

RADIOACTIVE  
**WASTECONTROL** MATERIALS DIVISION  
**SPECIALISTS LLC** JUN 8 PM 3 33

June 8, 2012

VIA Hand Delivery

Mr. Kelly Cook, Director (MC-172)  
Critical Infrastructure Division  
Office of Compliance and Enforcement  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, TX 78711-3087

RADIOACTIVE  
MATERIALS DIVISION  
2012 JUN 8 PM 3 33

- References: (1) Radioactive Material License No. R04100, Amendment 15  
CN600616890 / RN101702439.
- (2) Letter to Kelly Cook. (TCEQ), from J. Scott Kirk, CHP (WCS), re:  
"Proposed Action for Area of Concern Regarding the Detection of  
Water in Ogallala-Antlers-Gatuña (OAG) Wells in Compact Waste  
Facility (CWF) Buffer Zone, Radioactive Material License No.  
R04100", dated December 22, 2011.
- (3) Letter to Kelly Cook. (TCEQ), from J. Scott Kirk, CHP (WCS), re:  
"Completed Activities for Area of Concern Regarding the Detection of  
Water in OAG Wells in CWF Buffer Zone, Radioactive Material  
License No. R04100", dated February 3, 2012.

**Subject: Monthly Report of Water Level Measurements from OW-1, OW-2, OAG-21, OAG-22, and TP-173.**

Dear Mr. Cook,

Waste Control Specialists LLC (WCS) is providing the results of the water level measurements from OW-1, OW-2, OAG-21, OAG-22, and TP-173 in accordance with the December 22, 2011 letter to Mr. Kelly Cook of the Texas Commission on Environmental Quality (TCEQ) (Reference 2). On April 27, 2012, WCS accepted and disposed of its first waste shipment to the CWF.

Radioactive Material License No. R04100 (Reference 1), Amendment 15, License Condition (LC) 67 states the following:

*Corporate*  
5430 LBJ Freeway, Ste. 1700  
Three Lincoln Centre  
Dallas, TX 75240  
Ph. 972.715.9800  
Fx. 972.448.1419

*Facility*  
P.O. Box 1129  
Andrews, TX 79714  
Ph. 888.789.2783  
Fx. 575.394.3427

67. "The Licensee shall maintain an individual buffer zone for both the Compact Waste Disposal Facility and the Federal Facility Waste Disposal Facility in a lateral perimeter of at least 100 feet around all disposed waste to allow monitoring for early detection of releases and to allow for remediation, if necessary. In the event that saturated conditions are detected in the buffer zone, the Licensee shall cease all waste disposal operations and notify the executive director immediately."

Clearly the intent and context of the LC does not consider the presence of water a concern. Rather, as stated in the LC, the perimeter buffer zone around all disposed waste is intended "... to allow monitoring for early detection of releases and to allow for remediation, if necessary. ..." These potentially required activities may occur if saturated conditions migrate from the disposal area to the perimeter buffer zone.

OAG monitor wells OAG-21, OAG-22 and temporary piezometer TP-173 are located in the former small playa on the eastern boundary of the CWF within the perimeter buffer zone. Saturated conditions within the OAG were anticipated and forecast in the vicinity of the former playa due to the inherent geologic nature of playas as localized, closed depressions. The perched groundwater in this playa is a small, isolated pocket of water that is not connected to a zone of continuous saturation. Playas serve as focused recharge features both regionally and at the WCS facility. WCS notes that the existence of the small playa was identified and documented in the initial license application almost 10 years ago, and discussed with TCEQ staff several years before waste was accepted at the CWF.

To provide additional hydrogeologic information near the former small playa, WCS installed temporary observation wells OW-1 and OW-2 on January 4, 2012. Both wells are located east of the CWF disposal unit and west of monitor wells OAG-21 and OAG-22, and are expected to be located outside the former small playa on the eastern boundary of the CWF. These wells help demonstrate that the OAG is unsaturated in an area greater than 100 feet around the disposal areas.

