08:18 AM
Toluene	21	20		µg/L	40	5/13/2005 8:34:07 PM
Ethylbenzene	1700	100		µg/L	200	5/16/2005 9:08:18 AM
Xylenes, Total	5100	100		µg/L	200	5/16/2005 9:08:18 AM
Surr: 4-Bromofluorobenzene	103	83.3-121		%REC	200	5/16/2005 9:08:18 AM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.020		mg/L	1	5/16/2005 1:36:10 PM
Barium	0.20	0.020		mg/L	1	5/16/2005 1:36:10 PM
Cadmium	ND	0.0020		mg/L	1	5/16/2005 1:36:10 PM
Chromium	ND	0.0060		mg/L	1	5/16/2005 1:36:10 PM
Lead	0.0061	0.0050		mg/L	1	5/16/2005 1:36:10 PM
Selenium	ND	0.050		mg/L	1	5/16/2005 1:36:10 PM
Silver	ND	0.0050		mg/L	1	5/16/2005 1:36:10 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Lab Order: 0505088
Project: Phase II Monitoring
Lab ID: 0505088-05

Client Sample ID: CW 3+85
Collection Date: 5/10/2005 1:30:00 PM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: IC
Fluoride	0.21	0.10		mg/L	1	5/11/2005
Chloride	270	2.0		mg/L	20	5/16/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/11/2005
Sulfate	32	0.50		mg/L	1	5/11/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	5/26/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	35	10		µg/L	20	5/13/2005 9:04:37 PM
Toluene	22	10		µg/L	20	5/13/2005 9:04:37 PM
Ethylbenzene	20	10		µg/L	20	5/13/2005 9:04:37 PM
Xylenes, Total	250	10		µg/L	20	5/13/2005 9:04:37 PM
Surr: 4-Bromofluorobenzene	105	83.3-121		%REC	20	5/13/2005 9:04:37 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.020		mg/L	1	5/16/2005 1:49:03 PM
Barium	0.68	0.020		mg/L	1	5/16/2005 1:49:03 PM
Cadmium	ND	0.0020		mg/L	1	5/16/2005 1:49:03 PM
Chromium	ND	0.0060		mg/L	1	5/16/2005 1:49:03 PM
Lead	ND	0.0050		mg/L	1	5/16/2005 1:49:03 PM
Selenium	ND	0.050		mg/L	1	5/16/2005 1:49:03 PM
Silver	ND	0.0050		mg/L	1	5/16/2005 1:49:03 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Lab Order: 0505088
Project: Phase II Monitoring
Lab ID: 0505088-06

Client Sample ID: CW 5+50
Collection Date: 5/10/2005 2:15:00 PM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: IC
Fluoride	0.33	0.10		mg/L	1	5/11/2005
Chloride	2700	10		mg/L	100	5/17/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/11/2005
Sulfate	75	50		mg/L	100	5/17/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	5/26/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	200	10		µg/L	20	5/13/2005 9:35:08 PM
Toluene	11	10		µg/L	20	5/13/2005 9:35:08 PM
Ethylbenzene	64	10		µg/L	20	5/13/2005 9:35:08 PM
Xylenes, Total	240	10		µg/L	20	5/13/2005 9:35:08 PM
Surr: 4-Bromofluorobenzene	105	83.3-121		%REC	20	5/13/2005 9:35:08 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.020		mg/L	1	5/16/2005 1:53:08 PM
Barium	0.83	0.020		mg/L	1	5/16/2005 1:53:08 PM
Cadmium	ND	0.0020		mg/L	1	5/16/2005 1:53:08 PM
Chromium	ND	0.0060		mg/L	1	5/16/2005 1:53:08 PM
Lead	ND	0.0050		mg/L	1	5/16/2005 1:53:08 PM
Selenium	ND	0.050		mg/L	1	5/16/2005 1:53:08 PM
Silver	ND	0.0050		mg/L	1	5/16/2005 1:53:08 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Lab Order: 0505088
Project: Phase II Monitoring
Lab ID: 0505088-07

Client Sample ID: Trip Blank
Collection Date:

Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	5/13/2005 10:05:30 PM
Toluene	ND	0.50		µg/L	1	5/13/2005 10:05:30 PM
Ethylbenzene	ND	0.50		µg/L	1	5/13/2005 10:05:30 PM
Xylenes, Total	ND	0.50		µg/L	1	5/13/2005 10:05:30 PM
Surr: 4-Bromofluorobenzene	98.6	83.3-121		%REC	1	5/13/2005 10:05:30 PM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Lab Order: 0505088
Project: Phase II Monitoring
Lab ID: 0505088-08

