GW-21

Questionnaire

DATE:

2011

GW-21

New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

John H. Bemis
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

SCANNED

Jami Bailey
Division Director
Oil Conservation Division

May 12, 2011

Oil & Gas Facilities Questionnaire for Determination of a WQCC Discharge Permit

Only Water Quality Control Commission- regulated systems will be incorporated into the OCD's WQCC Permits, while OCD regulated systems will be handled under separate permit(s). A current discharge permit is valid until its normal expiration date or November 15, 2012, whichever is later. All facilities with processes subject to the Water Quality Act must have permits in place by November 16, 2012. H2S Contingency Plans; pits, ponds, above and/or below-grade tanks; waste treatment, storage and disposal; and landfarms and landfills may require separate permitting under the OCD Oil, Gas, and Geothermal regulations.

Proper completion and timely submission of this questionnaire is requested ***for all facilities with discharge permit expiration dates before November 15, 2012.*** *Please complete and submit a separate questionnaire for each facility* ***before July 15, 2011****.*

- **Name of the owner or operator of the facility**

  Oxy USA WTP Limited Partnership "Oxy"

- **Point of contact**

  Name Sandy Ballard
  Telephone 575.628.4122
  Email Sandy_Ballard@oxy.com
  Mailing address 329 Marathon Rd, Lakewood, NM 88254 / P.O. Box 1988, Carlsbad, NM 88221

- **Facility name** Indian Basin Gas Plant

- **Facility location**

  Unit Letter, Section, Township, Range S-23, T-21 South, R-23 East
  Street address (if any) NMPM, Eddy County, NM

- **Facility type**
  - ☐ Refinery
  - ☒ Gas Plant
  - ☐ Compressor
  - ☐ Crude Oil Pump Station
  - ☐ Injection Well
  - ☐ Service Company
  - ☐ Geothermal
  - ☐ Abatement
  - ☐ Other (describe)

- **Current and Past Operations** (please check all that apply)
  - ☐ Impoundments
  - ☐ Treatment Plant
  - ☐ Waterflood
  - ☐ Disposal Well
  - ☐ Brine Well
  - ☐ Wash Bay

☐ Steam Cleaning ☒ Groundwater Remediation

• **Facility Status** ☒ Active ☐ Idle ☐ Closed

• **Does this facility currently have a discharge permit?** ☒ Yes ☐ No

If so, what is the permit number? Groundwater Discharge Plan GW-21

• **Are there any routine activities at the facility which intentionally result in materials other than potable water being released either onto the ground or directly into surface or ground water?**
(This includes process activities, equipment maintenance, or the cleanup of historic spills.)
☐ Yes ☒ No

If so, describe those activities including the materials involved, the frequency of discharge, and the estimated volume per discharge event.

• **What is the depth below surface to shallowest ground water in the area?** ~180'-200'

• **Are there any water supply, groundwater monitoring, or recovery wells at the facility?**
Water supply ☒ Monitoring ☒ Recovery ☒

If these wells are registered with the Office of the State Engineer (OSE), what are the OSE well numbers? SW-1, SW-2, SW-3; For Monitoring/Recovery wells see attached list.

• **Are abatement actions ongoing?** No

• **Are there any active or inactive UIC wells present as part of the federal Underground Injection Control program associated with this facility?** ☒ Yes ☐ No

If so, what are the API numbers assigned to those wells?
30-015-31294 (AGI #1 well)

• **Are there any sumps at the facility?** ☒ Yes ☐ No
Number of sumps with volume less than 500 gallons 20
Use and contents Stormwater, lube oil, hydrocarbon condensate, glycol, selexol
Is secondary containment incorporated into the design? ☒ Yes ☐ No *See attached sump list.
*only on 5/20 sumps.
Number of sumps with volume greater than 500 gallons 0
Use and contents N/A
Is secondary containment incorporated into the design? ☐ Yes ☐ No

* Note: the remaining single-walled sumps are being retrofitted or removed per NMOCD Leonard Lowe approval on 10 May 2011. (See attached email)

- **Does the facility incorporate any underground lines other than electrical conduits, freshwater, natural gas for heating, or sanitary sewers?** ☒ Yes ☐ No
  If so, what do those buried lines contain?