Hydraulic conductivity associated with OAG-21 is sufficient to allow groundwater pumping; while OAG-22 and TP-173 do not recharge at a rate sufficient to provide effective evacuation of water. Hydrographs of water level measurements for wells OW-1, OW-2, OAG-21, OAG-22, and TP-173 are provided in Attachment A. As of May 31, 2012, after removing about 25,253 gallons of water, the height of the perched groundwater column above the Dockum/OAG contact has been reduced to slightly more than 2.9 ft and 1.06 ft in OAG-21 and OAG-22, respectively. The OAG hydraulic unit at TP-173 remains dry. OW-1 and OW-2 have been dry since their installation in January 2012. As shown on the attached hydrograph, water levels in OW-2 continue to fluctuate but the OAG formation remains unsaturated at that location.

WCS requests that a copy of all correspondence regarding this matter be directly emailed ([skirk@valhi.net](mailto:skirk@valhi.net)) to my attention as soon as possible after issuance. If you have any questions or need additional information, please call me at 432-525-8500.

Mr. Kelly Cook, TCEQ  
June 8, 2012  
Page 3 of 3

Sincerely,



J. Scott Kirk, CHP  
Vice President, Licensing, Corporate Compliance and Radiation Safety Officer

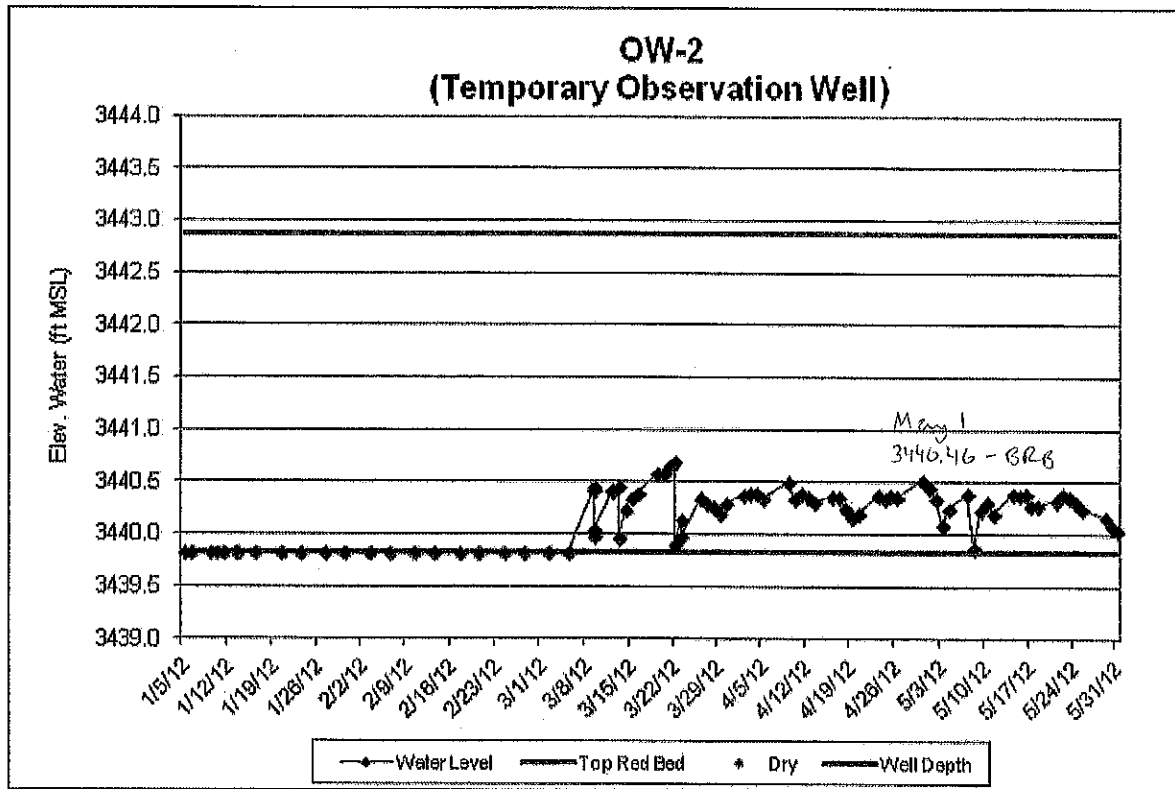
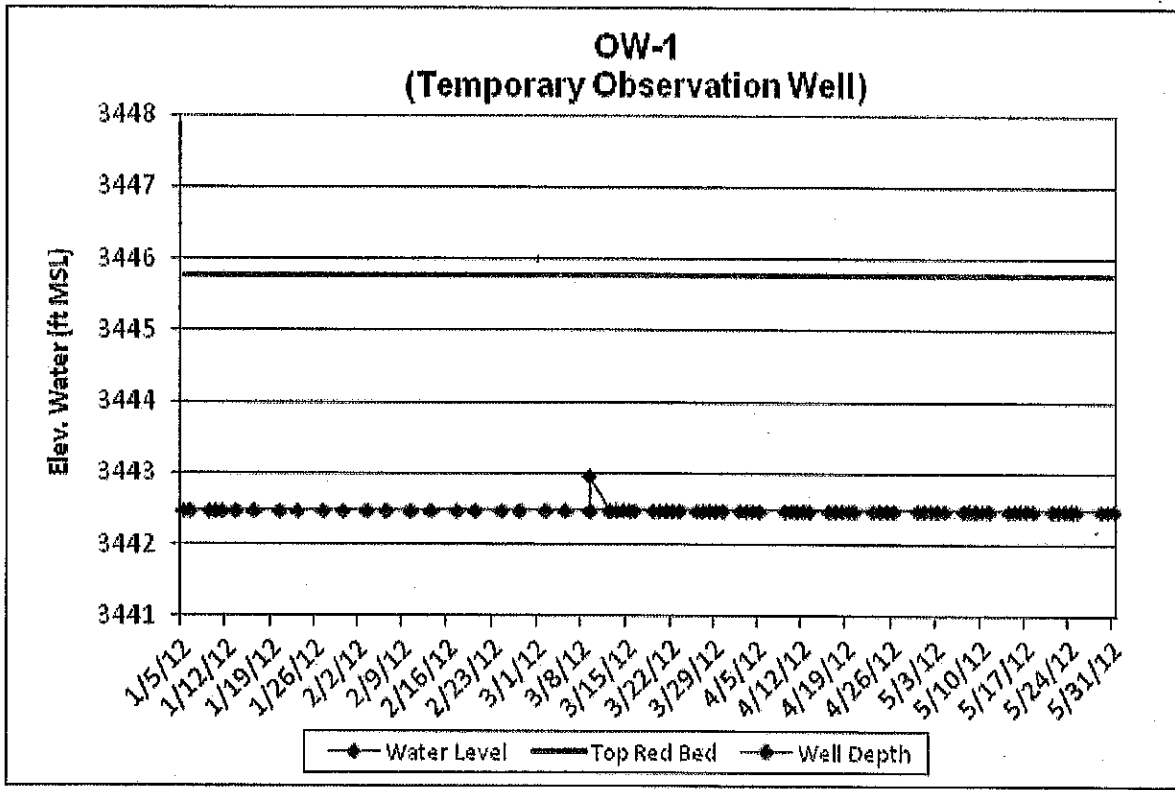
Enclosure

cc: Charles Maguire, TCEQ  
William Dornsife, P.E., WCS  
Jim Van Vliet, WCS  
Linda Beach, WCS  
Jane Grimm, WCS  
Pam Giblin, Baker Botts  
WCS Regulatory Compliance  
WCS Records Management