Client Sample ID: CW 22+00
Collection Date: 5/10/2005 2:45:00 PM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: IC
Fluoride	0.74	0.10		mg/L	1	5/11/2005
Chloride	510	2.0		mg/L	20	5/17/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/11/2005
Sulfate	38	0.50		mg/L	1	5/11/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	5/17/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	7000	100		µg/L	200	5/16/2005 9:38:58 AM
Toluene	90	10		µg/L	20	5/13/2005 10:35:52 PM
Ethylbenzene	95	10		µg/L	20	5/13/2005 10:35:52 PM
Xylenes, Total	200	10		µg/L	20	5/13/2005 10:35:52 PM
Surr: 4-Bromofluorobenzene	106	83.3-121		%REC	20	5/13/2005 10:35:52 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.020		mg/L	1	5/16/2005 1:57:15 PM
Barium	0.61	0.020		mg/L	1	5/16/2005 1:57:15 PM
Cadmium	ND	0.0020		mg/L	1	5/16/2005 1:57:15 PM
Chromium	ND	0.0060		mg/L	1	5/16/2005 1:57:15 PM
Lead	ND	0.0050		mg/L	1	5/16/2005 1:57:15 PM
Selenium	ND	0.050		mg/L	1	5/16/2005 1:57:15 PM
Silver	ND	0.0050		mg/L	1	5/16/2005 1:57:15 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
 Lab Order: 0505088
 Project: Phase II Monitoring
 Lab ID: 0505088-09

Client Sample ID: OW 22+00
 Collection Date: 5/10/2005 3:10:00 PM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: IC
Fluoride	0.78	0.10		mg/L	1	5/11/2005
Chloride	480	2.0		mg/L	20	5/17/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/11/2005
Sulfate	140	10		mg/L	20	5/17/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	5/17/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	3100	10		µg/L	20	5/13/2005 11:06:13 PM
Toluene	45	10		µg/L	20	5/13/2005 11:06:13 PM
Ethylbenzene	150	10		µg/L	20	5/13/2005 11:06:13 PM
Xylenes, Total	340	10		µg/L	20	5/13/2005 11:06:13 PM
Surr: 4-Bromofluorobenzene	105	83.3-121		%REC	20	5/13/2005 11:06:13 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.020		mg/L	1	5/16/2005 2:01:22 PM
Barium	0.16	0.020		mg/L	1	5/16/2005 2:01:22 PM
Cadmium	ND	0.0020		mg/L	1	5/16/2005 2:01:22 PM
Chromium	ND	0.0060		mg/L	1	5/16/2005 2:01:22 PM
Lead	0.012	0.0050		mg/L	1	5/16/2005 2:01:22 PM
Selenium	ND	0.050		mg/L	1	5/16/2005 2:01:22 PM
Silver	ND	0.0050		mg/L	1	5/16/2005 2:01:22 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-May-05

CLIENT: San Juan Refining
Work Order: 0505088
Project: Phase II Monitoring

QC SUMMARY REPORT

Method Blank

Sample ID	MBLK	Batch ID: R15366	Test Code: E300	Units: mg/L	Analysis Date 5/11/2005	Prep Date					
Client ID:		Run ID: LC_050511A			SeqNo: 361369						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID	MBLK	Batch ID: R15404	Test Code: E300	Units: mg/L	Analysis Date 5/16/2005	Prep Date					
Client ID:			Run ID: LC_050516A		SeqNo: 362672						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND										
Chloride	0.05255										
Phosphorus, Orthophosphate (As P)	ND										
Sulfate	ND										
Nitrate (As N)+Nitrite (As N)	ND										J

Sample ID	MBLK	Batch ID: R15517	Test Code: E300	Units: mg/L	Analysis Date 5/26/2005	Prep Date					
Client ID:		Run ID: LC_050526A			SeqNo: 366186						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

/

CLIENT: San Juan Refining
Work Order: 0505088
Project: Phase II Monitoring

QC SUMMARY REPORT
 Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R15378	Test Code: SW8021	Units: µg/L	Analysis Date	5/13/2005 8:43:30 AM	Prep Date					
Client ID:			Run ID: PIDFID_050513A		SeqNo:	361595						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		ND	0.5									
Toluene		ND	0.5									
Ethylbenzene		ND	0.5									
Xylenes, Total		ND	0.5									
Surr: 4-Bromofluorobenzene		19.54	0	20	0	97.7	83.3	121	0			

Sample ID	Reagent Blank 5m	Batch ID: R15402	Test Code: SW8021	Units: µg/L	Analysis Date	5/16/2005 7:08:29 AM	Prep Date					
Client ID:			Run ID: PIDFID_050516A		SeqNo:	362600						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		ND	0.5									
Toluene		ND	0.5									
Ethylbenzene		ND	0.5									
Xylenes, Total		ND	0.5									
Surr: 4-Bromofluorobenzene		20.29	0	20	0	101	83.3	121	0			

Sample ID	MB-7989	Batch ID: 7989	Test Code: SW7470	Units: mg/L	Analysis Date	5/17/2005	Prep Date	5/17/2005				
Client ID:			Run ID: MI-LA254_050517A		SeqNo:	362937						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		ND	0.0002									

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0505088
Project: Phase II Monitoring