Liquid hydrocarbon mix with lube oil and fresh water.
*please see attached list of underground lines.

THIS FORM IS DUE TO THE OIL CONSERVATION DIVISION BY JULY 15, 2011.

Questions? Please contact Glenn VonGonten at 505-476-3488 or Carl Chavez at 505-476-3490.

Thank you for your cooperation.

JAMI BAILEY
Director

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Table 2. Wells Retained for Groundwater Monitoring
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Monitoring Zone	Well ID	Well Type	Measuring Point Elevation (feet amsl)	Total Depth (feet btoc)	Top of Screen/ OpenHole Interval (feet btoc)	Screen/Open Hole Depth (feet)	Casing Diameter (inches)
Shallow Zone	MW-14	monitoring	3803.61	22.00	12.00	10.00	4
Shallow Zone	MW-45	monitoring	3808.68	24.00	9.50	14.50	2
Shallow Zone	MW-46	monitoring	3805.54	18.00	8.00	10.00	4
Shallow Zone	MW-49	monitoring	3805.61	24.00	14.00	10.00	2
Shallow Zone	MW-77	monitoring	3775.48	80.00	17.50	62.50	8
Shallow Zone	MW-106	monitoring	3721.97	92.00	12.50	79.5	4
Shallow Zone	MW-126	phase II infill	3795.58	70.00	30.00	40.00	7
Lower Queen	MW-58	recovery	3824.07	216.00	191.00	25.00	4
Lower Queen	MW-66	monitoring	3828.98	232.50	182.00	50.50	4
Lower Queen	MW-70	monitoring	3822.57	222.00	172.00	50.00	4
Lower Queen	MW-81	dual recovery	3817.03	225.00	71.00	154.00	8
Lower Queen	MW-88	monitoring	3789.7	175.00	142.50	32.50	8
Lower Queen	MW-111	monitoring	3824.44	230.00	190.00	40.00	4
Lower Queen	MW-113	phase I infill	3772.67	200.00	125.00	75.00	6
Lower Queen	MW-127	phase II infill	3825.17	245.00	195.00	50.00	4

Notes:
feet amsl Feet above mean sea level
feet btoc Feet below top of casing

Hamill, Jon R

From: Lowe, Leonard, EMNRD [Leonard.Lowe@state.nm.us]
Sent: Tuesday, May 10, 2011 12:43 PM
To: Hamill, Jon R
Subject: RE: GW-021 Sump Retrofit & Current Permit Approval

Mr. Hamill,

NMOCD Santa Fe approves your submitted retrofits for GW-021.

Per our verbal conversation on Tuesday, May 10, 2011, OXY may proceed with updating their sumps.

llowe

Leonard Lowe
Environmental Engineer
Oil Conservation Division/EMNRD
1220 S. St. Francis Drive
Santa Fe, N.M. 87505
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Fax: 505-476-3462
E-mail: leonard.lowe@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/

-----Original Message-----
From: Jon_Hamill@oxy.com [mailto:Jon_Hamill@oxy.com]
Sent: Thursday, May 05, 2011 9:04 PM
To: Lowe, Leonard, EMNRD; VonGonten, Glenn, EMNRD
Cc: Thomas_Bernal@oxy.com; Sandy_Ballard@oxy.com; Mark_Andersen@oxy.com; Timothy.Reed@tetratech.com; John_Kirby@oxy.com
Subject: GW-021 Sump Retrofit & Current Permit Approval
Importance: High

Leonard:

Per our conversation on Friday (4/29), the Oxy Indian Basin Gas Plant (IBGP) is requesting NMOCD email approval on the following changes, until our GW Discharge Plan 5-year renewal is formally approved and permit conditions issued by the NMOCD:

1) continue to operate off our current permit;

2) retrofit all single-containment sumps or replace with double-walled fiberglass sump w/ testing port (attached is our plans for the sump retrofits from page 14 in Oxy's GW-021 Discharge Plan)

3) continue with proposed MIT schedule for all underground piping (attached is the revised, proposed schedule from pages 23-24 in Oxy's GW-021 Discharge Plan)

Please let me know if you have any questions or comments. Thanks in advance for your consideration.

