

From: Karen Northcutt [<mailto:knorthcutt@earthlink.net>]
Sent: Friday, December 20, 2013 9:29 AM
To: Ed Almanza
Cc: Mike Finch; Lauren Jue
Subject: Visual Sim Update

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DEC 20 2013

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Hi,

Wanted to get you an update on the Focus 360 work. We had previously determined that Friday December 20, 2013 would be the completion date for visual simulations in the same format that was used in Appendix A to the Planning Application. Right now, Focus 360 is still running the visual simulations and renderings (the files are huge). We will be providing the model (the basis for all the visual simulations and renderings) along with a key map showing the locations of the simulation views, as well as a chart that describes the location for the visual simulations for the different phases of the project. This information will be very important for the consultants to have (MRS/Stantec).

The delay in getting the actual visual simulations completed was a result of the following:

1. Based on direction provided by the City's consultants, the 14 original view points were reshot using a 50mm lens. Of these view points, 6 of the view locations had to be reshot again at a location further back from the project site because with the 50mm lens they were too close to the site to adequately show the project improvements. These shots have been included as additional view points and 6 additional visual simulations with the 6 conditions are being prepared.
2. Based on direction provided by the City's consultants, for the visual simulation conditions for Phase 2 with drill rig, Phase 4 with drill rig, and Phase 4 with workover rig, Focus 360 identified the wells that have the potential for a worst-case effect to the views with the drill and workover rig. As a result of this analysis, Focus 360 identified 6 well locations rather than the 3 that were originally thought. Of these 6, 3 wells were identified for Phase 2 with drill rig, 4 wells were identified for the Phase 4 with drill rig, and 4 wells were identified for Phase 4 with workover rig. Each of these different conditions are now being modeled.
3. Based on pending information from the drill rig manufacturing, Focus 360 is remodeling the drill rig mast imagery. We anticipate receiving that information today. This information will still need to be included in the visual for the drill rig mast imagery.

The E&B team will be receiving the renderings today at the close of business. As we had indicated to the City on December 3, 2013, Focus 360 is closed the week of Christmas. They are back on December 30th and will need to incorporate the comments that we have from our internal review and produce the deliverables in the content and format similar to the Planning Application deliverables (which takes a while with the size of the high resolution images that they use).

Anticipate the model to be sent in an email with a link to a dropbox, since the files are large. The other two items will be send via regular email.

Let me know if you have questions.

Thanks,
Karen

Pamela Townsend

From: Edward Almanza <superpark@igc.org>
Sent: Wednesday, December 18, 2013 7:56 PM
To: Pamela Townsend
Cc: Yu-Ying Ting
Subject: FW: Remaining Responses Regarding Air Quality Impact Analysis
Attachments: TransmittalMemo_12172013.pdf

The attached info is from the applicant in response to questions from MRS. We might want to print this and place in our project file (though MRS will surely have it in their files as well).

Ed

From: Lauren Jue [mailto:lajue@earthlink.net]
Sent: Wednesday, December 18, 2013 12:35 PM
To: Edward Almanza
Cc: Joe Selgrath; Carl Haase; Karen Northcutt
Subject: Remaining Responses Regarding Air Quality Impact Analysis

Ed,

Attached please find the remaining responses to the air quality questions. Since this was addressed to you, I did not send it to Luis or Greg and would appreciate it if you would handle that.

Please let me know if there are any additional clarifications needed as soon as possible. Joe Selgrath will be out of town for the holidays from December 21st through January 3rd. Although his staff could respond to questions, they are not as versed in the proposed project and the analysis as he is.

Regards,

Lauren Jue
Northcutt & Associates

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DEC 19 2013

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Via Email

December 17, 2013

To: Edward Almanza
City of Hermosa Beach

Fr: Joe Selgrath
EnviroTech Consultants Inc.

Subject: Data Request

In response to your request please find attached the following electronic files that were not included in the previous submittal.

1. Capstone Turbine Exhaust Temperature – The Capstone micro-turbine has an exhaust temperature of approximately 570 °F. The exhaust temperature may vary from this value depending on the power load. E&B plans to capture heat from the exhaust of the microturbine for use within the facility. The heat recovery system will reduce the temperature of the exhaust to 325 °F. The exhaust temperature will be dependent on the design of the heat recovery unit. While no detailed design has been completed, an exhaust temperature of 325 °F is reasonable based on the heat requirements of the facility.
2. Phase 2 Combustor – The Flare Industries Clean Enclosed Burner is the most likely candidate for this application. Several of these devices have been permitted in the SCAQMD. Model CEB 350 is an ideal candidate for this project. (See Attachment A). Equipment specifications are provided on page 4 and emissions specifications are provided on page 3 of the brochure.

NOx emissions from this device are the same as that provided in the original submittal. VOC emissions are reduced from 0.007 lb/mmbtu to 0.004 lb/mmbtu. CO emissions are reduced from 0.037 lb/mmbtu to 0.007 lb/MMBtu.

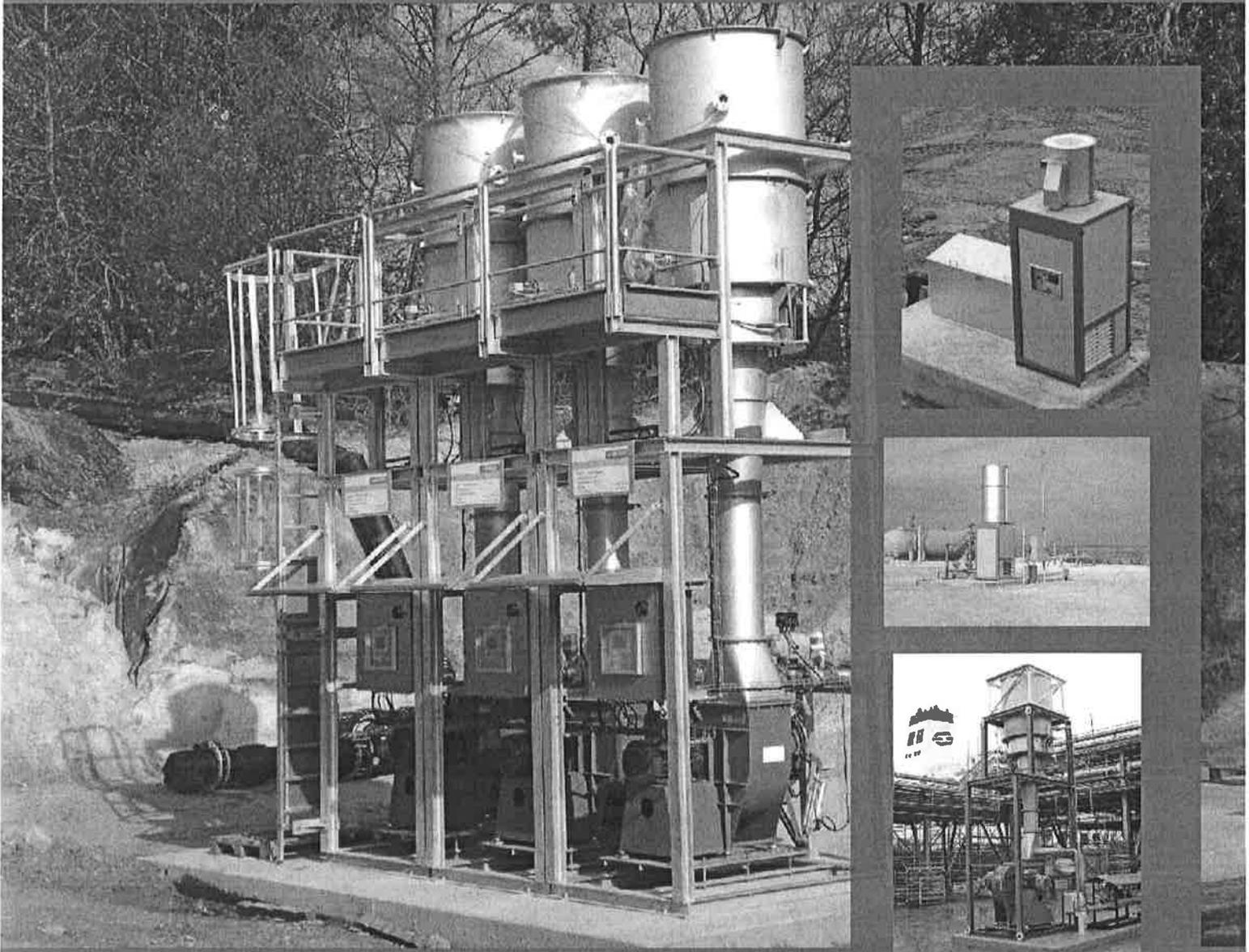
3. Emergency Use Flare – This flare will be used a maximum of 200 hours per year primarily for testing and maintenance. The flare will need to be designed to meet the constraints of the location, while still maintaining compliance with SCAQMD emissions. Detailed design of this device has not been completed, however a review of a similar device from Flare Industries indicates that our emissions estimates are reasonable. (See Attachment B)



FLARE

INDUSTRIES
INNOVATIVE COMBUSTION SOLUTIONS

CEB® - Vapor Treatment Systems



smart technology

clean air

Introduction to Flare Industries

Flare Industries, headquartered in Austin, Texas, USA, is one of the industry leaders in combustion and pollution control technology, providing quality flare systems, thermal oxidizers, incinerators, burners, and ignition systems since 1984. Flare Industries' world-class air quality and pollution control equipment is designed by some of the most experienced engineers in the industry.

The focus of our team is to provide cutting edge combustion and environmental technology, experience, innovation, and superior service; all of which give our growing client base successful solutions and the highest level of quality and satisfaction.

With offices located all around the world and a sales and marketing network spanning the globe, our company is totally dedicated to the global marketplace and rapidly changing business environment of the 21st century. Our staff of engineers is well-versed in multiple languages, cultures, and business environments, providing our clients with superior service. Flare Industries has thousands of installed combustion systems currently eliminating industrial waste around the world.

Introduction to Clean Enclosed Burner (CEB®) Technology

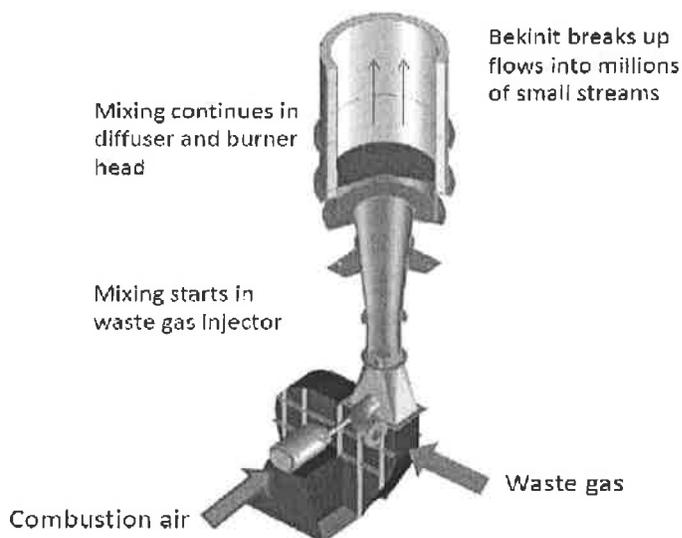
In July 2012, Flare Industries acquired the Clean Enclosed Burner (CEB®) product line from N.V. Bekaert S.A. The CEB uses Bekaert's proprietary Bekinit® metal fiber for pre-mix surface combustion. Premix surface combustion has been developed and successfully implemented by Bekaert since the mid 1980s in millions of OEM burners for domestic hot water heaters and high efficiency boilers.

The primary advantages of the CEB® products versus conventional enclosed flares or open flares are the ultra-low emissions and very high VOC destruction efficiencies (99.99%). This coupled with the compact footprint and no smoke, soot, or visible flame, make it a very attractive solution for vapor combustion requirements.

The CEB® product line ranges from units with a nominal thermal capacities of 0.34 MMBTU/hr (1 kw) to 40 MMBTU/hr (12 MW). The CEB® systems are modular and can easily be combined to cover the most demanding flow and thermal capacity requirements, ensuring cost effective operation under all process conditions. Future expansion or reduction of the installed thermal capacity is easy to realize, making sure that the CEB® installation is always configured to the actual requirements.

Pre-mixed surface combustion is a combustion process in which the fuel (waste gas and/or support gas) and combustion air streams are thoroughly mixed into a homogeneous mixture before passing through the Bekinit® permeable medium which breaks up the flow into millions of small flow streams just before combustion takes place. The combustion process actually takes place above the permeable medium.