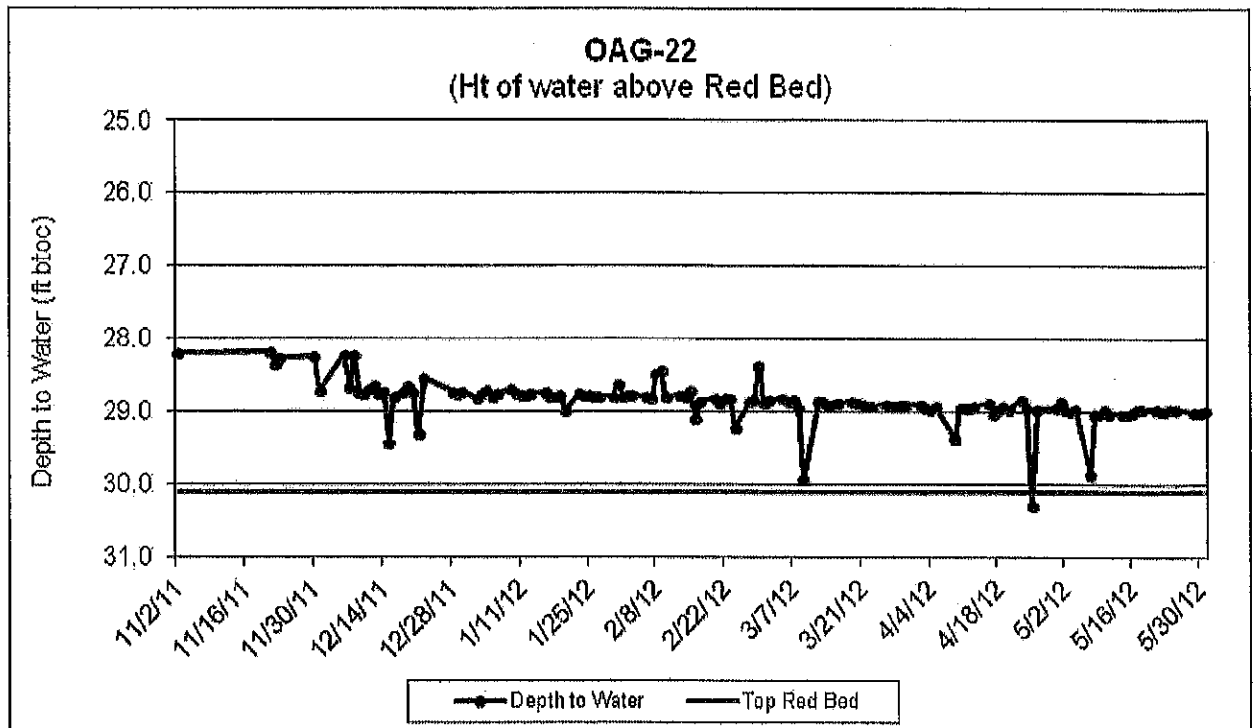
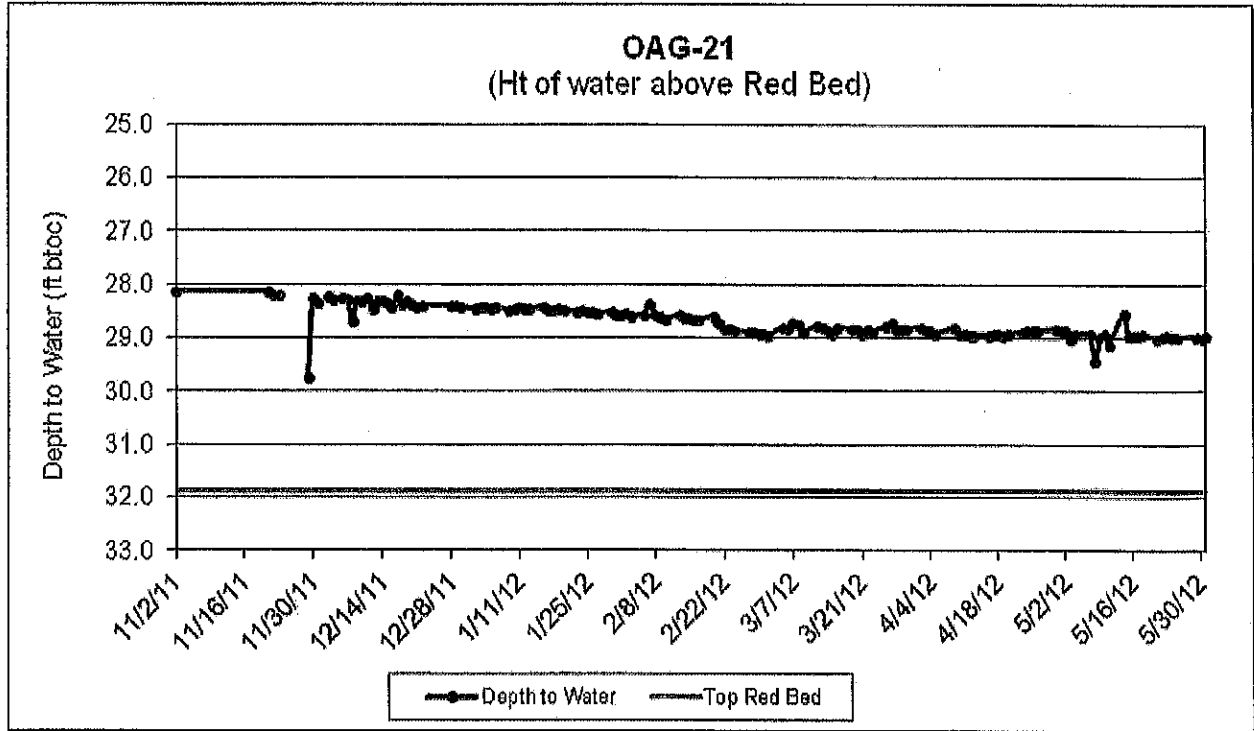
**ATTACHMENT A**