Regards,

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Jon R. Hamill ▪ CSP, CFPS, OHST
Health, Environment, & Safety Superintendent Oxy Permian-Primary Development

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Office: 575.628.4134 • Cell: 575.706.6011
Fax: 713.985.4931 • Email: jon_hamill@oxy.com

IBGP Sump Inventory					Sump Determination by Definition						
#	Current Sump Name	Primary Effluent(s)	Secondary Containment?	Sump Material	Is an Impermeable Vessel?	OR	Is it a Collection Device Incorporated within a Secondary Containment System?	<500 gals?	Remains Predominantly Empty?	Serves as a Drain or Receptacle for "small" releases?	Is not used to store, treat, dispose, or evaporate effluents?
1	Drum Storage Area Sump	Stormwater/Drum Chemicals	No	Concrete	No		Yes	Yes	Yes	Yes	Yes
2	Stabilizer Compressor Sump	Compressor Lube Oil	Yes	Fiberglass	Yes		No	Yes	Yes	Yes	Yes
3	Air Compressor Sump	Air Compressor Codensation/Coolant	No	Fiberglass	Yes		No	Yes	Yes	Yes	Yes
4	Steel Amine Collection Sump	Stormwater/Amine/Lube Oil	No	Steel	No		Yes	Yes	Yes	Yes	Yes
5	Cryo Collection Sump	Stormwater/Lube Oil	No	Steel	No		Yes	Yes	Yes	Yes	Yes
6	Recompressor Collection Sump1	Stormwater/Lube Oil	No	Steel	No		Yes	Yes	Yes	Yes	Yes
7	Recompressor Collection Sump2	Stormwater/Lube Oil	No	Steel	No		Yes	Yes	Yes	Yes	Yes
8	Lube Oil Sump	Stormwater/Lube Oil	No	Steel	No		Yes	Yes	Yes	Yes	Yes
9	Open Drain Collection Sump	Stormwater/Lube Oil	No	Steel	No		Yes	Yes	No	Yes	Yes
10	Inlet Compressor/A-2/Selexol Sump	Stormwater/Lube Oil/Selexol	Yes	Fiberglass	Yes		No	Yes	Yes	Yes	Yes
11	Generator/Glycol/SWD Triplex Pump Area Sump	Stormwater/Lube Oil	Yes	Fiberglass	Yes		No	Yes	Yes	Yes	Yes
12	Glycol/Small Condenser Sump (Hot sump)	Boiler Blowdown/Glycol	Yes	Fiberglass	Yes		No	Yes	Yes	Yes	Yes
13	Skimmer Basin Sump1	Stormwater/Produced Water/Codensate	No	Steel	No		Yes	Yes	Yes	Yes	Yes
14	Skimmer Basin Sump2	Stormwater/Produced Water/Codensate	No	Steel	No		Yes	Yes	Yes	Yes	Yes
15	Glycol Sump	Stormwater/Glycol	No	Steel	No		Yes	Yes	Yes	Yes	Yes
16	Amine Filter Containment Sump	Stormwater/Amine	No	Steel	No		Yes	Yes	Yes	Yes	Yes
17	Acid Gas Compressor Sump	Lube Oil	Yes	Fiberglass	Yes		No	Yes	Yes	Yes	Yes
18	LACT Unit Sump	Produced Water/Codensate	No	Steel	No		Yes	Yes	Yes	Yes	Yes
19	Flare Scrubber Transfer Pump Sump	Stormwater/Lube Oil	No	Steel	No		Yes	Yes	Yes	Yes	Yes
20	Car Wash Sump	Stormwater/Drum Chemicals	No	Concrete	No		Yes	Yes	Yes	Yes	Yes
21	Open Top Transfer Sump	Stormwater/Lube Oil	No	Concrete	Yes		No	Yes	Yes	Yes	Yes

Yellow indicates current sumps that are tested monthly.