The CEB® utilizes a variable speed fan to provide the correct air flow to pre-mix with the waste gas prior to combustion. The system is automatically controlled to ensure ultra-low emissions even if the waste gas flow or composition changes. The CEB® can also be fitted with an assist or support gas line for lean gas applications $< 160 \text{ Btu/scf}$ ($< 6 \text{ MJ/Nm}^3$) or when the waste gas is too low in volume.



Flare Industries' CEB® offers several advantages...

All CEB® systems are capable of achieving VOC destruction efficiencies of up to 99.99 %, while generating less than 15 ppmv (0.023 Lbs/MMBTU) of NO_x and less than 10 ppm CO (0.015 Lbs/MMBTU) at 3% oxygen.

The CEB® operates without a visible flame, smoke/soot or any odors. Because of the non-luminous flame, it does not generate heat from radiation (only convection). The compact footprint, simple installation, easy maintenance and very low life cycle/operational costs make the CEB® suitable for every type of application, from continuous and discontinuous operation to emergency backup of other equipment.

CEB® systems can easily be combined to cover a wide range of flows and operating conditions. By operating the CEB® units in a modular way, you can tailor the capacity of the total system to your current needs, which reduces your operating costs while minimizing your emissions. Heat recovery modules are available for all models and can be installed afterwards.

Where you can find CEB® systems...

CEB® systems have been installed in over 75 applications around the world to date. They are found in on-shore upstream oil and gas (drilling/exploration/well testing/associated gas), midstream oil and gas (treatment/separation systems and compressor stations), gas transport pipe line operations (pressure relief/degassing), tank park- load/unload applications (tank-ship-train-truck), tank venting, tank cleaning, pipe line cleaning, (petro)chemical industry (reactor venting, reactor and pipe line cleaning, treatment of residue gases/vapors), synthetic gas production, biogas and biofuel production, wastewater treatment, landfill, mine-gas etc.

Based on our in-depth knowledge and practical experience in many applications, the CEB® systems are offered in tailored solutions to meet your vapor/waste gas treatment needs, from vapor/waste gas flow control trains (for general or zoned/classified areas) to vapor/waste gas treatment.

CEB® systems are often a sound alternative to (Regenerative) Thermal Oxidizers, Vapor Recovery Units, incinerators and traditional flares, especially when emissions (VOC, NO_x or CO) are a restriction, when the waste gas/vapor contains very low energy (6 MJ/Nm³ or 160 BTU/scf) or when the flow rates or waste gas/vapor composition changes often.

Main advantages of the CEB® systems

Very low emissions (at 3% oxygen level in the flue gas and with Methane as reference gas)*:

- NO_x < 15 ppm or < 31.7 mg/Nm³
- CO < 10 ppm or < 12.5 mg/Nm³
- C_xH_y < 10 ppm or < 7.2 mg/Nm³

- Combustion efficiency (DRE) ≥ 99.99% within the full operating range
- Standard operational temperature 2192-2282°F (1200-1250°C)
- Best acceptance of (fast) changes in vapor/gas compositions
- Best acceptance of mixed vapors/gasses, of (fast) flow volume and simultaneous flow volume and gas composition changes
- Very good lean gas processing capabilities, combustion down to 10 - 15 % methane equivalent (4 - 6 MJ/Nm³)
- Very low support (fuel) gas consumption in case of i.e. inert gas flows (such as Nitrogen or Air)
- Very compact (footprint and height)
- High turn down ratio (> 1:10)
- Full PLC controlled and monitored stand-alone operation with remote control/monitor options
- No residence time required (short chimney/stack)
- No luminous flame, smell/odor emission and infra-red/heat radiation
- Smokeless combustion, no soot
- Low Noise Level
- Fast start-up (from cold stand-by to full operation at 1200 degree Centigrade in < 1 minute)
- Full flexibility within the thermal operational range regarding changes in flow volume and/or gas composition
- Easy and fast installation (fully assembled and tested in the factory, plug & play on site)

Achieve ultra-low emissions with our pre-mix surface technology

Characteristics of the CEB Product Portfolio

	Nominal Thermal Capacity (MW // MMBtu/hr)	Nominal waste gas flow** per hour (Nm ³ /h-scfm)	Number of burner units	Standard waste gas connection (ANSI 150 Lbs RF)	Footprint and Height (mm)	Weight (kg - Lbs)	Electrical power consumption max (kWatt - HP)
CEB 10	0.1 / 0.34	9 - 5.7	1	1"	900 x 900 x 1500	350 - 768	2.0 - 2.68
CEB 50	0.5 / 1.7	45 - 27	1	2"	1100 x 1100 x 3300	820 - 1800	2.0 - 2.68
CEB 100	1.0 / 3.4	90 - 53	1	2"	1100 x 1100 x 3300	850 - 1870	2.0 - 2.68
CEB 350	3.5 / 12	316 - 186	1	3"	1100 x 1100 x 4024	1050 - 2310	3.5 - 4.7
CEB 500	5.0 / 17	452 - 266	1	4"	1100 x 1100 x 4024	1130 - 2490	6.0 - 8.0
CEB 800	8.0 / 27	723 - 426	1	4"	1430 x 1953 x 5859	2750 - 6060	16.0 - 21.4
CEB 1200	12.0 / 41	1085 - 639	1	4"	1430 x 1953 x 5859	2850 - 6280	31.0 - 41.6

Inlet Waste Gas Pressure (min/max): 25-200 mbar(g) or 10-80" W.C.

*Emissions results are based on natural gas combustion with gross heating value of 1,069 Btu/scf (39.82 MJ/Nm³)

**Waste gas flow based on natural gas combustion with gross heating value of 1,069 Btu/scf (39.82 MJ/Nm³)

CEB® systems for loading / unloading and tank park applications

The CEB® vapor combustor is an ultra-low emission system that can achieve VOC destruction efficiencies up to 99.99%, while generating less than 15 ppmv of NO_x at 3% oxygen (<0.023 Lbs./MMBTU) and less than 10 ppmv CO (<0.015 Lbs/MMBTU)*. This makes the CEB® the ideal choice for your terminals, which are in environmentally sensitive areas where VOC or NO_x emissions are critical.

In addition, the CEB® is capable of handling a wide range of waste gases/vapors without modification, giving you a very flexible solution for your complex operation. All your waste gas/vapor streams from your tanks, trucks, railcars or vessels can be handled by the same unit.

The incredibly stable premixed, surface combustion technology allows the CEB® to operate on as little as 6MJ/Nm³ or 160 BTU/scf without the need for support gas. If you are dealing with tanks that are blanketed with nitrogen or are handling a very lean waste gas, the CEB® technology will significantly reduce your support gas requirements and your operating costs.

The efficiency of the premix surface combustion technology allows the CEB® to be built in a very compact footprint with a short exhaust stack. Thus the CEB® is ideal for installations where space is limited. Furthermore, the low radiant footprint that is generated by the non-luminous flame generates very little radiant heat (convective heat only), which allows you to site the CEB® closer to other equipment and structures than traditional flares.

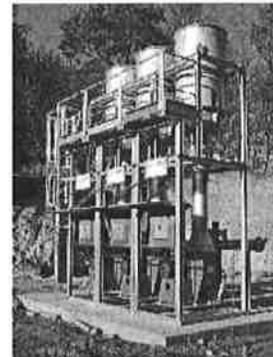
Typical Applications

- Truck and rail car loading/unloading
- Barge and ship loading/unloading
- Storage tank transfer and breathing
- Barge and tank degassing
- Pipeline stations and maintenance

*Emissions results are based on natural gas combustion with gross heating value of 39.82 MJ/Nm³



CEB 800* at tank park



3 x CEB 800*

Solve your hydrocarbons emissions at the lowest costs

CEB® systems for petrochemical and chemical industries

Flare Industries' CEB® Technology is the perfect solution for the wide range of applications and requirements that are present in today's petrochemical facilities. With an ever increasing focus on the environment and pollution (VOCs, NO_x and CO), more and more pressure is placed on petrochemical facilities to reduce their site emission levels.

One way to achieve this, without impacting productivity, is to replace conventional candlestick and enclosed flares with the ultra low emission CEB® technology. The proprietary pre-mix, surface combustion technology employed by the CEB® enables it to achieve VOC destruction efficiencies of up to 99.99 %, while generating the lowest emission levels available in the market and can significantly reduce your sites overall emissions.

In some regions of the world, environmental agencies are monitoring the misuse of plant emergency flares. In Texas (US), the Texas commission on Environmental Quality (TCEQ) is using infrared camera systems to detect VOC emissions from petrochemical plants. In doing this, they have discovered that many facilities are sending small amounts of process waste gas to their large, plant-wide emergency flares, which are sized for much larger volumes. The result is a staggering reduction in the flares destruction efficiency, sometimes as low as 50%. The TCEQ is now promoting the concept of using small, ultra low emission control devices for process waste gases and leaving the plant-wide emergency flare for just that, emergencies.

In addition, for storage tanks that are blanketed with nitrogen, the CEB® is the most economical choice for a control device for your tank breathing applications. This is due to the very stable combustion reaction thanks which enables the CEB to operate on very lean waste gases, and still meet its emission guarantees without the need for support gas.

The CEB® is ideal for:

- Vent gas flare
- Reactor, dryers and other process vents
- Tank loading
- Tank or pipeline degassing
- In conjunction with emergency flare to handle small volume releases

*Emissions results are based on natural gas combustion with gross heating value of 39.82 MJ/Nm³



CEB 350* at petrochemical plant



Two CEB 4800* at chemical plant

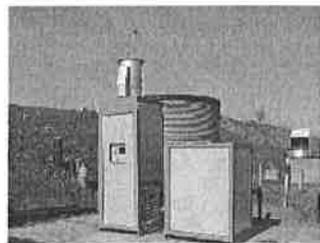
CEB® systems for biogas and synthetic gas applications

CEB Systems have been utilized for a variety of biogas applications with great success. The benefits of the CEB systems are recognized and appreciated in the following applications.

Pipeline Purification - The CEB is ideally suited to handle the lean tail gas streams produced by the pressure-swing adsorption or membrane systems with little to no assist or support gas.

Siloxane removal systems - The ultra-low emission CEB is ideally suited for the continuously produced lean tail-gas from the siloxane removal systems.

Low caloric value biogas streams - Closed landfills generating methane gas less than 30% are able to use the CEB systems which can operated without support gas down to 15% methane equivalent, thereby saving in operational costs.



CEB 100* with waste gas compressor enclosed in weather proof box

Reduce your plant emissions and save in operating costs

Traditional biogas applications - The CEB is a great choice for traditional wastewater or landfill biogas applications due to the ultra-low emissions, fast start & stop, and unobtrusive presence.

Synthetic gas - The changing flows, compositions, and operational cycles of synthetic gas production plants are well served by a CEB system which can readily handle the variety of waste gas streams without missing a beat.

Onshore upstream and midstream oil and gas

Upstream

During well exploration and testing activities, substantial flows of (associated) gas can be liberated from the well and must be effectively controlled in order to avoid safety and environmental issues. The CEB's ability to process fast fluctuations in flow rate and composition of the associated gas while maintaining very high destruction efficiencies up to 99.99% makes the CEB the ideal choice for exploration and well testing applications.

In addition, the compact footprint, low profile stack, non visible flame and soot less operation can be key benefits when drilling in or near residential areas.

Midstream

With an ever increasing global demand for oil, more and more companies are expanding their exploration efforts. In many fields, the oil in the ground is mixed with water and gases, such as methane, ethane, propane and other hydrocarbons, and must be separated from these contaminants before it can be sent to refineries. The gas that is separated during this process can be used to heat the three-phase separator, to generate power in micro-turbines, or be purified to pipeline quality to be sold as natural gas.

In many cases, there is not enough gas generated by the process to justify the significant investment in micro-turbines or a purification plant. In these situations, the oil exploration company must find an economical and environmentally acceptable way of controlling these gases or risk having limitations on how much oil they can pump in a day. Currently there are seven units operating in this application in Southern California, five of which are within South Coast Air Quality Management District, the most environmentally strict location in North America.

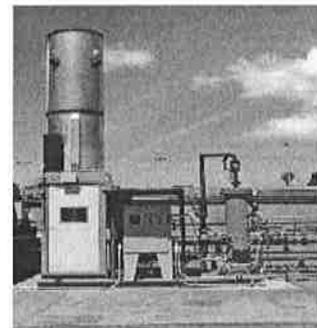
For applications where the process gas is utilized, there may still be a requirement for a low-emission back-up system. The CEB is an economical and environmentally acceptable technology for this application, that will provide worry-free service, allowing you to focus on your oil production.