Hydrographs through May 31, 2012 for  
OW-1, OW-2, OAG-21, OAG-22, and TP-173

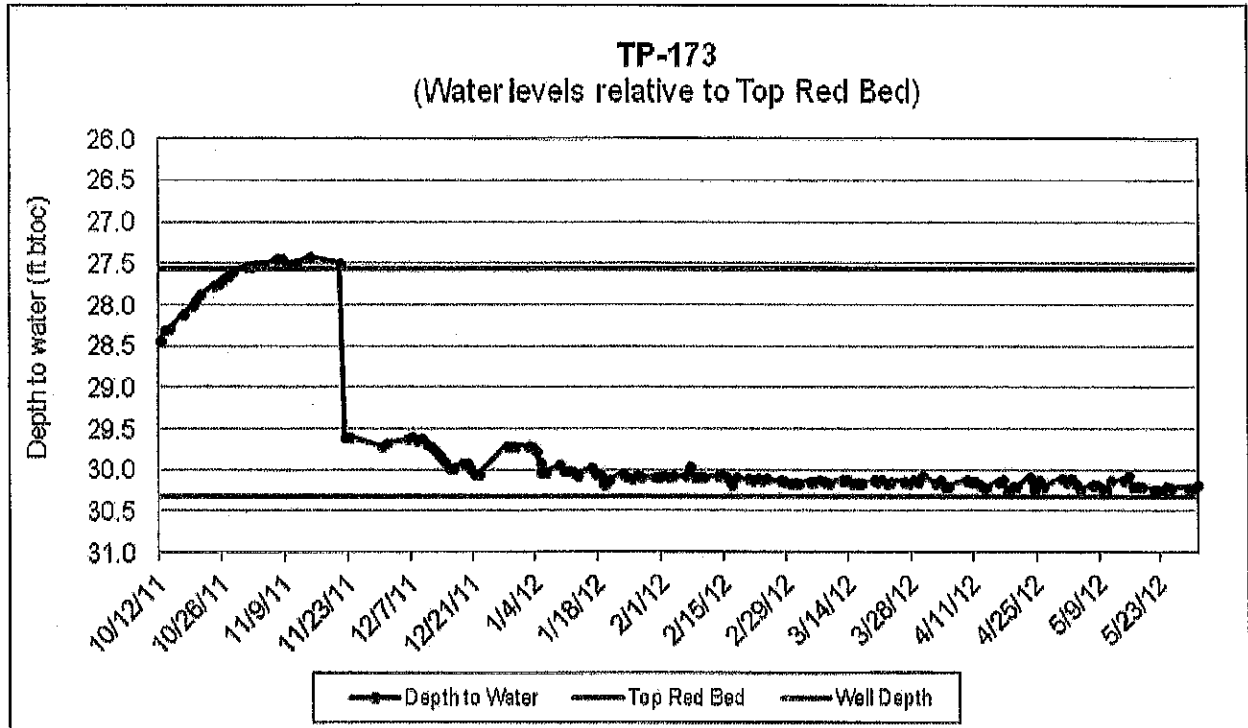
HYDROGRAPHS



HYDROGRAPHS



HYDROGRAPHS



**WASTECONTROL  
SPECIALISTS LLC**

May 8, 2012

VIA Express Mail  
EG 728476195 US

Mr. Kelly Cook, Director (MC-172)  
Critical Infrastructure Division  
Office of Compliance and Enforcement  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, TX 78711-3087

RECEIVED

MAY 10 2012

COMPLIANCE ENFORCEMENT

RECEIVED  
MAY 11 2012

Critical Infrastructure Division

- References: (1) Radioactive Material License No. R04100, Amendment 14  
CN600616890 / RN101702439.
- (2) Letter to Kelly Cook. (TCEQ), from J. Scott Kirk, CHP (WCS), re:  
"Proposed Action for Area of Concern Regarding the Detection of Water  
in Ogallala-Antlers-Gatufia (OAG) Wells in Compact Waste Facility  
(CWF) Buffer Zone, Radioactive Material License No. R04100", dated  
December 22, 2011.
- (3) Letter to Kelly Cook. (TCEQ), from J. Scott Kirk, CHP (WCS), re:  
"Completed Activities for Area of Concern Regarding the Detection of  
Water in OAG Wells in CWF Buffer Zone, Radioactive Material License  
No. R04100", dated February 3, 2012.

**Subject: Monthly Report of Water Level Measurements from OW-1, OW-2, OAG-21,  
OAG-22, and TP-173.**

Dear Mr. Cook,

Waste Control Specialists LLC (WCS) is providing the results of the water level measurements from OW-1, OW-2, OAG-21, OAG-22, and TP-173 in accordance with the December 22, 2011 letter to Mr. Kelly Cook of the Texas Commission on Environmental Quality (TCEQ) (Reference 2). On April 27, 2012, WCS accepted and disposed of its first waste shipment to the CWF.

Radioactive Material License No. R04100 (Reference 1), Amendment 14, License Condition (LC) 67 states the following:

*Corporate*  
5430 LBJ Freeway, Ste. 1700  
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Dallas, TX 75240  
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Andrews, TX 79714  
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WCS notes that the existence of the small playa was identified and documented in the initial license application almost 10 years ago, and discussed with TCEQ staff on several occasions. The intent and context of the LC does not consider the presence of water a concern. Rather, as stated in the LC, the perimeter buffer zone around all disposed waste is intended "... to allow monitoring for early detection of releases and to allow for remediation, if necessary. ..." These potentially required activities may occur if saturated conditions migrate from the disposal area to the perimeter buffer zone. At present, the OAG is unsaturated in an area greater than 100 feet around the disposal areas.

OAG monitor wells OAG-21, OAG-22 and temporary piezometer TP-173 are located in the former small playa on the eastern boundary of the CWF within the perimeter buffer zone. Saturated conditions within the OAG were anticipated and forecast in the vicinity of the former playa due to the inherent geologic nature of playas as localized, closed depressions. The perched groundwater in this playa is a small, isolated pocket of water that is not connected to a zone of continuous saturation. Playas serve as focused recharge features both regionally and at the WCS facility.