Pink indicates current sumps that are tested annually.

White indicates no current testing frequency.

NMAC Sump Definition:

Sump means an impermeable vessel, or a collection device incorporated within a secondary containment system, with a capacity less than 500 gallons, which remains predominantly empty, serves as a drain or receptable for de minimus (small) releases on an intermittent basis and is not used to store, treat, dispose, or evaporate products or waste.

"Sump" means an impermeable vessel, or a collection device incorporated within a secondary containment system, with a capacity less than 500 gallons, which remains predominantly empty, serves as a drain or receptacle for de minimus releases on an intermittent basis and is not used to store, treat, dispose of or evaporate products or wastes.

If all YES answers, then the sump is confirmed per NMAC 19.15.17.7	Planned Corrective Action	Can Sump be eliminated from definition?	Date Sump Eliminated or Retro-fitted?	Projected New Sump List	Projected New Above-Grade Tanks	Projected New Below-Grade Tanks
Yes	Fill in with concrete	Yes				
Yes	N/A	No	N/A	Stabilizer Compressor Sump		
Yes	Install above-ground double walled tank >500gal	Yes; reclassify as tank			Air Compressor Tank	
Yes	Install steel inner containment OR a fiberglass double-walled sump	No		Steel Amine Collection Sump		
Yes	Install steel inner containment OR a fiberglass double-walled sump	No		Cryo Collection Sump		
Yes	Install sweeps and eliminate sump; fill in with concrete	Yes				
Yes	OOS indefinitely; need to fill in with concrete	Yes				
Yes	Fill in with concrete and install a containment diaper on line	Yes				
No	Install below-grade tank double walled; have engineering to assist and install during 2010 turnaround	Yes; reclassify as tank				Open Drain Collection Tank
Yes	N/A	No		Inlet Compressor/A-2/Selexol Sump		
Yes	N/A	No		Generator/Glycol/SWD Triplex Pump Area Sump		
Yes	N/A	No		Glycol/Small Condenser Sump (Hot sump)		
Yes	Install steel inner containment	No		Skimmer Basin Sump1		
Yes	Install steel inner containment	No		Skimmer Basin Sump2		
Yes	Install steel inner containment	No		Glycol Sump		
Yes	Install steel inner containment	No		Amine Filter Containment Sump		
Yes	N/A	No		Acid Gas Compressor Sump		
Yes	Fill in with concrete	Yes				
Yes	Fill in with concrete	Yes				
Yes	Fill in with concrete	Yes				
Yes	Fill in with concrete	Yes				