CEB 4500HP* at upstream well site



CEB 350* at midstream location



CEB 500* at midstream location

Get the best solution for exploration and well testing operations

Heat recovery system

The heat recovery system is based on the plate heat exchanger technology, with special features to handle the very high temperature flue gases (up to 1300°C/2372°F). The overall thermal efficiency of the heat exchanger is up to 70% considering an inlet thermal fluid temperature as ambient.

Conception :

The high reliability of the heat exchanger is based on a concept that gathers the efficiency of the plates heat exchangers standard systems together with robustness of the U-tube profile.

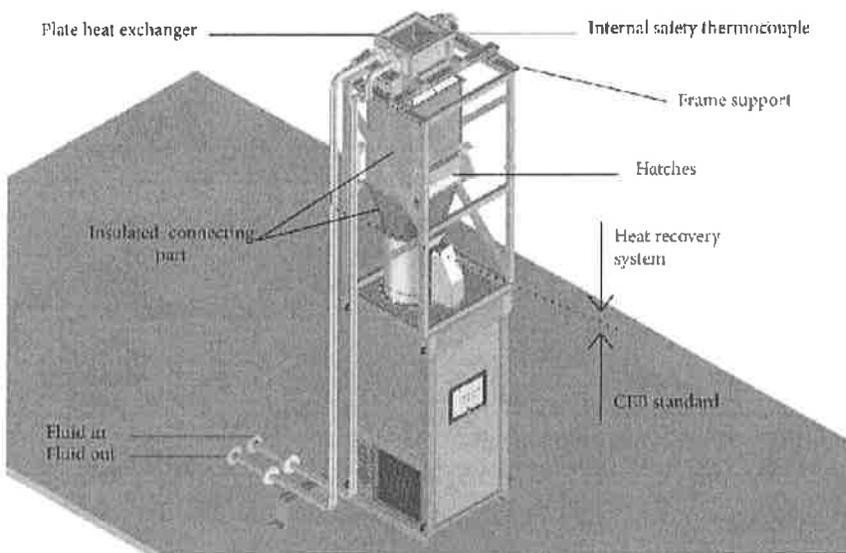
Indeed, the plates are welded only at one extremity so it can expand without any constraint when exposed to thermal cycles and especially thermal shocks. The plate design has been made to avoid "dead zone" circulation, thus preventing the thermal fluid from boiling up.

Advantages :

- Compactness of plates configuration resulting in high exchange coefficient for reduced exchange surfaces
- Reliability
- U-plate reliability versus thermal constraints ; mechanical constraints on the welding reduced during thermal shocks

The CEB® Heat recovery module converts the combustion heat of the CEB® system into:

- Hot air
- Thermal oil
- Hot water
- Steam



Don't waste the energy of your waste gas/vapor



FLARE

INDUSTRIES
INNOVATIVE COMBUSTION SOLUTIONS

Flare Industries LLC
16310 Bratton Lane,
Building 3, Suite 350
Austin, TX 78728
USA
T + 1 512 836 9473
F + 1 512 836 3025
www.flareindustries.com

The focus of our team is to provide cutting edge combustion and environmental technology, experience, innovation, and superior service; all of which give our growing client base successful solutions and the highest level of quality and satisfaction

Attachment B – Flare Industries Fully Enclosed FLare



FLARE

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FULLY ENCLOSED FLARE

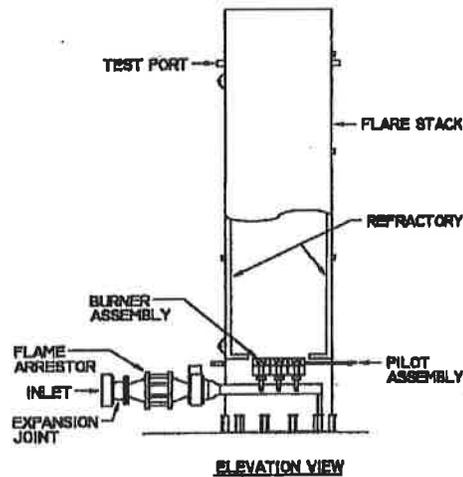
DESIGN FEATURES

- Controlled combustion environment
- Natural draft design
- No visible flame
- Low noise
- 8 to 1 turndown ration
- Smokeless operation
- Fully automated controls
- High destruction efficiency
- Low NOX emissions
- Low CO emissions
- Skid mounted option
- Modular construction
- Multi-fuel pilot

BENEFIT

- Increased destruction efficiency
- Low operating costs
- "Good neighbor" policy
- "Good neighbor" policy
- Good performance under varying operating conditions
- Meets U.S. and International requirements
- Reduced personnel requirements
- 99.5% meets U.S. and International emissions standards
- < 0.06 lb/MMbtu (0.11 kg/MMkcal)
- < 0.11 lb/MMbtu (0.2 kg/MMkcal)
- Reduced installation costs
- Reduced installation costs
- Operates on propane, natural gas or bio-gas

BURNER MATERIAL:	Stainless Steel
PILOT MATERIAL:	Stainless Steel
STACK MATERIAL:	Carbon Steel
PROCESS CONNECTION:	150# ANSI Flange
TURN DOWN RATIO:	8:1 (Higher Turndown Optional)
OPERATING TEMPERATURE:	1500°F
NOX EMISSIONS:	< 0.025 #'s/MMBTU's/Hr
CO EMISSIONS:	< 0.06 #'s/MMBTU's/Hr
VISIBLE EMISSIONS:	None
DESTRUCTION EFFICIENCY:	> 99.0%
COMBUSTION EFFICIENCY:	> 99.0%



SPECIFICATIONS:

MODEL	INLET SIZE		MAX HEAT RELEASE		FLOW RATE		TURN DOWN RATIO	RETENTION TIME SEC. (MIN)
	IN	(MM)	MMBTU/HR	(MMKCAL/HR)	SCFM	(M ³ /HR)		
FEF-2	3	(76)	2.5	(0.63)	75	(127)	8:1	0.6
FEF-5	4	(101)	5.0	(1.26)	160	(272)	8:1	0.6
FEF-10	6	(152)	10.0	(2.52)	320	(543)	8:1	0.6
FEF-18	8	(203)	18.0	(4.54)	650	(1,104)	8:1	0.6
FEF-21	10	(254)	21.0	(5.3)	1,000	(1,698)	8:1	0.6
FEF-58	12	(305)	58.0	(14.6)	2,000	(3,396)	8:1	0.6
FEF-110	14	(355)	110.0	(27.7)	4,500	(7,641)	8:1	0.6
FEF-175	16	(406)	175.0	(44.1)	6,000	(10,200)	8:1	0.6

E&B to submit
paper copy

Pamela Townsend

From: Edward Almanza <superpark@igc.org>
Sent: Wednesday, December 11, 2013 10:29 AM
To: Ken Robertson; Pamela Townsend
Subject: FW: Information in Support of Noise Impact Study

RECEIVED
FEB 1 2013
COMMUNITY DEV. DEPT.

Ken,

In response to requests from our consultants to E&B, this information arrived this morning. Would be good to download it and put it in the project file. (No other action is needed.)

Ed Almanza
environmental planning



949.499.9704 superpark@igc.org
p.o. box 9396 laguna beach, ca 92652

From: Lauren Jue [<mailto:lajue@earthlink.net>]
Sent: Wednesday, December 11, 2013 6:26 AM
To: Edward Almanza; Greg Chittick; Luis Perez
Cc: Thomas Corbishley; Carl Haase; Carl Haase; Don Behrens
Subject: Information in Support of Noise Impact Study

Ed, Greg, and Luis,

Below please find the link to the information in support of the Noise Impact Study prepared by Behrens & Associates.

<https://www.dropbox.com/sh/5zxy25juymosqo4/xLXaKuEWy>

Please let me know if you have problems accessing the files.

Regards,

Lauren Jue
Northcutt & Associates
(949) 246-3614

Pamela Townsend

From: Pamela Townsend
Sent: Tuesday, December 10, 2013 5:52 PM
To: 'Michael Finch (mfinch@ebresources.com)'; 'Karen Northcutt'
Cc: 'Edward Almanza (superpark@igc.org)'; Ken Robertson (krobertson@hermosabch.org)
Subject: Request for Information on E&B Proposed Oil Production Project--- Parking

Mike and Karen,

As work proceeds on the DEIR, we would encourage you to provide a more specific plan for employee and replacement public parking as soon as possible, including the following information to the extent relevant for one or several sites:

Lot Survey showing all existing improvements, including adjacent sidewalk, curb, street improvements, with property corner and adjacent property elevations. Survey must be stamped and signed by a Civil Engineer or licensed Land Surveyor.

Site plan/parking plan shall clearly identify and dimension lot size, property corner elevations, building dimensions, setbacks, parking space dimension, turning radii. The site plans shall also show existing curb cuts and existing on-street parking, existing and finished elevations and adjacent elevations, and grading plans for projects on sloping lots.

Preliminary Landscape plans identifying type, size, and quantity of plants to be utilized and identifying existing trees of over 6" in diameter. Existing trees shall be saved where possible or compensated with an equivalent size tree elsewhere on the site. All landscaped area shall be provided with an automatic irrigation system. Plans must be consistent with Municipal Code Chapters 8.56 and 8.12.

Site elements: Other elements such as preliminary drainage plans, lighting, solid waste, signage, any perimeter treatments, etc.

Please advise to the availability of this information.

Pam

Pamela Townsend, Senior Planner
City of Hermosa Beach
Community Development Department
1315 Valley Drive, Hermosa Beach, CA 90254
Phone: (310) 318-0242 Fax: (310) 937-6235
Email: ptownsend@hermosabch.org
Hours: Monday-Thursday, 7:00 a.m.–6:00 p.m.
Website: <http://www.hermosabch.org>
Municipal Code: <http://www.hermosabch.org/departments/cityclerk/code/>

Pamela Townsend

From: Edward Almanza <superpark@igc.org>
Sent: Thursday, November 21, 2013 11:43 AM
To: Pamela Townsend; Ken Robertson
Subject: FW: E&B Hermosa Noise Request
Attachments: SRA Information Request (E&B Hermosa) 11-20-13.pdf

Pam,
Ken --

FYI, and the file.

Ed

From: Greg Chittick [<mailto:greg.chittick@mrsenv.com>]
Sent: Thursday, November 21, 2013 10:31 AM
To: JOBBERMEYER@BAENC.COM; dbehrens@baenc.com
Cc: steve@rogersacoustics.com; Luis Perez; Edward Almanza
Subject: E&B Hermosa Noise Request

Jeff and Don, Thanks for the meeting yesterday. It was very helpful.

Please see the attached noise request from Steve Rogers. Forward what you can now and we will look for everything by the 6th of December. Please let us know if you have any questions of clarifications.

Thanks

Greg Chittick
Senior Engineer and Scientist
3140 Telegraph Rd Suite 2A
Ventura, CA 93105
805-289-3924
greg.chittick@mrsenv.com

From: Steve Rogers [<mailto:steve@rogersacoustics.com>]
Sent: Wednesday, November 20, 2013 5:42 PM
To: Luis Perez; Greg Chittick
Subject: E&B Hermosa

Luis and Greg – useful meeting today I thought; thanks again for facilitating.

As promised, I attach a summary of the various items of information we have requested from Behrens & Associates for distribution to the various interested parties.

I suggest that we ask for the requested data by December 6, 2013 (the Friday after Thanksgiving), in the interests of keeping our work moving forward.

Steve

Steve Rogers

Principal

STEVE ROGERS ACOUSTICS, LLC
2355 Westwood Boulevard, #411
Los Angeles, CA 90064
310-234-0939
www.rogersacoustics.com

ETB Submittal - Oil Production Curve Figures

RECEIVED

OCT 21 2013

COMMUNITY DEV. DEPT.