QC SUMMARY REPORT
 Method Blank

Sample ID	MB-7969	Batch ID: 7969	Test Code: SW6010A	Units: mg/L	Analysis Date	5/16/2005 1:06:22 PM	Prep Date	5/13/2005			
Client ID:		Run ID: ICP_050516B			SeqNo: 362840						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Lead	ND	0.005									
Selenium	ND	0.05									
Silver	ND	0.005									

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Date: 27-May-05

Hall Environmental Analysis Laboratory

CLIENT: San Juan Refining
Work Order: 0505088
Project: Phase II Monitoring

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS	Batch ID: R15366	Test Code: E300	Units: mg/L	Analysis Date 5/11/2005	Prep Date					
Client ID:		Run ID:	LC_050511A		SeqNo:	361370					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5049	0.1	0.5	0	101	90	110	0			
Chloride	4.695	0.1	5	0	93.9	90	110	0			
Phosphorus, Orthophosphate (As P)	4.781	0.5	5	0	95.6	90	110	0			
Sulfate	9.703	0.5	10	0	97.0	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.329	0.1	3.5	0	95.1	90	110	0			

Sample ID	LCS	Batch ID: R15404	Test Code: E300	Units: mg/L	Analysis Date 5/16/2005	Prep Date					
Client ID:			Run ID: LC_050516A		SeqNo: 362675						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5306	0.1	0.5	0	106	90	110	0			
Chloride	4.664	0.1	5	0.05255	92.2	90	110	0			
Phosphorus, Orthophosphate (As P)	4.747	0.5	5	0	94.9	90	110	0			
Sulfate	9.524	0.5	10	0	95.2	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.281	0.1	3.5	0	93.7	90	110	0			

Sample ID	LCS	Batch ID: R15517	Test Code: E300	Units: mg/L	Analysis Date 5/26/2005		Prep Date				
Client ID:		Run ID:	LC_050526A		SeqNo:	366187					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4586	0.1	0.5	0	91.7	90	110	0			
Chloride	4.665	0.1	5	0	93.3	90	110	0			
Phosphorus, Orthophosphate (As P)	4.688	0.5	5	0	93.8	90	110	0			
Sulfate	9.338	0.5	10	0	93.4	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.306	0.1	3.5	0	94.5	90	110	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

/

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining

Work Order: 0505088

Project: Phase II Monitoring

Sample ID	BTEX Ics 100ng	Batch ID: R15378	Test Code: SW8021	Units: µg/L	Analysis Date	5/14/2005 2:37:48 AM	Prep Date				
Client ID:			Run ID: PIDFID_050513A		SeqNo: 362246						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.32	0.5	20	0	102	88.7	114	0			
Toluene	20.41	0.5	20	0	102	89.3	112	0			
Ethylbenzene	21.21	0.5	20	0	106	88.6	113	0			
Xylenes, Total	61.73	0.5	60	0	103	89.4	112	0			

Sample ID	BTEX Ics 100ng	Batch ID: R15402	Test Code: SW8021	Units: µg/L	Analysis Date	5/17/2005 2:41:13 AM	Prep Date				
Client ID:			Run ID: PIDFID_050516A		SeqNo: 362606						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.62	0.5	20	0	98.1	88.7	114	0			
Toluene	19.42	0.5	20	0	97.1	89.3	112	0			
Ethylbenzene	19.56	0.5	20	0	97.8	88.6	113	0			
Xylenes, Total	58.39	0.5	60	0	97.3	89.4	112	0			

Sample ID	LCS-7989	Batch ID: 7989	Test Code: SW7470	Units: mg/L	Analysis Date	5/17/2005	Prep Date	5/17/2005			
Client ID:			Run ID: MI-LA254_050517A		SeqNo: 362938						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004839	0.0002	0.005	0	96.8	75.2	134	0			

Sample ID	LCSD-7989	Batch ID: 7989	Test Code: SW7470	Units: mg/L	Analysis Date	5/17/2005	Prep Date	5/17/2005			
Client ID:			Run ID: MI-LA254_050517A		SeqNo: 362962						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004773	0.0002	0.005	0	95.5	75.2	134	0.004839	1.35	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
 Work Order: 0505088
 Project: Phase II Monitoring

Sample ID	LCS-7969	Batch ID: 7969	Test Code: SW6010A	Units: mg/L	Analysis Date	5/16/2005 1:09:21 PM	Prep Date	5/13/2005			
Client ID:			Run ID: ICP_050516B		SeqNo: 362841						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.526	0.02	0.5	0	105	80	120	0			
Barium	0.5109	0.02	0.5	0	102	80	120	0			
Cadmium	0.5159	0.002	0.5	0	103	80	120	0			
Chromium	0.5079	0.006	0.5	0	102	80	120	0			
Lead	0.5041	0.005	0.5	0	101	80	120	0			
Selenium	0.5057	0.05	0.5	0	101	80	120	0			
Silver	0.5122	0.005	0.5	0	102	80	120	0			