To provide additional hydrogeologic information near the former small playa, WCS installed temporary observation wells OW-1 and OW-2 on January 4, 2012. Both wells are located east of the CWF disposal unit and west of monitor wells OAG-21 and OAG-22, and are expected to be located outside the former small playa on the eastern boundary of the CWF.

Hydraulic conductivity associated with OAG-21 is sufficient to allow groundwater pumping; while OAG-22 and TP-173 do not recharge at a rate sufficient to provide effective evacuation of water. Hydrographs of water level measurements for wells OW-1, OW-2, OAG-21, OAG-22, and TP-173 are provided in Attachment A. As of April 30, 2012, after removing about 24,450 gallons of water, the height of the perched groundwater column above the Dockum/OAG contact has been reduced to slightly more than 3.0 ft in OAG-21.

During April 2012, the water production rate in OAG-21 began to decline. Although not reflected in the OAG-21 hydrograph, water production has reduced from around 30 gallons per hour (gal/hr) to about 7.5 gal/hr. This reduction has decreased the daily volume of water produced from OAG-21 by about 75%. WCS proposes to continue pumping the water from OAG-21 while seeking ways to improve the water production rate in OAG-21.

Temporary observation well OW-1 remains dry after a brief indication of water in the end cap of the well. On March 9, 2012, OW-2 showed an initial reading of 0.59 ft of end cap water in the well. Total well depth was measured at 28.65 ft below top of casing (btoc) and the depth to water was at 28.06 ft btoc. Before that time, temporary observation well OW-2 had been dry since its installation in January 2012. As shown on the attached hydrograph, water levels in OW-2 continue to fluctuate but the OAG formation remains unsaturated at that location.

Mr. Kelly Cook, TCEQ  
May 8, 2012  
Page 3 of 3

WCS requests that a copy of all correspondence regarding this matter be directly emailed ([skirk@valhi.net](mailto:skirk@valhi.net)) to my attention as soon as possible after issuance. If you have any questions or need additional information, please call me at 432-525-8500.