Date	Projected Gas, MCF	Projected Oil, BBls	Projected Water, BBls
Mar-16	7,625	24,400	14,463
Apr-16	7,625	24,400	28,935
May-16	7,625	24,400	42,016
Jun-16	7,625	24,400	43,444
Jul-16	7,625	24,400	42,069
Aug-16	7,625	24,400	43,499
Sep-16	7,625	24,400	43,527
Oct-16	7,625	24,400	39,339
Nov-16	7,625	24,400	43,580
Dec-16	7,625	24,400	42,201
Jan-17	0	0	0
Feb-17	0	0	0
Mar-17	0	0	0
Apr-17	0	0	0
May-17	0	0	0
Jun-17	0	0	0
Jul-17	0	0	0
Aug-17	0	0	0
Sep-17	0	0	0
Oct-17	0	0	0
Nov-17	0	0	0
Dec-17	0	0	0
Jan-18	0	0	0
Feb-18	0	0	0
Mar-18	13,442	44,805	43,635
Apr-18	24,817	82,724	56,251
May-18	34,821	116,071	72,625
Jun-18	41,514	138,379	85,734
Jul-18	48,785	162,615	100,242
Aug-18	55,017	183,391	116,181
Sep-18	58,583	195,278	126,500
Oct-18	65,560	218,532	145,263
Nov-18	68,351	227,836	156,077
Dec-18	73,801	244,000	170,134
Jan-19	76,250	244,000	188,954
Feb-19	75,725	244,000	186,671
Mar-19	76,250	244,000	218,122
Apr-19	76,250	244,000	225,215
May-19	76,250	244,000	247,332
Jun-19	76,250	244,000	254,923
Jul-19	76,250	244,000	275,158
Aug-19	76,250	244,000	291,220
Sep-19	76,250	244,000	296,000
Oct-19	76,250	244,000	320,523
Nov-19	76,250	244,000	325,802
Dec-19	76,250	244,000	345,584
Jan-20	76,250	244,000	364,549
Feb-20	76,250	244,000	356,200
Mar-20	76,250	244,000	393,938
Apr-20	76,250	244,000	395,467
May-20	76,250	244,000	423,370
Jun-20	76,250	244,000	425,401
Jul-20	76,250	244,000	436,945

Aug-20	76,250	244,000	438,658
Sep-20	76,250	244,000	424,776
Oct-20	76,250	244,000	439,212
Nov-20	76,250	244,000	426,749
Dec-20	76,250	244,000	436,893
Jan-21	76,250	244,000	440,048
Feb-21	76,250	244,000	400,585
Mar-21	76,250	244,000	440,588
Apr-21	76,250	244,000	426,644
May-21	76,250	244,000	441,144
Jun-21	76,250	244,000	428,626
Jul-21	76,250	244,000	440,258
Aug-21	76,250	244,000	441,985
Sep-21	72,517	241,724	427,997
Oct-21	73,413	244,000	442,543
Nov-21	69,827	232,756	429,985
Dec-21	70,123	233,743	438,757
Jan-22	69,331	231,102	443,384
Feb-22	61,889	206,298	403,621
Mar-22	67,037	223,456	443,928
Apr-22	63,809	212,698	429,879
May-22	64,888	216,292	444,488
Jun-22	61,983	206,611	431,876
Jul-22	62,770	209,233	443,596
Aug-22	61,996	206,652	445,335
Sep-22	59,145	197,149	431,242
Oct-22	60,272	200,907	445,898
Nov-22	57,694	192,312	433,245
Dec-22	58,228	194,095	442,083
Jan-23	57,918	193,060	446,745
Feb-23	51,974	173,248	406,681
Mar-23	56,536	188,454	447,293
Apr-23	54,057	180,190	433,137
May-23	55,205	184,015	447,858
Jun-23	52,954	176,513	435,149
Jul-23	53,815	179,385	446,958
Aug-23	53,355	177,850	448,711
Sep-23	51,077	170,256	434,511
Oct-23	52,221	174,071	449,278
Nov-23	50,150	167,167	436,529
Dec-23	50,742	169,141	445,435
Jan-24	50,636	168,786	450,132
Feb-24	47,046	156,821	422,825
Mar-24	49,670	165,567	450,692
Apr-24	47,612	158,705	436,429
May-24	48,739	162,465	451,261
Jun-24	46,865	156,217	438,456
Jul-24	47,724	159,079	450,355
Aug-24	47,422	158,073	452,121
Sep-24	45,490	151,632	437,813
Oct-24	46,600	155,333	452,692
Nov-24	44,839	149,464	439,847
Dec-24	45,563	151,876	450,301
Jan-25	45,431	151,435	453,554
Feb-25	40,958	136,527	412,879

Mar-25	44,718	149,061	454,110
Apr-25	42,931	143,103	439,738
May-25	44,013	146,709	454,683
Jun-25	42,382	141,274	441,781
Jul-25	43,213	144,045	453,770
Aug-25	42,998	143,328	455,549
Sep-25	41,297	137,657	441,133
Oct-25	42,355	141,182	456,125
Nov-25	40,801	136,003	443,182
Dec-25	41,384	137,945	452,223
Jan-26	41,423	138,078	456,992
Feb-26	37,381	124,602	416,009
Mar-26	40,845	136,149	457,552
Apr-26	39,244	130,813	443,072
May-26	40,263	134,211	458,130
Jun-26	38,799	129,331	445,130
Jul-26	39,585	131,949	457,210
Aug-26	39,412	131,373	459,003
Sep-26	37,873	126,244	444,477
Oct-26	38,862	129,541	459,583
Nov-26	37,454	124,845	446,541
Dec-26	38,003	126,676	455,651
Jan-27	38,054	126,846	460,456
Feb-27	34,350	114,501	419,162
Mar-27	37,543	125,143	461,021
Apr-27	36,080	120,266	446,431
May-27	37,024	123,413	461,603
Jun-27	35,683	118,943	448,504
Jul-27	36,410	121,366	460,676
Aug-27	36,254	120,848	462,482
Sep-27	34,841	116,138	447,846
Oct-27	35,753	119,176	463,066
Nov-27	34,458	114,860	449,927
Dec-27	34,964	116,547	459,105
Jan-28	35,011	116,704	463,947
Feb-28	32,626	108,752	435,802
Mar-28	34,534	115,114	464,524
Apr-28	33,188	110,628	449,823
May-28	34,057	113,522	465,111
Jun-28	32,823	109,411	451,913
Jul-28	33,492	111,639	464,177
Aug-28	33,349	111,163	465,997
Sep-28	32,049	106,831	451,250
Oct-28	32,888	109,626	466,586
Nov-28	31,697	105,656	453,346
Dec-28	32,252	107,507	464,121
Jan-29	32,205	107,349	467,474
Feb-29	29,071	96,903	425,550
Mar-29	31,773	105,909	468,047
Apr-29	30,534	101,782	453,234
May-29	31,333	104,445	468,638
Jun-29	30,199	100,662	455,340
Jul-29	30,814	102,712	467,696
Aug-29	30,682	102,274	469,531
Sep-29	29,486	98,288	454,671

Oct-29	30,258	100,859	470,124
Nov-29	29,162	97,207	456,783
Dec-29	29,590	98,634	466,102
Jan-30	29,630	98,767	471,017
Feb-30	26,747	89,155	428,776
Mar-30	29,233	97,442	471,595
Apr-30	28,093	93,644	456,670
May-30	28,828	96,094	472,190
Jun-30	27,784	92,614	458,791
Jul-30	28,350	94,501	471,242
Aug-30	28,229	94,097	473,090
Sep-30	27,129	90,430	458,118
Oct-30	27,839	92,796	473,687
Nov-30	26,831	89,435	460,246
Dec-30	27,225	90,748	469,635
Jan-31	27,261	90,871	474,588
Feb-31	24,608	82,028	432,026
Mar-31	26,896	89,652	475,170
Apr-31	25,847	86,158	460,132
May-31	26,524	88,412	475,770
Jun-31	25,563	85,210	462,269
Jul-31	26,084	86,945	474,814
Aug-31	25,972	86,574	476,676
Sep-31	24,960	83,200	461,591
Oct-31	25,613	85,377	477,278
Nov-31	24,686	82,285	463,735
Dec-31	25,048	83,493	473,195
Jan-32	25,082	83,606	478,186
Feb-32	23,373	77,909	449,177
Mar-32	24,740	82,467	478,781
Apr-32	23,776	79,253	463,629
May-32	24,398	81,327	479,385
Jun-32	23,514	78,381	465,782
Jul-32	23,993	79,978	478,423
Aug-32	23,891	79,636	480,299
Sep-32	22,960	76,533	465,099
Oct-32	23,561	78,535	480,905
Nov-32	22,707	75,691	467,259
Dec-32	23,105	77,017	478,365
Jan-33	23,071	76,904	481,821
Feb-33	20,826	69,420	438,610
Mar-33	22,762	75,873	482,411
Apr-33	21,875	72,916	467,144
May-33	22,447	74,823	483,020
Jun-33	21,634	72,114	469,314
Jul-33	22,075	73,582	482,050
Aug-33	21,980	73,268	483,941
Sep-33	21,124	70,413	468,625
Oct-33	21,677	72,255	484,552
Nov-33	20,891	69,638	470,802
Dec-33	21,198	70,661	480,407
Jan-34	21,227	70,756	485,473
Feb-34	19,161	63,870	441,935
Mar-34	20,942	69,807	486,068
Apr-34	20,126	67,086	470,685

May-34	20,652	68,841	486,682
Jun-34	19,904	66,348	472,872
Jul-34	20,310	67,700	485,705
Aug-34	20,223	67,411	487,609
Sep-34	19,435	64,783	472,178
Oct-34	19,944	66,478	488,000
Nov-34	19,221	64,071	474,371
Dec-34	19,503	65,012	484,049
Jan-35	19,530	65,099	488,000
Feb-35	17,629	58,764	445,286
Mar-35	19,268	64,226	488,000
Apr-35	18,517	61,723	474,254
May-35	19,001	63,338	488,000
Jun-35	18,313	61,044	476,457
Jul-35	18,686	62,287	488,000
Aug-35	18,606	62,021	488,000
Sep-35	17,881	59,604	475,757
Oct-35	18,349	61,164	488,000
Nov-35	17,685	58,949	477,967
Dec-35	17,944	59,814	487,718
Jan-36	17,968	59,895	488,000
Feb-36	16,744	55,813	462,962
Mar-36	17,724	59,079	488,000
Apr-36	17,033	56,776	477,858
May-36	17,479	58,262	488,000
Jun-36	16,846	56,152	480,077
Jul-36	17,189	57,295	488,000
Aug-36	17,115	57,051	488,000
Sep-36	16,448	54,828	479,373
Oct-36	16,879	56,262	488,000
Nov-36	16,267	54,225	481,600
Dec-36	16,552	55,175	488,000
Jan-37	16,528	55,094	488,000
Feb-37	14,920	49,732	452,072
Mar-37	16,306	54,355	488,000
Apr-37	15,671	52,236	481,481
May-37	16,081	53,603	488,000
Jun-37	15,498	51,662	483,718
Jul-37	15,814	52,714	488,000
Aug-37	15,747	52,489	488,000
Sep-37	15,133	50,443	483,008
Oct-37	15,529	51,763	488,000
Nov-37	14,967	49,888	485,251
Dec-37	15,186	50,621	488,000
Jan-38	15,207	50,689	488,000
Feb-38	13,727	45,756	455,499
Mar-38	15,003	50,009	488,000
Apr-38	14,418	48,060	485,131
May-38	14,795	49,317	488,000
Jun-38	14,259	47,531	487,385
Jul-38	14,550	48,499	488,000
Aug-38	14,488	48,292	488,000
Sep-38	13,923	46,410	486,669
Oct-38	14,287	47,625	488,000
Nov-38	13,770	45,900	488,000