Sample ID	LCSD-7969	Batch ID: 7969	Test Code: SW6010A	Units: mg/L	Analysis Date	5/16/2005 1:12:23 PM	Prep Date	5/13/2005			
Client ID:			Run ID: ICP_050516B		SeqNo: 362842						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5106	0.02	0.5	0	102	80	120	0.526	2.97	20	
Barium	0.4946	0.02	0.5	0	98.9	80	120	0.5109	3.23	20	
Cadmium	0.5016	0.002	0.5	0	100	80	120	0.5159	2.82	20	
Chromium	0.4943	0.006	0.5	0	98.9	80	120	0.5079	2.71	20	
Lead	0.4894	0.005	0.5	0	97.9	80	120	0.5041	2.95	20	
Selenium	0.4864	0.05	0.5	0	97.3	80	120	0.5057	3.89	20	
Silver	0.4958	0.005	0.5	0	99.2	80	120	0.5122	3.26	20	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

5/11/2005

Work Order Number 0505088

Received by

GLS

Checklist completed by

Signature

Date

Matrix

Carrier name UPS

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒ Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
Container/Temp Blank temperature?	1°	4° C ± 2 Acceptable If given sufficient time to cool.	

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

QA/QC Packages

Client: SAN JUAN ROMNEY

Project Name: Phase II Monitoring

Address: #50 Rd 4990

Bloomfield, NM 87413

Phone #: 505-1637-4161

fax #: 505-632-3911

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative			HEAL No.
					HgCl ₂	HNO ₃		
5-10-05	830A	H ₂ O	CW0+60	2-10A	X			0505088
	/	/	/	1-2500			H ₂ O ₄	-1
	/	/	/	1-2500				-1
	/	/	/	1-500ml			X	-1

-0.05	915A	H ₂ O	CW1 + 50	2-Volts	X	-2
				1-250ml		-2
				1-250ml		-2
				1-500ml	X	-2

Date: 5-11-05	Time: 3:30pm	Relinquished By: (Signature) <i>Indy J. J. J.</i>	Received By: (Signature) <i>[Signature]</i>
Date: 5-11-05	Time: 3:30pm	Relinquished By: (Signature) <i>Indy J. J. J.</i>	Received By: (Signature) <i>[Signature]</i>

Received By: (Signature) *[Signature]* 5-11-05
Received By: (Signature) *[Signature]* @ 14:00

HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

ANALYSIS REQUEST

[illegible]

Remarks:

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4901
www.hallenvironmental.com

ANALYSIS REQUEST

	Air Bubbles or Headspace (Y or N)
BTEX + MTBE + MIBS (8921)	X
BTEX + MTBE + TPH (Gasoline Only)	
TPH Method 8015B (Gas/Diesel)	
TPH (Method 418.1)	
EDB (Method 504.1)	
EDC (Method 8021)	
8310 (PMA or PAH)	
RCRA 8 Metals	
Anions (F^- , Cl^- , NO_3^- , PO_4^{3-} , SO_4^{2-})	X X
8081 Pesticides / PCB's (8082)	X X
8260B (VDA)	
8270 (Semi-VOA)	

Remarks:

Received By: (Signature) 5-11-05
Received By: (Signature) @ 4:00

Std  Level 4 

Other:

Client:

AP Juan Remy

Project Name:

PHASE II Monitoring

Project #:

Address: #50 Rd 4990

Bloomfield, Wm

87413

Phone #:

205-632-4161

Fax #:

05-632-3911

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative			HEAL No.
					HgCl ₂	HNO ₃		
5-p-05	245pm	H ₂ O	CW22+00	2-VOL	X			035088 -8
				1-250ml			H ₂ SO ₄	-8
				1-250ml				-8
				1-500ml			X	-8
5-10-05	310pm	H ₂ O	OW22+00	2-VOL	X			-9
				1-250ml			H ₂ SO ₄	-9
				1-250ml				-9
				1-500ml			X	-9

Date:	Time:
-------	-------

Date: 5-10-05 Time: 330am

Belangrijke bijv. (Signature)

1000

6

Received By: [Signature]

10/10/10

Remarks:

CONCLUSION

ANALYSIS REQUEST

[illegible]

Air Bubbles or Headspace (Y or N)

4901 Hawkins NE, Suite D

Albuquerque, New Mexico 87109

Tel. 505.345.3975 Fax 505.345.4107

www.hallenvironmental.com

COVER LETTER

May 31, 2005

Cindy Hurtado
San Juan Refining
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: Phase II Monitoring

Order No.: 0505119

Dear Cindy Hurtado:

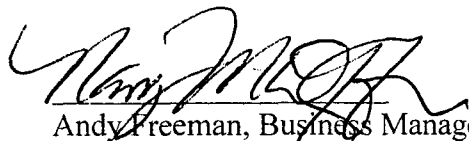
Hall Environmental Analysis Laboratory received 7 samples on 5/13/2005 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 31-May-05

CLIENT: San Juan Refining
Lab Order: 0505119
Project: Phase II Monitoring
Lab ID: 0505119-01