11 Sumps; 1 AST; 1 UST, 8 sumps eliminated

Table 5. Underground Piping

Piping Name	Pathway	Flow Rate (Bbls/day)	Pressure (psig)	Diameter (inch)	Piping Type	Baseline Integrity Test
Produced Water Line	Inlet valve pit to skimmer basin gunbarrel	1500	15	6	Poly	Jul 2010
Recompressor & Expander Lube Oil Makeup Line	From lube oil tank makeup pump to south of expander skid	<1	150	1	Steel	Aug 2010
Stabilizer Compressor Dump	From Stab comp dumps to south of stab comp containment	15	30	1	Steel	Sep 2010
Selexol Underground Pipeline	Selexol storage tank to Selexol unit	As needed	25	2	Steel	Oct 2010
Waste Effluent Transfer Piping	Open drain collection sump to skimmer basin	80	30	4	IC Steel	Nov 2010
LACT Sump Pump to Main Boiler Sump	LACT sump pump to main boiler sump	1	<35	2	Steel/Poly	Nov 2010
Product Skimmer Recovery Line	Skimmer basin oil transfer pump to inlet condensate line	20	40	2	Steel	Dec 2010
Open Drain System	Various plant units to open drain collection sump	15	No	3.2	IC Steel	Dec 2010
Underground Amine Lines Tied to Valve "Octopus" From:						
Little Slop		1	5	2	Steel	Jan 2011
Flash Tank		1	80	2	Steel	Jan 2011
Bag Filters		<1	80	2	Steel	Jan 2011
Charcoal Filters		<1	80	2	Steel	Jan 2011
Reflux pumps		1	20	2	Steel	Jan 2011
Amine Storage Tank 8		1	5	2	Steel	Jan 2011
Amine Storage Tank 9		1	5	2	Steel	Jan 2011
Condensate Delivery Sales	Condensate bullet storage tanks (1) to condensate loading area (LA)	300	<10	4	Poly	Mar 2011
Glycol Storage Tank Discharge	Storage tank transfer pump to glycol flash tank	1	70	2	Poly	Apr 2011
SWD pump discharge to 6" fiberglass	25-102 to 25-101	As needed	10	3	Steel	Apr 2011
Condensate rerun line from lact unit to water tank	East of LACT, south to water truck unloading	As needed	0	2	Poly	Apr 2011
Inlet Filter/Separator Closed Drain Connection	Inlet filter/separator to closed drain header	0	40	2	Steel	May 2011
From Slugcatcher to Metering separator	00-100 to 31-100 to 31-101 to 31-102	150	200	2	Steel	Jun 2011
Glycol Overhead Coalescer to Closed Drain	12-102 to 31-108	As needed	60	2	Steel	Jul 2011
Acid gas suction line to skimmer basin	18-100 to 18-101	As needed	0	1	Steel	Jul 2011
Gas Gathering Blowdown lines	20-106 through 109 to 20-110	As needed	1000	various	Steel	Aug 2011
Hot sump pump discharge to east water tank	OD-104 to OD-105	80	0	2	Steel	Sep 2011
Amine charcoal open drain sump pump discharge	OD-106 to OD-107	As needed	0	1	Steel	Oct 2011
NGL proving station to flare scrubber	34-104 to 34-105	As needed	0	1 and 2	Steel	Nov 2011
Flare scrubber pump discharge to stabilizer feed tank	34-106 to 34-103	50	75	2	Steel	Dec 2011
Selexol Filter drains to still	17-107 through 17-109	As needed	75	2	Steel	Jan 2012
Amine overhead coaleser to closed drain	31-109 to 31-110	As needed	60	1	Steel	Feb 2012
GTU inlet filter coaleser and regen scrubber to closed drain	31-113 and 31-116 to 31-111	As needed	60	1	Steel	Feb 2012
Condensate Rerun Line	Condensate bullet storage tanks to overhead pipe rack	10:100 max	<20	2	Steel	Mar 2012
Selexol Reflux Water	Selexol unit to gunbarrel	1	20	2	Steel	Dec 2012
Injection Line	Fiberglass saltwater tank to pump suction header	3000	30	10	Steel	Dec 2012
Condensate Make Line	Stabilizer to condensate storage tanks	300	0	2	Steel	Dec 2012
Softwater Regeneration	Water softner in water treatment building to fiberglass SWD tank	385	15	2	PVC	Dec 2012
Inlet Condensate Line	Inlet valve pit to overhead pipe rack	350	<30	4	Steel	Dec 2012
Co-Production Line to Skimmer Basin Gunbarrel	Co-production line outside plant to skimmer basin gunbarrel	2000	<10	6	Fiberglass	Dec 2012
Dump Line	Stabilizer feed tank to skimmer basin	50	40	4	Poly	Dec 2012
SWD pump discharge to A.G.I. #1 Well	25-109 to injection wellhead	3000	2000	6	Fiberglass	Dec 2012
Closed Drain Scrubber Dump Line	Closed drain scrubber to skimmer basin gunbarrel	5	40	2	Poly	Dec 2012
Blow Down Collection Header	Open drain collection sump area to boiler blow down bottle	80	40	2	Steel	Dec 2012
Selexol Reflux Water to Reflux pump suction	17-110 to 17-106	170	8	3	Steel	Dec 2012
Selexol condensate to Gunbarrell	17-113 to 17-114	10	0	1	Steel	Dec 2012
Softwater, SWD bypass and RO reject to White tank	24-107 to 24-108	125	0	4	Steel	Dec 2012
LINES REMOVED FROM TABLE 5 UNDERGROUND PIPING MIT LIST						**COMMENTS**
SRU Steam Condensate Return	From SRU to boiler feed tank	10	0	2	Stainless	Brought above ground
Line 3 & 4 Metering Separator Oil Dump Line to Inlet Condensate Line	Line 3 & 4 metering separator oil dump line to inlet condensate line	200	40	3	Steel	Brought above ground
Inlet Filter/Separator Dump Line	Inlet filter/separator to inlet condensate line	20	<10	2	Steel	Out Of Service (OOS)
Open Drain Collection Sump Pump to Skimmer Basin Gunbarrel	Open drain collection sump pump to skimmer basin gunbarrel	80	100	4	IC Steel	Duplicate of Line #5
Main Boiler Blowdown to Sump	Main boiler blowdown collection header	15	100	2	Steel	Brought above ground
Reverse Osmosis Wastewater Piping (out of service due to permit)	RO unit in water treatment building to air stripper outlet to infiltration	200	60	2	Poly	Out Of Service (OOS)
Untreated Groundwater Bypass Piping	Diversion valve at treatment compound to skimmer basir	2676	50	2	Poly	Out Of Service (OOS)
Treated Groundwater Piping	Air stripper at treatment compound to skimmer basin SWD tank	125	20	6	Poly	Out Of Service (OOS)
SRU Waste Heat Boiler & Large Condenser Blowdown Discharge Piping (OOS)	Waste heat boiler and large condenser to steel saltwater tanl	10	70	2	Steel	Brought above ground
Divert Line	Inlet valve pit to condensate bullet storage tank:	1	40	2	Poly	Out Of Service (OOS)
Open Top Tank To Skimmer Basin Gunbarrel	Open top transfer pump to skimmer basin gunbarrel	50	10	2	Steel	Out Of Service (OOS)