Dec-38	13,972	46,574	488,000
Jan-39	13,991	46,637	488,000
Feb-39	12,629	42,098	458,952
Mar-39	13,803	46,011	488,000
Apr-39	13,265	44,218	488,000
May-39	13,612	45,375	488,000
Jun-39	13,119	43,731	488,000
Jul-39	13,387	44,622	488,000
Aug-39	13,329	44,432	488,000
Sep-39	12,810	42,700	488,000
Oct-39	13,145	43,817	488,000
Nov-39	12,669	42,230	488,000
Dec-39	12,855	42,850	488,000
Jan-40	12,872	42,908	488,000
Feb-40	11,995	39,984	477,171
Mar-40	12,697	42,324	488,000
Apr-40	12,202	40,674	488,000
May-40	12,522	41,738	488,000
Jun-40	12,068	40,227	488,000
Jul-40	12,314	41,046	488,000
Aug-40	12,261	40,871	488,000
Sep-40	11,783	39,278	488,000
Oct-40	12,092	40,306	488,000
Nov-40	11,654	38,846	488,000
Dec-40	11,858	39,527	488,000
Jan-41	11,841	39,469	488,000
Feb-41	10,688	35,628	465,946
Mar-41	11,682	38,939	488,000
Apr-41	11,226	37,422	488,000
May-41	11,520	38,401	488,000
Jun-41	11,103	37,010	488,000
Jul-41	11,329	37,764	488,000
Aug-41	11,281	37,603	488,000
Sep-41	10,841	36,137	488,000
Oct-41	11,125	37,083	488,000
Nov-41	10,722	35,740	488,000
Dec-41	10,879	36,264	488,000
Jan-42	10,894	36,313	488,000
Feb-42	9,834	32,779	469,478
Mar-42	10,748	35,826	488,000
Apr-42	10,329	34,430	488,000
May-42	10,599	35,331	488,000
Jun-42	10,215	34,051	488,000
Jul-42	10,423	34,745	488,000
Aug-42	10,379	34,596	488,000
Sep-42	9,974	33,248	488,000
Oct-42	10,235	34,118	488,000
Nov-42	9,865	32,882	488,000
Dec-42	10,010	33,365	488,000
Jan-43	10,023	33,410	488,000
Feb-43	9,048	30,159	473,037
Mar-43	9,889	32,962	488,000
Apr-43	9,503	31,677	488,000
May-43	9,752	32,506	488,000
Jun-43	9,399	31,329	488,000

Jul-43	9,590	31,967	488,000
Aug-43	9,549	31,831	488,000
Sep-43	9,177	30,590	488,000
Oct-43	9,417	31,390	488,000
Nov-43	9,076	30,254	488,000
Dec-43	9,209	30,698	488,000
Jan-44	9,222	30,739	488,000
Feb-44	8,593	28,645	488,000
Mar-44	9,096	30,320	488,000
Apr-44	8,742	29,139	488,000
May-44	8,970	29,901	488,000
Jun-44	8,645	28,818	488,000
Jul-44	8,822	29,405	488,000
Aug-44	8,784	29,280	488,000
Sep-44	8,442	28,139	488,000
Oct-44	8,662	28,875	488,000
Nov-44	8,349	27,829	488,000
Dec-44	8,495	28,317	488,000
Jan-45	8,483	28,275	488,000
Feb-45	7,657	25,524	480,246
Mar-45	8,369	27,896	488,000
Apr-45	8,043	26,809	488,000
May-45	8,253	27,510	488,000
Jun-45	7,954	26,514	488,000
Jul-45	8,116	27,054	488,000
Aug-45	8,081	26,938	488,000
Sep-45	7,767	25,888	488,000
Oct-45	7,970	26,566	488,000
Nov-45	7,681	25,604	488,000
Dec-45	7,794	25,980	488,000
Jan-46	7,804	26,015	488,000
Feb-46	7,045	23,483	483,887
Mar-46	7,700	25,666	488,000
Apr-46	7,400	24,665	488,000
May-46	7,593	25,311	488,000
Jun-46	7,318	24,394	488,000
Jul-46	7,467	24,891	488,000
Aug-46	7,435	24,785	488,000
Sep-46	7,146	23,819	488,000
Oct-46	7,333	24,442	488,000
Nov-46	7,067	23,557	488,000
Dec-46	7,171	23,903	488,000
Jan-47	7,180	23,935	488,000
Feb-47	6,482	21,606	487,555
Mar-47	7,084	23,614	488,000
Apr-47	6,808	22,693	488,000
May-47	6,986	23,287	488,000
Jun-47	6,733	22,444	488,000
Jul-47	6,870	22,901	488,000
Aug-47	6,841	22,803	488,000
Sep-47	6,574	21,914	488,000
Oct-47	6,746	22,488	488,000
Nov-47	6,502	21,673	488,000
Dec-47	6,597	21,992	488,000
Jan-48	6,606	22,021	488,000

Feb-48	6,156	20,521	488,000
Mar-48	6,516	21,721	488,000
Apr-48	6,262	20,875	488,000
May-48	6,426	21,421	488,000
Jun-48	6,194	20,645	488,000
Jul-48	6,320	21,066	488,000
Aug-48	6,293	20,976	488,000
Sep-48	6,047	20,158	488,000
Oct-48	6,206	20,686	488,000
Nov-48	5,981	19,937	488,000
Dec-48	6,086	20,286	488,000
Jan-49	6,077	20,256	488,000
Feb-49	5,485	18,285	488,000
Mar-49	5,995	19,984	488,000
Apr-49	5,762	19,205	488,000
May-49	5,912	19,708	488,000
Grand Total	10,788,887	35,626,497	170,202,176

HB Submittal

Pamela Townsend

From: Ken Robertson
Sent: Monday, October 14, 2013 9:30 AM
To: Luis Perez (luis.perez@mrsenv.com)
Cc: Pamela Townsend
Subject: FW: Production Graph
Attachments: Projected Production for Hermosa Beach 10082103.pdf

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OCT 14 2013
COMMUNITY DEV. DEPT.

Luis and Pam FYI, and for our files.

Ken Robertson

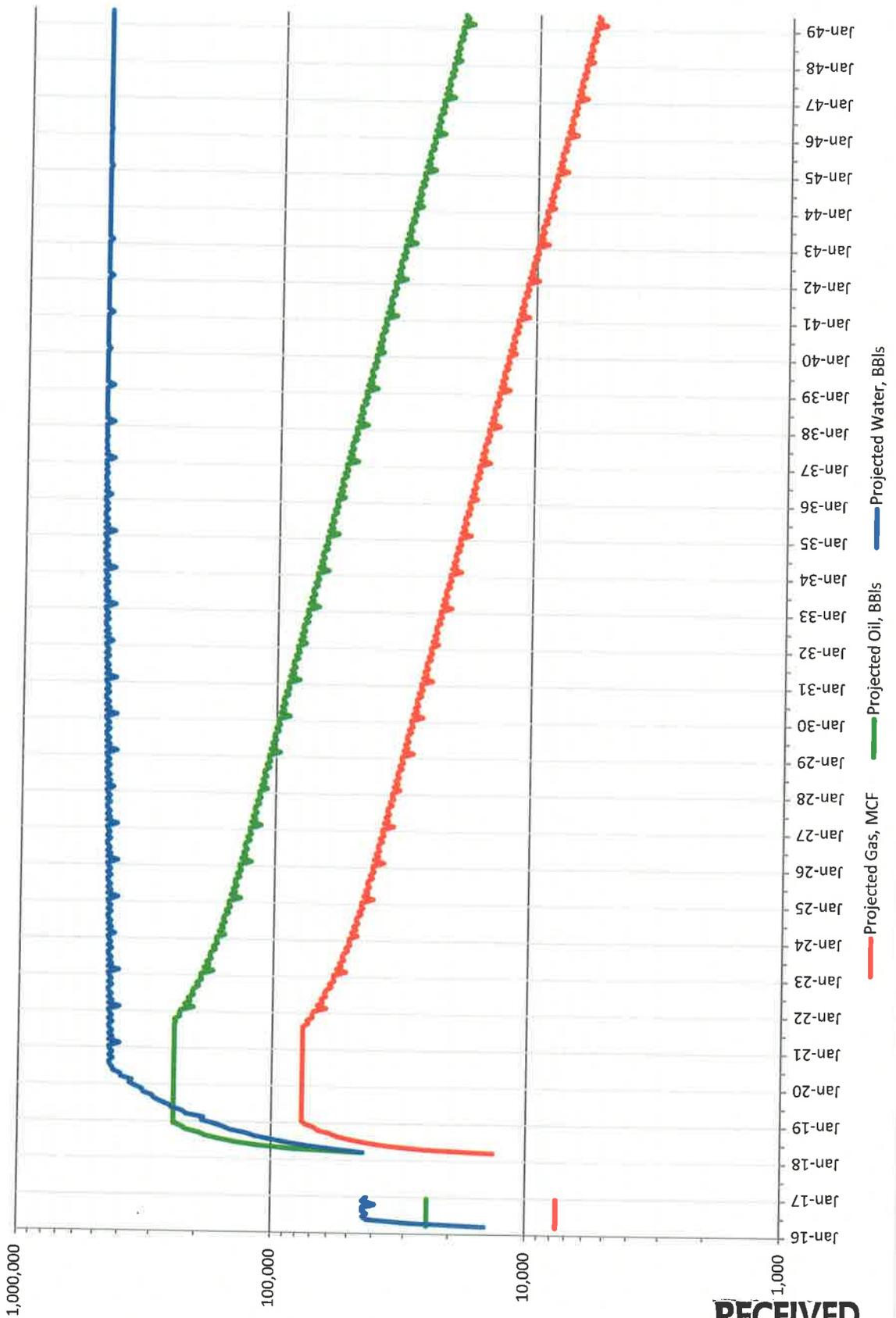
Director, Community Development Department
City of Hermosa Beach
(310) 318-0242

From: Karen Northcutt [<mailto:knorthcutt@earthlink.net>]
Sent: Monday, October 14, 2013 9:15 AM
To: Ken Robertson
Cc: Ed Almanza
Subject: FW: Production Graph

Hi,
Attached is the production curve that was requested. Please forward on to MRS for their use. Let me know if there are questions about the information.
Thanks,
Karen

E & B Oil Development Project

-Hermosa Beach-



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OCT 14 2013

Pamela Townsend

Subject: FW: Responses for City Text Clarifications
Attachments: Responses to Questions at 10-2-13 Meeting.pdf

From: Karen Northcutt [<mailto:knorthcutt@earthlink.net>]
Sent: Monday, October 07, 2013 6:19 PM
To: Ken Robertson
Cc: Ed Almanza; Mike Finch; Lauren Jue; Carl Haase
Subject: Responses for City Text Clarifications

Hi,
At our meeting last week, MRS and City staff requested additional clarification. Attached please find the responses. Could you please forward on to MRS.

Let us know if you have additional clarifications.
Karen

Karen Northcutt knorthcutt@earthlink.net work (760) 379-4626 or cell (661) 330-5799

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OCT 07 2013

**Information Responding to Questions from
October 2, 2013 Meeting with City of Hermosa Beach**

COMMUNITY DEV. DEPT.

1. Clarification Text Regarding Re-drilling

No more than five re-drills would happen in any year and no more than a total of 30 re-drills would occur for the entire Proposed Project. In the event that a re-drill would occur, noise attenuation design features, including the use of a 32-foot sound attenuation wall and acoustical covers, would be implemented on the Project site.

2. Revised Text, Fourth Paragraph on Page 2-40 (shown in ~~strikeout~~/underline)

The offsite underground pipeline for the transport of oil to an area refinery via a connection to a valve location in the City of Torrance would be constructed for a distance of approximately 3.55 miles in one of three potential pipeline scenarios that would transverse through the Cities of Hermosa Beach, and Redondo Beach, and terminate in Torrance. The selection of the pipeline route would ~~depend on the ROW negotiations between the Applicant and the various cities that have yet to be conducted as well as the results of this EIR analysis~~ occur after the Project approval.

3. Text About Phase 4 Maintenance Activities, Second Paragraph on Page 2-52

No additional text is needed for the discussion of the Phase 4 maintenance activities on page 2-52.

4. Letters from State Lands Commission Regarding Hydrogen Sulfate

See attached letters.

5. Biocide Chemicals to be Added to Tables 2.4 and 2.11

Biotreat 8415 should be added to Table 2.4 (for Phase 2) and Table 2.11 (for Phase 4) to address the treatment of water before injection into the oil reservoir.

6. Refinement of Parking Plan by Project Phase

This information will be provided under separate cover.

7. Production Curve

This information will be provided under separate cover.

8. Plan View and Cross Section of Well Cellar

This information will be provided under separate cover.

**CALIFORNIA STATE
LANDS COMMISSION****MINERAL RESOURCES
MANAGEMENT DIVISION**
200 Oceangate, 12th Floor
Long Beach, CA 90802-4331**PAUL B. MOUNT II, Chief**Contact Phone: (562) 590-5205
Contact FAX: (562) 590-5210California Relay Service From TDD Phone 1-800-735-2922
Voice Phone 1-800-735-2929

December 3, 1997

File Ref: W40015

Ms. Susan Hansch
California Coastal Commission
45 Fremont, Suite 2000
San Francisco, CA 94105-2219**Subject: Macpherson/Hermosa Beach Oil Development Project**

Dear Ms. Hansch:

I have had an opportunity to review your letter of November 14, to Donald R. Macpherson, Jr., concerning the discussion in our October 17, 1997 meeting. I agree with you about the difficulty of correctly restating the substance of such a roundtable discussion. In any event, it is clear from your letter that we did not adequately convey to you our technical conclusions concerning the potential for elevated levels of H₂S in the production stream of the contemplated Hermosa Beach project.