Client Sample ID: CW 23+10
Collection Date: 5/12/2005 8:30:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: IC
Fluoride	0.59	0.10		mg/L	1	5/14/2005
Chloride	450	2.0		mg/L	20	5/25/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/14/2005
Sulfate	9.7	0.50		mg/L	1	5/14/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	5/25/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	6300	50		µg/L	100	5/17/2005 10:12:56 AM
Toluene	76	10		µg/L	20	5/16/2005 10:37:05 PM
Ethylbenzene	190	10		µg/L	20	5/16/2005 10:37:05 PM
Xylenes, Total	350	10		µg/L	20	5/16/2005 10:37:05 PM
Surr: 4-Bromofluorobenzene	105	83.3-121		%REC	20	5/16/2005 10:37:05 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	0.00038	0.00020		mg/L	1	5/26/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.020		mg/L	1	5/18/2005 1:15:23 PM
Barium	0.73	0.020		mg/L	1	5/18/2005 1:15:23 PM
Cadmium	ND	0.0020		mg/L	1	5/18/2005 1:15:23 PM
Chromium	ND	0.0060		mg/L	1	5/18/2005 1:15:23 PM
Lead	ND	0.0050		mg/L	1	5/18/2005 1:15:23 PM
Selenium	ND	0.050		mg/L	1	5/18/2005 1:15:23 PM
Silver	ND	0.0050		mg/L	1	5/18/2005 1:15:23 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 31-May-05

CLIENT: San Juan Refining
Lab Order: 0505119
Project: Phase II Monitoring
Lab ID: 0505119-02

Client Sample ID: CW 23+90
Collection Date: 5/12/2005 9:20:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: IC
Fluoride	0.39	0.10		mg/L	1	5/14/2005
Chloride	350	2.0		mg/L	20	5/25/2005
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	5/14/2005
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	5/14/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/14/2005
Sulfate	4.9	0.50		mg/L	1	5/14/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	3400	10		µg/L	20	5/16/2005 11:07:51 PM
Toluene	35	10		µg/L	20	5/16/2005 11:07:51 PM
Ethylbenzene	170	10		µg/L	20	5/16/2005 11:07:51 PM
Xylenes, Total	400	10		µg/L	20	5/16/2005 11:07:51 PM
Surr: 4-Bromofluorobenzene	105	83.3-121		%REC	20	5/16/2005 11:07:51 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/26/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.020		mg/L	1	5/18/2005 1:19:31 PM
Barium	0.40	0.020		mg/L	1	5/18/2005 1:19:31 PM
Cadmium	ND	0.0020		mg/L	1	5/18/2005 1:19:31 PM
Chromium	ND	0.0060		mg/L	1	5/18/2005 1:19:31 PM
Lead	ND	0.0050		mg/L	1	5/18/2005 1:19:31 PM
Selenium	ND	0.050		mg/L	1	5/18/2005 1:19:31 PM
Silver	ND	0.0050		mg/L	1	5/18/2005 1:19:31 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 31-May-05

CLIENT: San Juan Refining
Lab Order: 0505119
Project: Phase II Monitoring
Lab ID: 0505119-03

Client Sample ID: CW 25+95
Collection Date: 5/12/2005 10:10:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: IC
Fluoride	0.43	0.10		mg/L	1	5/14/2005
Chloride	85	1.0		mg/L	10	5/25/2005
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	5/14/2005
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	5/14/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/14/2005
Sulfate	270	5.0		mg/L	10	5/25/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	1.0	0.50		µg/L	1	5/16/2005 11:38:28 PM
Toluene	ND	0.50		µg/L	1	5/16/2005 11:38:28 PM
Ethylbenzene	ND	0.50		µg/L	1	5/16/2005 11:38:28 PM
Xylenes, Total	ND	0.50		µg/L	1	5/16/2005 11:38:28 PM
Surr: 4-Bromofluorobenzene	100	83.3-121		%REC	1	5/16/2005 11:38:28 PM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/26/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.020		mg/L	1	5/18/2005 1:23:39 PM
Barium	0.085	0.020		mg/L	1	5/18/2005 1:23:39 PM
Cadmium	ND	0.0020		mg/L	1	5/18/2005 1:23:39 PM
Chromium	ND	0.0060		mg/L	1	5/18/2005 1:23:39 PM
Lead	ND	0.0050		mg/L	1	5/18/2005 1:23:39 PM
Selenium	ND	0.050		mg/L	1	5/18/2005 1:23:39 PM
Silver	ND	0.0050		mg/L	1	5/18/2005 1:23:39 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 31-May-05

CLIENT: San Juan Refining
Lab Order: 0505119
Project: Phase II Monitoring
Lab ID: 0505119-04