Cooling Tower Blowdown to Skimmer Basin	Cooling tower blowdown to skimmer basin SWD tank	200	<10	2	Poly	Fresh Water Line
Morrow Gas Separator Dump Line	Morrow gas separator to closed drain	0	<5	2	Steel	Out Of Service (OOS)
Horizontal H.P. Inlet Scrubber Closed Drain	Removed from service	1	40	2	Steel	Out Of Service (OOS)
WHB Blowdown	WHB's to open drain collection sump area	65	100	2	Steel	Duplicate of Line #43
Inlet Condensate Divert Line to the Transfer Tank (OOS)	Inlet condensate divert line to the transfer tank	1	270	2	Steel	Out Of Service (OOS)
Inlet Compressor Suction Scrubber (H&V) Dump Lines to Inlet Metering Separator (OO	Inlet comp. suction scrubber (H&V) dump lines to inlet metering system	3	30	2	Steel	Out Of Service (OOS)
Soft Water	From soft water pump discharge to boiler feed tanks	1	5	2	Steel	Soft Water Line
Acid Gas Compressor Suction Line	SRU to acid gas compressor	1 MMSCF/d	6	10	Steel	Natural Gas Line
Acid Gas Compressor Sweet Purge Gas	Pipe rack at glycol unit to acid gas compressor	As needed	50	2	Steel	Natural Gas Line
Acid Gas Compressor Instrument Air	Pipe rack at glycol unit to acid gas compressor	As needed	80	2	Steel	Dry Air System Line
Glycol Flash Gas to Closed Drain	Glycol flash tank to closed drain scrubber	I MMSCF/d	100	2"	Steel	Natural Gas Line
Cyclone Dump to Closed Drain	Cyclone to closed drain scrubber	As needed	1000	2" / 3"	Steel	Out Of Service (OOS)