It is our opinion that there is no reasonable basis for a concern that any Macpherson/Hermosa Beach project well will produce a dangerously high concentration of H₂S. The best available evidence of the "native" reservoir H₂S concentration is the laboratory analysis of the Marble #102 well, which reflected 6 ppm H₂S. Such concentrations of H₂S unquestionably present no public health hazard.

Given the existing operating constraints and monitoring requirements of the City's use permit, and with the additional project oversight of the staff of the State Lands Commission, it is improbable the reservoir H₂S concentrations will ever be significantly increased throughout the duration of the Hermosa Beach project. It is a technical certainty that any potential increase in reservoir H₂S from native concentrations in the 6-10 ppm range to a level presenting any public health hazard would of necessity be extremely gradual, over a period of years. In any case, because of the operating constraints and monitoring requirements of the City's use permit, and with the additional project oversight of the staff of the State Lands Commission, any such potential increase in H₂S concentrations would be detected and required corrective action could be taken (including the abandonment of an offending well, if necessary) long before H₂S concentrations presented such a hazard.

CH 011853

- Ms. Susan Hansch
December 3, 1997
Page 2

The other technical discussion in your letter make reference to a potential for the Hermosa Beach project wells to produce high levels of H₂S due to reservoir fluid migration. H₂S has been found to exist in elevated concentrations (as high as 5,000 ppm) in production from wells in the southerly portions of the previously produced, and now abandoned, Redondo Beach portion of this field. This increase over "native" H₂S levels was caused by improper operation of just the type that the use permit conditions and State Lands Commission oversight are designed to prevent. Increased H₂S levels in the southerly portion of the Redondo Beach area were found near the end of the 34-year productive life of those wells.

The State Lands Commission, in its approval of the Hermosa Beach project lease found that the operation of the Redondo Beach wells over that period of time had created an area of low pressure in the Redondo Beach portion of the field relative to the Hermosa Beach portion of the field, to the north. This reservoir pressure differential results in the gradual movement of fluids, including oil, from the higher pressure area in the north to the area of lower pressure in the south. Such migration or movement of oil is often referred to as "drainage" when the oil crosses property lines. The State Lands Commission, in approving Hermosa Beach project lease, found that the Hermosa Beach portion of the field was being drained as a result of the Redondo Beach operations.

This drainage determination and the conclusion, in your words, is a "hydraulic connection between" the Redondo Beach and Hermosa Beach portions of this field do not make certain that the Hermosa Beach project will either initially or ultimately result in the production of the elevated H₂S concentrations now in place in and around one or more wells in the southern portions of the Redondo Beach area. In the first place, the pressure gradient is the wrong way. The relatively lower pressure created in the Redondo Beach portion of the field by over 30 years of operations is not going to be instantaneously equalized by the completion of the Hermosa Beach wells.

Only after years, if at all, will the operation of Hermosa Beach wells begin to restore the reservoir pressure to equilibrium.

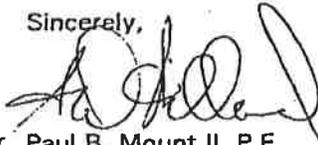
Even if extended operation of the Hermosa Beach wells resulted in a reversal of the existing pressure differential, the offending liquid would have to travel a distance of hundreds of yards and up to a mile or more, to the extreme, commingling with virgin reservoir liquids before it is produced. The time involved would be years. Even assuming that the offending fluids in question would migrate across the boundary, the mixing action in that movement would blend or distribute such highly localized elevated H₂S concentrations throughout the reservoir fluid resulting in well effluents in Hermosa Beach that should be more or less typical of the native production.

Ms. Susan Hansch
December 3, 1997
Page 3

All of the Redondo Beach wells have been abandoned as uneconomic. This means that the portion of the Redondo Beach area between the southerly margin of Hermosa Beach and the elevated H₂S concentrations in the southerly portion of the Redondo Beach area no longer include economically recoverable reserves. From this we conclude that the Hermosa Beach wells might be abandoned as uneconomic long before they could draw to the north and produce the elevated H₂S concentrations that are now in place, approximately a mile distant, in the southerly portion of the Redondo Beach area of the field.

For these reasons, the staff of the State Lands Commission has concluded that there is no evidence to support a reasonable concern that the contemplated operations of the Hermosa Beach project will present a public health hazard associated with elevated H₂S concentrations.

Sincerely,



for Paul B. Mount II, P.E.

Chief, Mineral Resources Management Division

**CALIFORNIA STATE
LANDS COMMISSION**

**MINERAL RESOURCES
MANAGEMENT DIVISION**
200 Oceangate, 12th Floor
Long Beach, CA 90802-4331



PAUL B. MOUNT II, Chief

Contact Phone: (310) 590-5205
Contact FAX: (310) 590-5210

California Relay Service From TDD Phone 1-800-735-2922
Voice Phone 1-800-735-2929

December 3, 1997

File Ref: W 40015

Ms. Susan M. Hansch, Deputy Director
California Coastal Commission
Energy and Coastal Resources Unit
45 Fremont Street, Suite 2000
San Francisco, CA 94105

**Subject: Macpherson/Hermosa Beach Oil Development Project Inspection
Program**

Dear Ms. Hansch:

The State Lands Commission will utilize agency-standardized inspection guidelines with site specific inspection forms (attached) to insure a consistent safety inspection program for the MacPherson Oil Hermosa Beach development. This approach will consist of two inspection phases, designed to monitor the exploration and the development phases from the Hermosa Beach site.

In phase one, the inspection program will involve weekly site visits with a physical plant check and documented by memorandum. Monthly, the State Lands inspector will conduct an organized, methodical, pre-determined test on all affected alarms to insure process integrity and safety, from the wellhead to the final sales point. This includes testing all three affected streams: oil, water, gas, and the related equipment installed to process each stream. Emergency response and spill equipment will be checked for adequate inventory and readiness. All process equipment will be checked for critical levels and pressures, as well as gas detection and hydrogen sulfide sensing devices. All safety equipment will be function tested for readiness, and to verify proper calibration. Failure or deficiency of any safety/environmental related device or supply will be documented, with the operator required to correct the problem in a time frame commensurate with the criticality of the device. As currently engineered, the inspection topics will be as follows:

- Oil spill response equipment
- Production handling and other processing equipment

CH 011856

Susan M. Hansch
December 3, 1997
Page 2

- Wells and flowlines, injection lines
- Gas detection equipment
- Fire and smoke detection equipment
- Fire alarms
- Emergency (ESD) shutdown system
- Fire deluge and foam system
- Records review

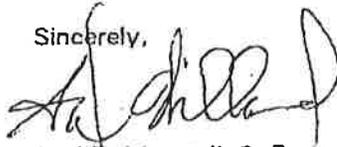
The phase two inspection program will be expanded to encompass all additional development process and safety equipment, ensuring oversight that is related to the complexity of the developing facility.

In addition to the above facility inspection program the SLC Mineral Resources Management Division staff will conduct drilling rig equipment inspections at the drilling site, prior to initiating drilling operations.

Our goal is to ensure public safety within the vicinity of the work site, and protection of the environment.

Please contact me at (562) 590-5205 if you have any questions regarding this matter.

Sincerely,



Paul B. Mount II, P. E.
Chief, Mineral Resources Management Division

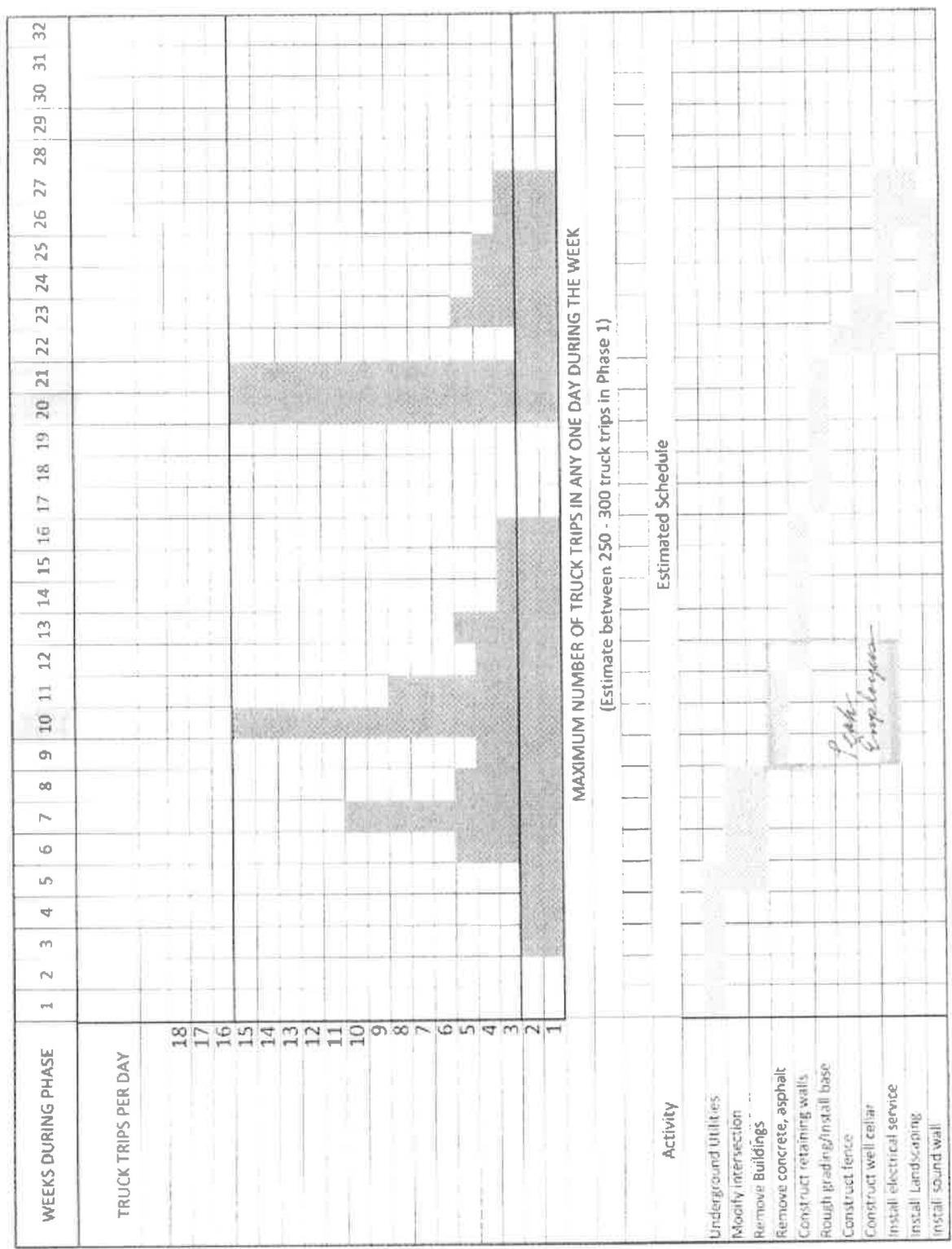
Attachments

cc: Steve Burrell, City Manager
City of Hermosa Beach
Civic Center
1315 Valley Drive
Hermosa Beach, CA 90254-3885

RECEIVED
OCT 07 2013

COMMUNITY DEV. DEPT.

Phase 1
Truck Trips Per Day per Week



Pamela Townsend

Subject: FW: Traffic Information for Greg
Attachments: Maximum Trucks & Employees Notes.pdf

RECEIVED
OCT 7 2013

COMMUNITY DEV. DEPT.

From: Edward Almanza [<mailto:superpark@igc.org>]
Sent: Monday, October 07, 2013 6:24 PM
To: 'Luis Perez'; greg.chittick@mrsenv.com
Cc: Ken Robertson
Subject: FW: Traffic Information for Greg

Greg, Luis,

The City received this today from the applicant.

Please let me know if you need additional information related to the Project Description.

Thanks.