Client Sample ID: OW 25+70
Collection Date: 5/12/2005 10:20:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: IC
Fluoride	0.53	0.10		mg/L	1	5/14/2005
Chloride	50	1.0		mg/L	10	5/25/2005
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	5/14/2005
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	5/14/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/14/2005
Sulfate	350	5.0		mg/L	10	5/25/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	0.79	0.50		µg/L	1	5/17/2005 12:09:01 AM
Toluene	ND	0.50		µg/L	1	5/17/2005 12:09:01 AM
Ethylbenzene	ND	0.50		µg/L	1	5/17/2005 12:09:01 AM
Xylenes, Total	ND	0.50		µg/L	1	5/17/2005 12:09:01 AM
Surr: 4-Bromofluorobenzene	101	83.3-121		%REC	1	5/17/2005 12:09:01 AM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	5/26/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	0.14	0.10		mg/L	5	5/18/2005 2:48:09 PM
Barium	25	2.0		mg/L	100	5/18/2005 3:22:11 PM
Cadmium	ND	0.010		mg/L	5	5/18/2005 2:48:09 PM
Chromium	0.44	0.030		mg/L	5	5/18/2005 2:48:09 PM
Lead	0.13	0.025		mg/L	5	5/18/2005 2:48:09 PM
Selenium	ND	0.25		mg/L	5	5/18/2005 2:48:09 PM
Silver	ND	0.025		mg/L	5	5/18/2005 2:48:09 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 31-May-05

CLIENT: San Juan Refining
Lab Order: 0505119
Project: Phase II Monitoring
Lab ID: 0505119-05

Client Sample ID: OW 23+90
Collection Date: 5/12/2005 12:30:00 PM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: IC
Fluoride	0.72	0.10		mg/L	1	5/14/2005
Chloride	320	2.0		mg/L	20	5/25/2005
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	5/14/2005
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	5/14/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/14/2005
Sulfate	77	0.50		mg/L	1	5/14/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	980	10		µg/L	20	5/17/2005 12:39:31 AM
Toluene	16	10		µg/L	20	5/17/2005 12:39:31 AM
Ethylbenzene	31	10		µg/L	20	5/17/2005 12:39:31 AM
Xylenes, Total	130	10		µg/L	20	5/17/2005 12:39:31 AM
Surr: 4-Bromofluorobenzene	105	83.3-121		%REC	20	5/17/2005 12:39:31 AM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 31-May-05

CLIENT: San Juan Refining
Lab Order: 0505119
Project: Phase II Monitoring
Lab ID: 0505119-06

Client Sample ID: OW 23+10
Collection Date: 5/12/2005 1:00:00 PM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: IC
Fluoride	0.47	0.10		mg/L	1	5/14/2005
Chloride	270	2.0		mg/L	20	5/25/2005
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	5/14/2005
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	5/14/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	5/14/2005
Sulfate	360	10		mg/L	20	5/25/2005
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	340	5.0		µg/L	10	5/17/2005 10:43:37 AM
Toluene	9.2	5.0		µg/L	10	5/17/2005 10:43:37 AM
Ethylbenzene	11	5.0		µg/L	10	5/17/2005 10:43:37 AM
Xylenes, Total	80	5.0		µg/L	10	5/17/2005 10:43:37 AM
Surr: 4-Bromofluorobenzene	105	83.3-121		%REC	10	5/17/2005 10:43:37 AM
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	0.00096	0.00020		mg/L	1	5/26/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: CMC
Arsenic	ND	0.020		mg/L	1	5/18/2005 1:34:49 PM
Barium	0.75	0.020		mg/L	1	5/18/2005 1:34:49 PM
Cadmium	ND	0.0020		mg/L	1	5/18/2005 1:34:49 PM
Chromium	0.020	0.0060		mg/L	1	5/18/2005 1:34:49 PM
Lead	0.0091	0.0050		mg/L	1	5/18/2005 1:34:49 PM
Selenium	ND	0.050		mg/L	1	5/18/2005 1:34:49 PM
Silver	ND	0.0050		mg/L	1	5/18/2005 1:34:49 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 31-May-05

CLIENT: San Juan Refining
Lab Order: 0505119
Project: Phase II Monitoring
Lab ID: 0505119-07

Client Sample ID: Trip Blank

Collection Date:

Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	5/17/2005 2:10:51 AM
Toluene	ND	0.50		µg/L	1	5/17/2005 2:10:51 AM
Ethylbenzene	ND	0.50		µg/L	1	5/17/2005 2:10:51 AM
Xylenes, Total	ND	0.50		µg/L	1	5/17/2005 2:10:51 AM
Surr: 4-Bromofluorobenzene	97.4	83.3-121		%REC	1	5/17/2005 2:10:51 AM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 31-May-05

CLIENT: San Juan Refining
Work Order: 0505119
Project: Phase II Monitoring

QC SUMMARY REPORT

Method Blank

Sample ID	MBLK	Batch ID: R15380	Test Code: E300	Units: mg/L	Analysis Date 5/12/2005	Prep Date					
Client ID:		Run ID: LC_050512A			SeqNo: 361746						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID	MB	Batch ID: R15380	Test Code: E300	Units: mg/L	Analysis Date 5/12/2005	Prep Date					
Client ID:		Run ID: LC_050512A			SeqNo: 361769						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

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QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
Work Order: 0505119
Project: Phase II Monitoring