Ed Almanza
environmental planning

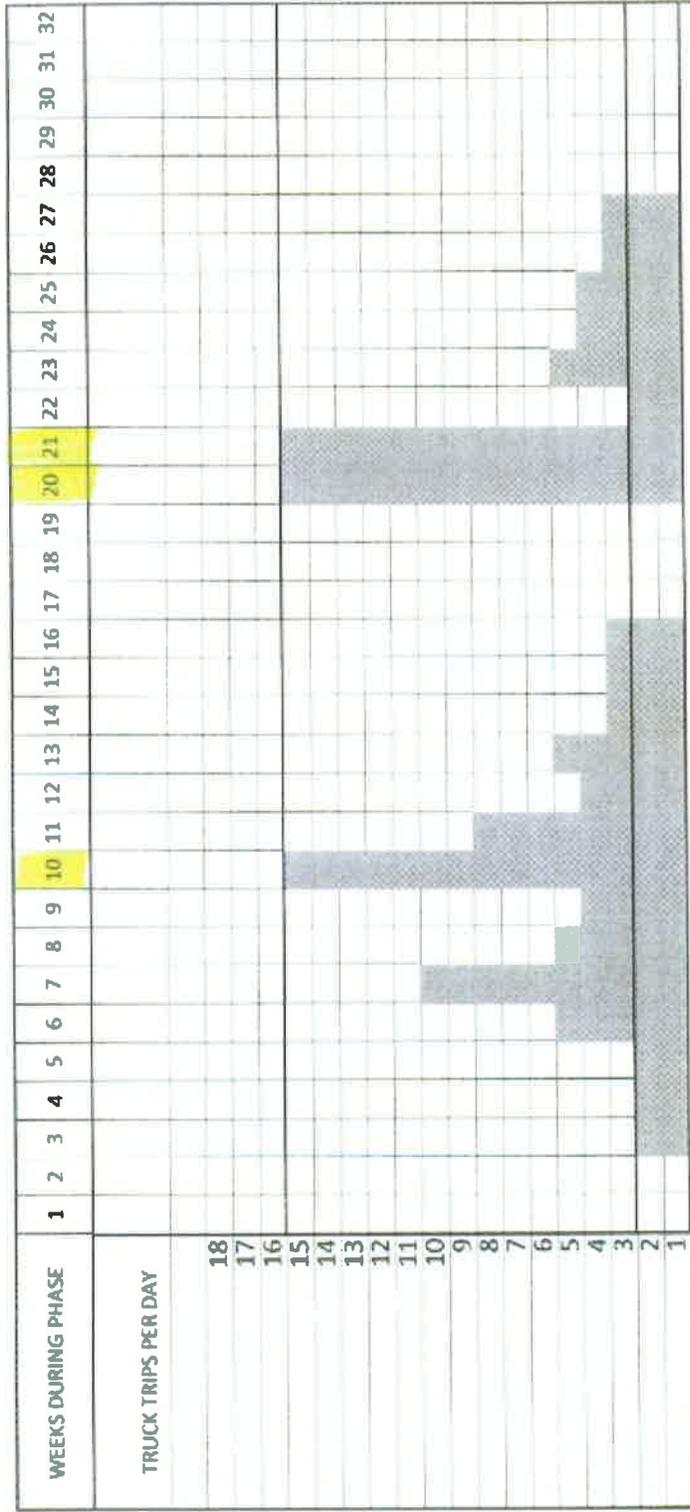


949.499.9704 superpark@igc.org
p.o. box 9396 laguna beach, ca 92652

From: Karen Northcutt [<mailto:knorthcutt@earthlink.net>]
Sent: Monday, October 07, 2013 6:14 PM
To: Ken Robertson
Cc: Ed Almanza; Mike Finch; Lauren Jue
Subject: Traffic Information for Greg

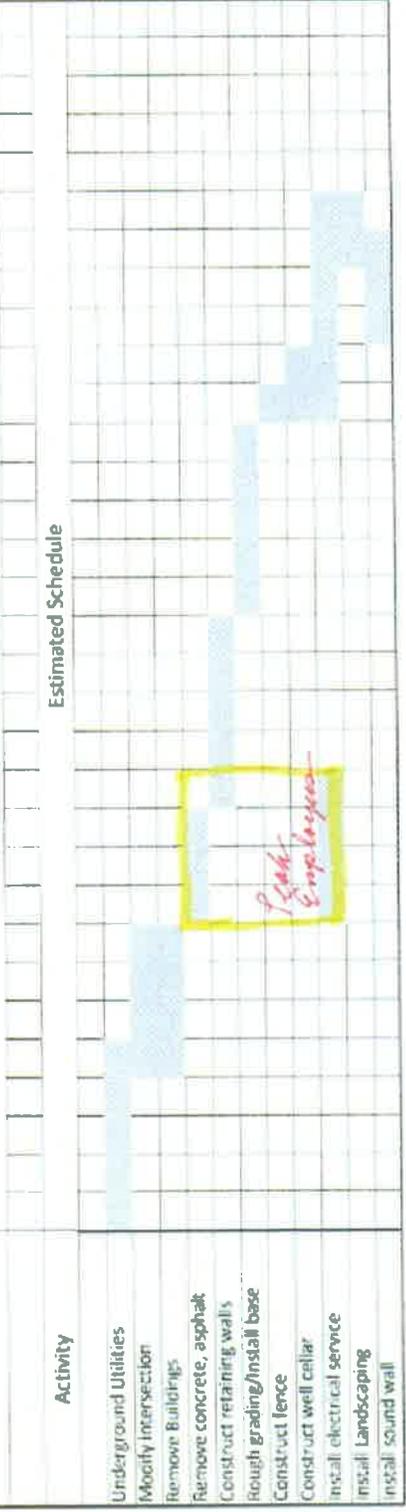
Hi,
This is some information we and MRS were talking about during our meeting with the City last week. Lauren told Greg she would provide this information with some color added so it was clearer. If you could forward this, that would be great.
Thanks
Karen
Karen Northcutt knorthcutt@earthlink.net work (760) 379-4626 or cell (661) 330-5799

Phase 1
Truck Trips Per Day per Week



MAXIMUM NUMBER OF TRUCK TRIPS IN ANY ONE DAY DURING THE WEEK

(Estimate between 250 - 300 truck trips in Phase 1)



Peak Employment

9 10 11 12

Weeks

E&B
Natural Resources

RECEIVED
SEP 03 2013

COMMUNITY DEV. DEPT.

Office: (661) 679-1700 • Fax: (661) 679-1797
1600 Norris Road • Bakersfield, CA 93308

September 3, 2013

Mr. Ken Robertson, AICP, Director
City of Hermosa Beach
Community Development Department
1315 Valley Drive
Hermosa Beach, California 90254

RE: Responses to Requested Information on Project Description
E&B Oil Development Project

Dear Mr. Robertson:

Attached please find responses to the requested information from the City of Hermosa Beach's environmental consultant on the project description for the E&B Oil Development Project (proposed project).

Please feel free to contact Karen Northcutt or me with any questions. We look forward to working with you to address any questions and provide information you may need to continue processing the Planning Application.

Very truly yours,



Michael Finch
Vice President of Health, Safety, Environmental & Governmental Affairs
E&B Natural Resources Management Corp.

Attachments

Responses to Requested Information on Project Description

**E&B Oil Development Project
Responses to Requested Information on Project Description**

Question 1: Drill rig info: can you give a specific rig name and number as an example? Would it be an automated drilling rig (ADR)?

Answer: It will be an automated drill rig. The particular rig will depend on timing and availability; however, a typical example would be ENSIGN ADR 300.

Question 2: Provide specification on the drilling rig: electrical consumption, motor sizing, etc.

Answer: Anticipated electric motor size for a typical drill rig that may be used for the proposed project: Hydraulic Power Unit – 1000 horse power (hp); Mudpumps – four at 1000 hp each; and misc. small motors – total 75 hp. This electrical consumption was included in the electrical load information provided for the project phases in the last paragraph on page 36 of the Planning Application Project Description.

Question 3: Pipeline SCADA operating parameters: percentage leak detection over various timeframes.

Answer: The percentage that is set in the SCADA system to notify the operator of potential oil leak detection over the timeframes set by E&B would vary depending on the crude oil flow rate in the pipeline. When the flow rate is at the maximum anticipated production rate of 8,000 barrels per day, flowing on a continuous basis, the flow rate would be 5.5 barrels per minute and the following would apply:

15 minute time interval	5 % or 4.1 barrels
1 hour time interval	2 % or 6.7 barrels
24 hour time interval	1 % or 80 barrels

It should be noted that typical custody transfer meters have an error of 0.1 to 0.25% (FMC – Smith-technical paper 111). Assuming that the inlet meter and the outlet meter both have an error of 0.25 (that would potentially be a 0.5 % error between the two meters) and, when you factor in temperature and pressure, you could be up to a 1 % error, thereby, requiring a minimum percentage of 1 %.

If oil production is considerably less than the 8,000 barrels per day, the percentages would be adjusted upward to maintain essentially the same volume of oil noted above based on the reduced flow rate in the pipe.

Question 4: Please describe the wellhead pressures anticipated during and immediately after drilling (first period of production). If wells are not anticipated to be free-flowing, what method would be used to provide lift (down hole pumps, surface pumpers, etc).

Answer: The wellhead pressures anticipated during and immediately after drilling would be 0.0 pounds per square inch (psi). The wells are not anticipated to be free-flowing. Please refer to E&B Responses to Requested Clarifications, dated June 2, 2013. Page 2, response to Oil and Gas Operations, item 6, discusses the types of pumps for the wells.

Question 5: Provide information on the amount of electricity used to drill each well (MWhrs).

Answer: It is anticipated that approximately 75 kilowatt-hours (kwh) will be required to drill a well. This electrical consumption was included in the electrical load information provided for the project phases in the last paragraph on page 36 of the Planning Application Project Description.

Question 6: Provide anticipated well bottomhole locations (x,y,z coordinates) What would be the range of depths of anticipated targets?

Answer: Please refer to the attached figure for the anticipated bottomhole locations.

Question 7: During phase 4 operations, after drilling, would personnel be present onsite 24 hours per day? Please describe the normal, non-drilling, operational employee shifts.

Answer: Please refer to E&B Response to Requested Clarifications, dated June 2, 2013. Page 8, response to Personnel questions discusses the employees that would be present on the project site and offsite during the ongoing operations of the proposed project. The anticipated personnel on the project site would be four personnel for a 12-hour daytime shift, two personnel for an 8-hour graveyard shift, and two personnel for an 8-hour swing shift. Therefore, there would be personnel present 24 hours per day on the project site.

Question 8: Would there be a refrigeration unit? What type of refrigerant would be used? What would be the anticipated maximum production of natural gas liquids (gallons per day) at design capacity? How would the NGL be handled (added to crude stream or trucked out)? Would there be any storage of the NGL before adding to the crude stream and if so, how much (gallons)?

Answer: Yes, there would be a refrigeration unit as part of the gas processing unit during Phase 4 of the proposed project. Propane refrigerant is anticipated to be used to condense NGL liquids. Based on anticipated raw gas composition, not more than 1 barrel per day of NGL would be anticipated to be condensed from the raw gas at design capacity. This NGL would be injected directly into the crude oil and no NGL storage is expected.

Question 9: What is the anticipated production of produced water that would be processed and injected during Phase 2 and Phase 4 over the life of the project?

Answer: During Phase 4, it is anticipated that up to 16,000 barrels per day (bpd) of produced water would be reinjected when the proposed facility is operating at full capacity. During Phase 2, it is anticipated that up to 1,600 bdp of produced water would be reinjected.

Question 10: Provide anticipated production curves over the life of the project for gas, crude and water.

Answer: Please refer to E&B Response to Requested Clarifications, dated June 24, 2013. Page 2, response to Oil and Gas Operations, item 2, refers the City to *The Potential Impact of a Proposed Oil & Gas Development Project on the City of Hermosa Beach, Phase 1 Report*, prepared by the Berkeley Research Group, LLC, dated March 2013 for a discussion of the estimated oil and gas production volumes over the life of the proposed project. A figure showing the anticipated production curves will be provided under separate cover.

Question 11: How many re-drills are anticipated annually? Would re-drills involve the use of the 32-foot attenuation sound wall?

Answer: Although we do not anticipate the re-drilling of wells, under extraordinary circumstances they may be required. Also, depending on the circumstances, a workover rig could be used to complete a re-drill. However, for the purposes of providing a worst-case analysis, E&B has estimated that 30 re-drills could occur over the life of the proposed project. In the event that a re-drilling would occur, noise attenuation design features, including the use of a 32-foot sound attenuation wall and acoustical covers, would be implemented on the project site.

Question 12: Would workovers utilize sound walls at all? If so, please describe. Please confirm the allowed hours of use of the workover rigs (weekdays, weekends, hours of the day).

Answer: Workover rig drive mechanism would be wrapped with a shrouded sound attenuation blanket and the project site would be enclosed by a 16-foot block wall. No additional sound walls would be provided. In compliance with the 1993 Conditional Use Permit Condition of Approval, the use of the workover rig would occur weekdays between the hours of 8:00 AM and 6:00 PM on weekdays only, excluding holidays.