Sample ID	MB	Batch ID: R15380	Test Code: E300	Units: mg/L	Analysis Date 5/14/2005			Prep Date			
Client ID:		Run ID: LC_050512A			SeqNo: 362063						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1	0	0	0	0	0	0	0	0	
Chloride	ND	0.1	0	0	0	0	0	0	0	0	
Nitrogen, Nitrite (As N)	ND	0.1	0	0	0	0	0	0	0	0	
Nitrogen, Nitrate (As N)	ND	0.1	0	0	0	0	0	0	0	0	
Phosphorus, Orthophosphate (As P)	ND	0.5	0	0	0	0	0	0	0	0	
Sulfate	0.1124	0.5	0	0	0	0	0	0	0	0	J
Nitrate (As N)+Nitrite (As N)	ND	0.1	0	0	0	0	0	0	0	0	

Sample ID	MBLK	Batch ID: R15502	Test Code: E300	Units: mg/L	Analysis Date 5/25/2005	Prep Date					
Client ID:			Run ID: LC_050525A		SeqNo: 365704						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0505119
Project: Phase II Monitoring

QC SUMMARY REPORT
 Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R15402	Test Code: SW8021	Units: µg/L	Analysis Date 5/16/2005 7:08:29 AM	Prep Date					
Client ID:			Run ID: PIDFID_050516A		SeqNo: 362600						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	20.29	0	20	0	101	83.3	121	0			

Sample ID	Reagent Blank 5m	Batch ID: R15413	Test Code: SW8021	Units: µg/L	Analysis Date 5/17/2005 8:39:57 AM	Prep Date					
Client ID:			Run ID: PIDFID_050517A		SeqNo: 362968						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.76	0	20	0	98.8	83.3	121	0			

Sample ID	MB-8047	Batch ID: 8047	Test Code: SW7470	Units: mg/L	Analysis Date 5/26/2005	Prep Date 5/26/2005					
Client ID:			Run ID: MI-LA254_050526A		SeqNo: 366067						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
Work Order: 0505119
Project: Phase II Monitoring

Sample ID	MB-7986	Batch ID: 7986	Test Code: SW6010A	Units: mg/L	Analysis Date	5/18/2005 1:00:33 PM	Prep Date	5/17/2005			
Client ID:		Run ID: ICP_050518A			SeqNo:	363313					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Lead	ND	0.005									
Selenium	ND	0.05									
Silver	ND	0.005									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 31-May-05

CLIENT: San Juan Refining

Work Order: 0505119

Project: Phase II Monitoring

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS	Batch ID: R15380	Test Code: E300	Units: mg/L	Analysis Date 5/12/2005	Prep Date					
Client ID:		Run ID: LC_050512A			SeqNo: 361747						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5047	0.1	0.5	0	101	90	110	0			
Chloride	4.755	0.1	5	0	95.1	90	110	0			
Nitrogen, Nitrite (As N)	0.9372	0.1	1	0	93.7	90	110	0			
Nitrogen, Nitrate (As N)	2.449	0.1	2.5	0	98.0	90	110	0			
Phosphorus, Orthophosphate (As P)	4.836	0.5	5	0	96.7	90	110	0			
Sulfate	9.669	0.5	10	0	96.7	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.386	0.1	3.5	0	96.7	90	110	0			

Sample ID	LCS	Batch ID: R15380	Test Code: E300	Units: mg/L	Analysis Date 5/12/2005	Prep Date					
Client ID:		Run ID: LC_050512A			SeqNo: 361770						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5233	0.1	0.5	0	105	90	110	0			
Chloride	4.89	0.1	5	0	97.8	90	110	0			
Nitrogen, Nitrite (As N)	0.978	0.1	1	0	97.8	90	110	0			
Nitrogen, Nitrate (As N)	2.507	0.1	2.5	0	100	90	110	0			
Phosphorus, Orthophosphate (As P)	5.19	0.5	5	0	104	90	110	0			
Sulfate	9.994	0.5	10	0	99.9	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.485	0.1	3.5	0	99.6	90	110	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0505119
Project: Phase II Monitoring

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID	LCS	Batch ID: R15380	Test Code: E300	Units: mg/L	Analysis Date 5/14/2005	Prep Date
Client ID:		Run ID: LC_050512A	SeqNo: 362064			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Fluoride	0.516	0.1	0.5	0	103 90 110	0
Chloride	4.744	0.1	5	0	94.9 90 110	0
Nitrogen, Nitrite (As N)	0.9562	0.1	1	0	95.6 90 110	0
Nitrogen, Nitrate (As N)	2.427	0.1	2.5	0	97.1 90 110	0
Phosphorus, Orthophosphate (As P)	4.845	0.5	5	0	96.9 90 110	0
Sulfate	9.712	0.5	10	0.1124	96.0 90 110	0
Nitrate (As N)+Nitrite (As N)	3.383	0.1	3.5	0	96.7 90 110	0