Question 13: It is indicated that the stock tanks might need to be heated. Please provide information on the heater, heater size, combustion characteristics and emissions. Was this included in the air quality calcs and if so, where?

Answer: If required, stock tank heat would be provided by the Microturbine exhaust waste heat recovery system providing hot water or steam to coils inside the tank. The use of the Microturbine and the associated emissions are included in the analysis provide in the Air Quality Impact Analysis technical report provided in Appendix C to the Planning Application.

Question 14: Please describe the use of some of the equipment listed in the air quality section: specifically the H-401 gas combustor manufacturer and emissions information, the use and characteristics of the micro-turbine.

Answer: The following equipment was analyzed in the Air Quality Impact Analysis technical report provided in Appendix C to the Planning Application:

Enclosed Ground Flare/Gas Combustor: During Phase 2, Flare Industries CEB-800-CA flare or equal is anticipated. Criteria pollutants would be: NO_x (15 ppm); CO (10 ppm); VOC (10 ppm); and PM10 (.093 grain/design standard cubic feet).

Enclosed Ground Flare/Gas Combustor: During Phase 4, an emergency ground flare, designed to meet SCAQMD BACT requirements, would be installed and used for less than 200 hours per year.

Micro-turbines: Microturbines would consist of five 200 kw Capstone turbines configured as a single 1,000 kw package. Anticipated NO_x emissions would be 4 ppm. Gas produced on the project site would be utilized as fuel for the turbines.

Question 15: Information on the odorant process: size of storage tank, rate of use of odorant and the frequency of odorant tank loading operations at design capacity.

Answer: It is anticipated that less than one gallon of odorant would be used per day. This odorant would be stored in a 500-gallon container and filled once every year and a half.

Question 16: There are some inconsistencies between the schedules as depicted in the figures and the days for the activity as depicted in the tables. These have been corrected in the project description but should be confirmed.

Answer: Comments and clarifications on this information will be provided under separate cover.

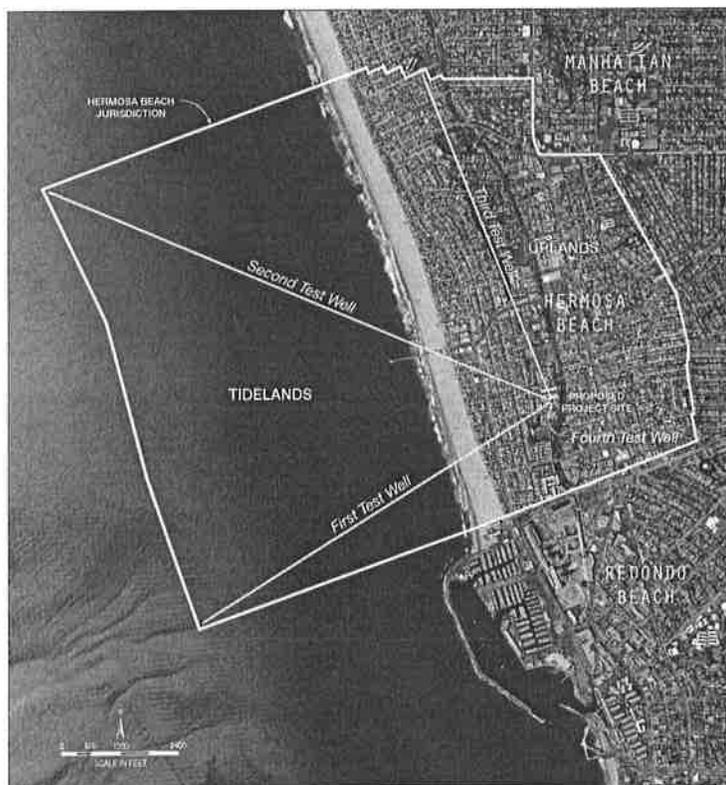
Question 17: Provide information on the exact tie-in location into the water pipeline within the Greenbelt and construction activities related to pipeline installation within the Greenbelt.

Answer: Please refer to E&B Response to Requested Clarifications, dated June 24, 2013. Page 6, Water Injection Pipeline response provides the location of the tie-in to the reclaimed water pipeline in the greenbelt and the general construction activities.

Question 18: Provide a detailed listing of all equipment, size, capacity for each phase of the project.

Answer: The listing of equipment for Phases 2 and 4 have been provided under separate cover.

E&B Oil Development Project



Source: E&B Natural Resource Management Corp.; Google Earth aerial dated March 7, 2011.

E&B Natural Resources
www.E&B.com

FIRST TEST WELL

Bottom Hole Location:
LAT: 33.8472087
LONG: -118.4144510
Z: -2600 SS

Purpose:

Test location of 103 fault
Test structural position of target zones
Test reservoir characteristics of target zones
Test presence of Catalina Shist Conglomerate

SECOND TEST WELL

Bottom Hole Location:
LAT: 33.8715568
LONG: -118.4248349
Z: -4200 SS

Purpose:

Test location of 103 fault
Test structural position of target zones
Test reservoir characteristics of target zones
Test presence of Catalina Shist Conglomerate

THIRD TEST WELL

Bottom Hole Location:
LAT: 33.8772445
LONG: -118.4032842
Z: -6000 SS

Purpose:

Test structural position of target zones
Test O/W contact of target zones
Test reservoir characteristics of target zones
Test presence of Catalina Shist Conglomerate
Assess for water injection

FOURTH TEST WELL

Tentative Bottom Hole Location:
LAT: 33.8589937
LONG: -118.3948172
Z: -4600 SS

Purpose:

Tentatively planned to be drilled vertical; however,
may be drilled to other areas depending upon
results of first test wells.
Test structural position of target zones
Test O/W contact of target zones
Test reservoir characteristics of target zones
Test presence of Catalina Shist Conglomerate
Assess for water injection

Anticipated Locations of
Test Wells

Ken Robertson

From: Ken Robertson
Sent: Thursday, August 01, 2013 2:44 PM
To: 'mfinch@ebresources.com'
Cc: 'Edward Almanza (superpark@igc.org)'
Subject: E&B oil project MRS information request
Attachments: E & B Info request (3).docx

Mike:

Here's a list of some additional information our EIR consultant needs to proceed with their work. Thanks, and let me know if you have any questions, and direct your responses to me. Ken

Ken Robertson

Director, Community Development Department
City of Hermosa Beach
(310) 318-0242

MRS Information Request

1. Drill rig info: can you give a specific rig name and number as an example? Would it be an automated drilling rig (ADR)?
2. Provide specification on the drilling rig: electrical consumption, motor sizing, etc.
3. Pipeline scada operating parameters: percentage leak detection over various timeframes
4. Please describe the wellhead pressures anticipated during and immediately after drilling (first period of production). If wells are not anticipated to be free-flowing, what method would be used to provide lift (down hole pumps, surface pumpers, etc)
5. Provide information on the amount of electricity used to drill each well (MWhrs)
6. Provide anticipated well bottomhole locations (x,y,z coordinates) What would be the range of depths of anticipated targets?.
7. During phase 4 operations, after drilling, would personnel be present onsite 24 hours per day? Please describe the normal, non-drilling, operational employee shifts
8. Would there be a refrigeration unit? What type of refrigerant would be used? What would be the anticipated maximum production of natural gas liquids (gallons per day) at design capacity? How would the NGL be handled (added to crude stream or trucked out)? Would there be any storage of the NGL before adding to the crude stream and if so, how much (gallons)?
9. What is the anticipated production of produced water that would be processed and injected during Phase 2 and Phase 4 over the life of the project?
10. Provide anticipated production curves over the life of the project for gas, crude and water.
11. How many re-drills are anticipated annually? Would re-drills involve the use of the 32-foot attenuation sound wall?
12. Would workovers utilize sound walls at all? If so, please describe. Please confirm the allowed hours of use of the workover rigs (weekdays, weekends, hours of the day).
13. It is indicated that the stock tanks might need to be heated. Please provide information on the heater, heater size, combustion characteristics and emissions. Was this included in the air quality calcs and if so, where?
14. Please describe the use of some of the equipment listed in the air quality section: specifically the H-401 gas combustor manufacturer and emissions information, the use and characteristics of the micro-turbine.
15. Information on the odorant process: size of storage tank, rate of use of odorant and the frequency of odorant tank loading operations at design capacity.
16. There are some inconsistencies between the schedules as depicted in the figures and the days for the activity as depicted in the tables. These have been corrected in the project description but should be confirmed.
17. Provide information on the exact tie-in location into the water pipeline within the Greenbelt and construction activities related to pipeline installation within the Greenbelt.
18. Provide a detailed listing of all equipment, size, capacity for each phase of the project.



Steve Rogers Acoustics

November 20, 2013

**E&B OIL DEVELOPMENT PROJECT, HERMOSA BEACH
SUMMARY OF DATA REQUESTED FROM BEHRENS & ASSOCIATES**

Noise Impact Analysis - PHASE 1 (Site Preparation)

- Anticipated noise levels for each demolition and construction stage within this phase, based on equipment types, usage percentages etc.
The intent is to verify which stages will likely be the noisiest/worst case.
- Specific references for the source sound power levels (dBA) in Table 7-1 of Appendix J.
- The noise spectrum for each source in the noise impact models for this phase, as well as references for these spectra.
- Usage percentages (with references) for the items of equipment in each stage of this phase.
- A site plan for this phase of the project, showing location of sources (including heights) and radiation characteristics - point source, line source area source etc. - as well as the location of noise barriers.
- Topographical input data (including buildings) for the vicinity of the project site.
Suitable for input to our SoundPLAN model.

Noise Impact Analysis - PHASE 2 (Drilling & Testing)

- Source data - including spectra - for the noise sources in this phase.
- For measured data (from past B&A projects) date and location of the measurement and confirmation of the type of equipment.
- References for any data that comes from published sources.
- For equipment that is to receive noise mitigation as part of the project, an analysis the net noise radiated by each piece of equipment (i.e. source spectrum - mitigation IL = radiated noise).
- A site plan for this phase of the project, showing location of sources (including heights) and radiation characteristics - point source, line source area source etc. - as well as the location of noise barriers.

Noise Impact Analysis - PHASE 3 (Final Design & Construction, Pipeline Construction)

- Anticipated noise levels for each construction stage within this phase, based on equipment types, usage percentages etc.
The intent is to verify which stages will likely be the noisiest/worst case.
- Specific references for the source sound power levels (dBA) in Table 7-8 of Appendix J.
- The noise spectrum for each source in the noise impact models for this phase, as well as references for these spectra.



- Usage percentages (with references) for the items of equipment in each stage of this phase.
- A site plan for this phase of the project, showing location of sources (including heights) and radiation characteristics - point source, line source area source etc. - as well as the location of noise barriers.
- For the pipeline construction locations, topographical input data (including buildings) for the vicinity of the project site.
Suitable for input to our SoundPLAN model.

Noise Impact Analysis - PHASE 4 (Development & Operations)

- Source data - including spectra - for the noise sources in this phase.
- For measured data (from past B&A projects) date and location of the measurement and confirmation of the type of equipment.
- References for any data that comes from published sources.
- For equipment that is to receive noise mitigation as part of the project, an analysis the net noise radiated by each piece of equipment (i.e. source spectrum - mitigation IL = radiated noise).
- A site plan for this phase of the project, showing location of sources (including heights) and radiation characteristics - point source, line source area source etc. - as well as the location of noise barriers.
- Noise data for workover drilling (including references for published sources, date/location for B&A measured data).
We would like to include an expanded analysis of workover drilling noise in our section of the EIR.

Traffic Noise Analysis

- The raw traffic data (volume, mix, average speed etc., with and without the project) and growth factors from the traffic consultant for all of the roadway segments affected by the project.
If this data is included in the Applicant's traffic study, and a copy of the study is made available to us, we can work directly from that document and won't need any further input from B&A.

Vibration Analysis

- Source vibration data for the equipment/processes involved in Phases 2 and 4.
- Table 7-16 in Appendix J provides source vibration levels for the construction/demolition equipment in Phases 1 and 3; some of this data is taken directly from the FTA Noise and Vibration Manual, which is fine.
For the remainder, we would like to confirm where the quoted vibration levels came from - references for published sources and date/location for measurements made previously by B&A.
- Source vibration levels for the reduced-vibration methods of demolition or construction referred to in section 7.6 of Appendix J (such as substituting a crusher for the hydraulic concrete buster etc.).