Sample ID	LCS	Batch ID: R15502	Test Code: E300	Units: mg/L	Analysis Date 5/25/2005	Prep Date
Client ID:		Run ID: LC_050525A	SeqNo: 365705			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Fluoride	0.5249	0.1	0.5	0	105 90 110	0
Chloride	4.589	0.1	5	0	91.8 90 110	0
Nitrogen, Nitrite (As N)	0.9075	0.1	1	0	90.8 90 110	0
Nitrogen, Nitrate (As N)	2.328	0.1	2.5	0	93.1 90 110	0
Phosphorus, Orthophosphate (As P)	4.656	0.5	5	0	93.1 90 110	0
Sulfate	9.366	0.5	10	0	93.7 90 110	0
Nitrate (As N)+Nitrite (As N)	3.236	0.1	3.5	0	92.4 90 110	0

Sample ID	BTEX Ics 100ng	Batch ID: R15402	Test Code: SW8021	Units: µg/L	Analysis Date 5/17/2005 2:41:13 AM	Prep Date
Client ID:		Run ID: PIDFID_050516A	SeqNo: 362606			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Benzene	19.62	0.5	20	0	98.1 88.7 114	0
Toluene	19.42	0.5	20	0	97.1 89.3 112	0
Ethylbenzene	19.56	0.5	20	0	97.8 88.6 113	0
Xylenes, Total	58.39	0.5	60	0	97.3 89.4 112	0

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
Work Order: 0505119
Project: Phase II Monitoring

Sample ID	BTEX Ics 100ng	Batch ID: R15413	Test Code: SW8021	Units: µg/L	Analysis Date 5/17/2005 10:39:14 PM	Prep Date					
Client ID:			Run ID: PIDFID_050517A		SeqNo: 363019						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.19	0.5	20	0	95.9	88.7	114	0			
Toluene	19.54	0.5	20	0	97.7	89.3	112	0			
Ethylbenzene	19.59	0.5	20	0	97.9	88.6	113	0			
Xylenes, Total	59.19	0.5	60	0	98.7	89.4	112	0			

Sample ID	LCS-8047	Batch ID: 8047	Test Code: SW7470	Units: mg/L	Analysis Date	5/26/2005	Prep Date	5/26/2005			
Client ID:			Run ID: MI-LA254_050526A		SeqNo:	366068					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004958	0.0002	0.005	0	99.2	75.2	134	0			

Sample ID	LCSD-8047	Batch ID: 8047	Test Code: SW7470		Units: mg/L		Analysis Date 5/26/2005		Prep Date 5/26/2005			
Client ID:			Run ID:	MI-LA254_050526A			SeqNo:	366084				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.005284	0.0002	0.005	0	106	75.2	134	0.004958	6.36	0	

Sample ID	LCS-7986	Batch ID: 7986	Test Code: SW6010A	Units: mg/L	Analysis Date 5/18/2005 1:03:29 PM	Prep Date 5/17/2005					
Client ID:			Run ID: ICP_050518A		SeqNo: 363314						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.528	0.02	0.5	0	106	80	120	0			
Barium	0.5084	0.02	0.5	0	102	80	120	0			
Cadmium	0.5097	0.002	0.5	0	102	80	120	0			
Chromium	0.5011	0.006	0.5	0	100	80	120	0			
Lead	0.4976	0.005	0.5	0	99.5	80	120	0			
Selenium	0.4864	0.05	0.5	0	97.3	80	120	0			
Silver	0.5102	0.005	0.5	0	102	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0505119
Project: Phase II Monitoring

QC SUMMARY REPORT
 Laboratory Control Spike Duplicate

Sample ID	LCSD-7986	Batch ID: 7986	Test Code: SW6010A	Units: mg/L	Analysis Date	5/18/2005 1:06:28 PM	Prep Date	5/17/2005			
Client ID:			Run ID: ICP_050518A		SeqNo: 363315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5204	0.02	0.5	0	104	80	120	0.528	1.44	20	
Barium	0.5108	0.02	0.5	0	102	80	120	0.5084	0.483	20	
Cadmium	0.5099	0.002	0.5	0	102	80	120	0.5097	0.0392	20	
Chromium	0.5056	0.006	0.5	0	101	80	120	0.5011	0.894	20	
Lead	0.4979	0.005	0.5	0	99.6	80	120	0.4976	0.0656	20	
Selenium	0.4785	0.05	0.5	0	95.7	80	120	0.4864	1.65	20	
Silver	0.5105	0.005	0.5	0	102	80	120	0.5102	0.0645	20	

Qualifiers: ND - Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

5/13/2005

Work Order Number 0505119

Received by

GLS

Checklist completed by

Signature

Date

Matrix

Carrier name UPS

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☒	
Chain of custody present?	Yes ☒	No ☐		
Chain of custody signed when relinquished and received?	Yes ☒	No ☐		
Chain of custody agrees with sample labels?	Yes ☒	No ☐		
Samples in proper container/bottle?	Yes ☒	No ☐		
Sample containers intact?	Yes ☒	No ☐		
Sufficient sample volume for indicated test?	Yes ☒	No ☐		
All samples received within holding time?	Yes ☒	No ☐		
VOA - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐	
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐	

Container/Temp Blank temperature?

1°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

Remarks:

Air Bubbles or Headspace (Y or N)