Sincerely,



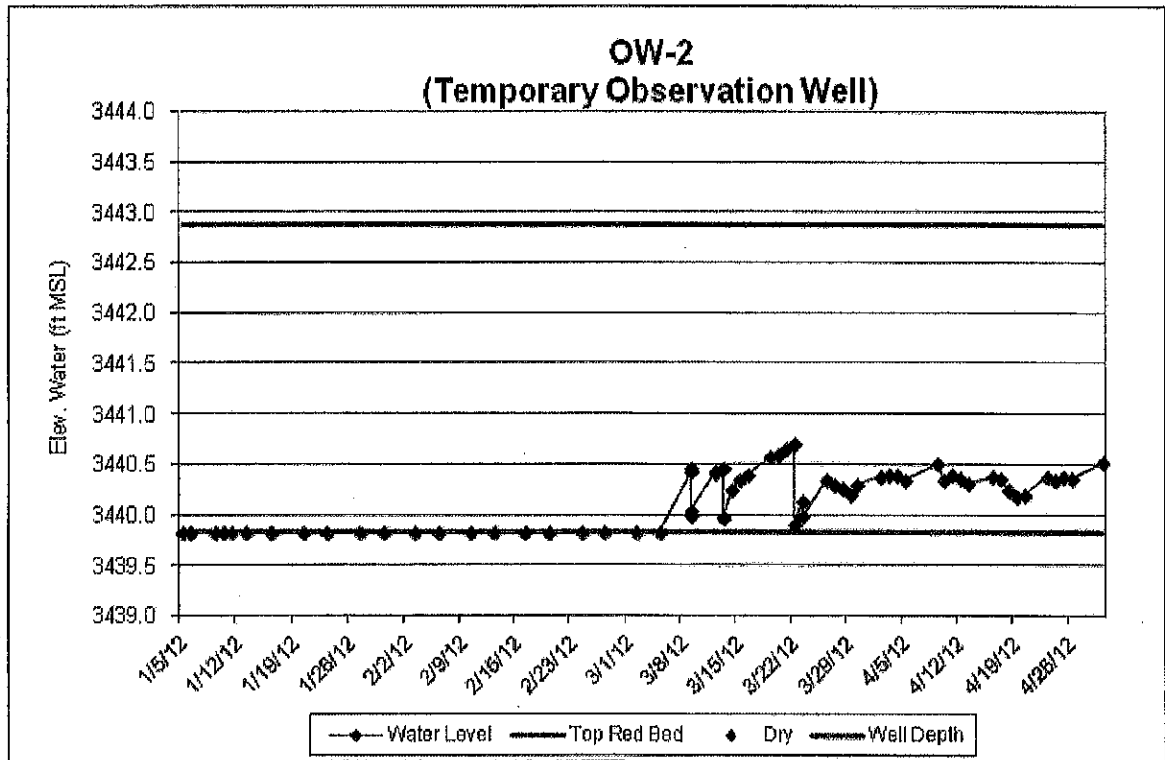
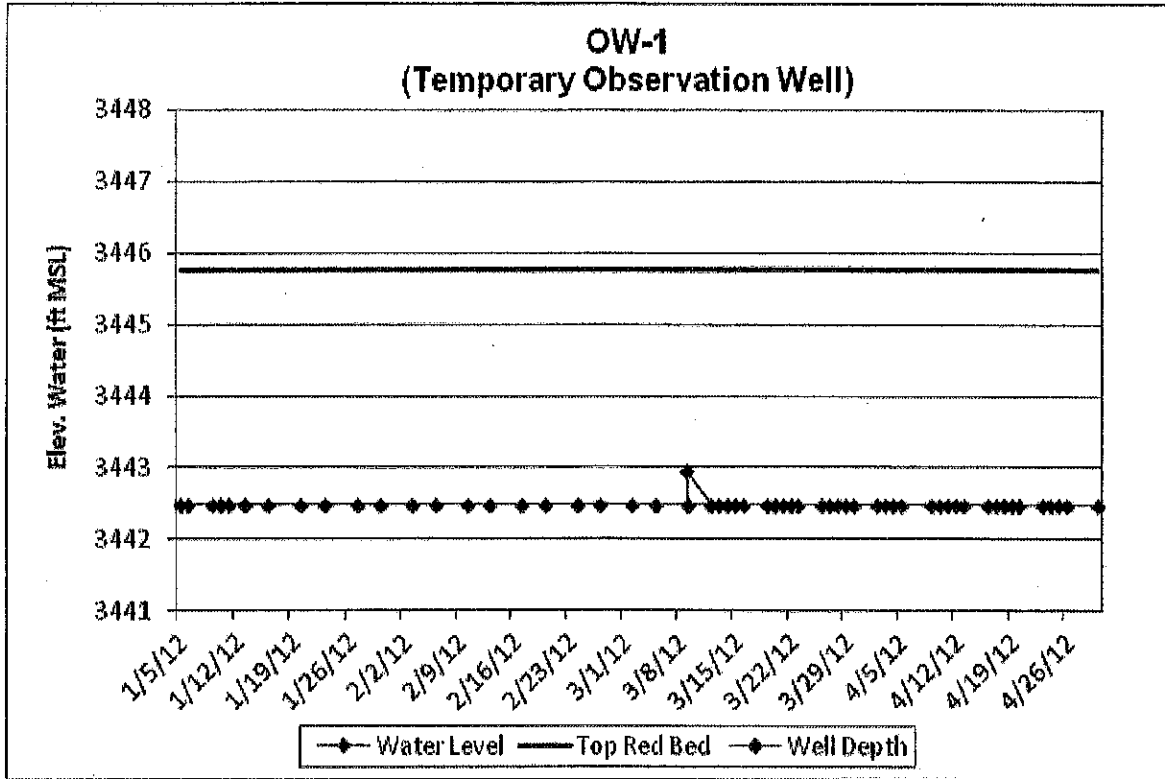
J. Scott Kirk, CHP  
Vice President, Licensing, Corporate Compliance and Radiation Safety Officer

Enclosure

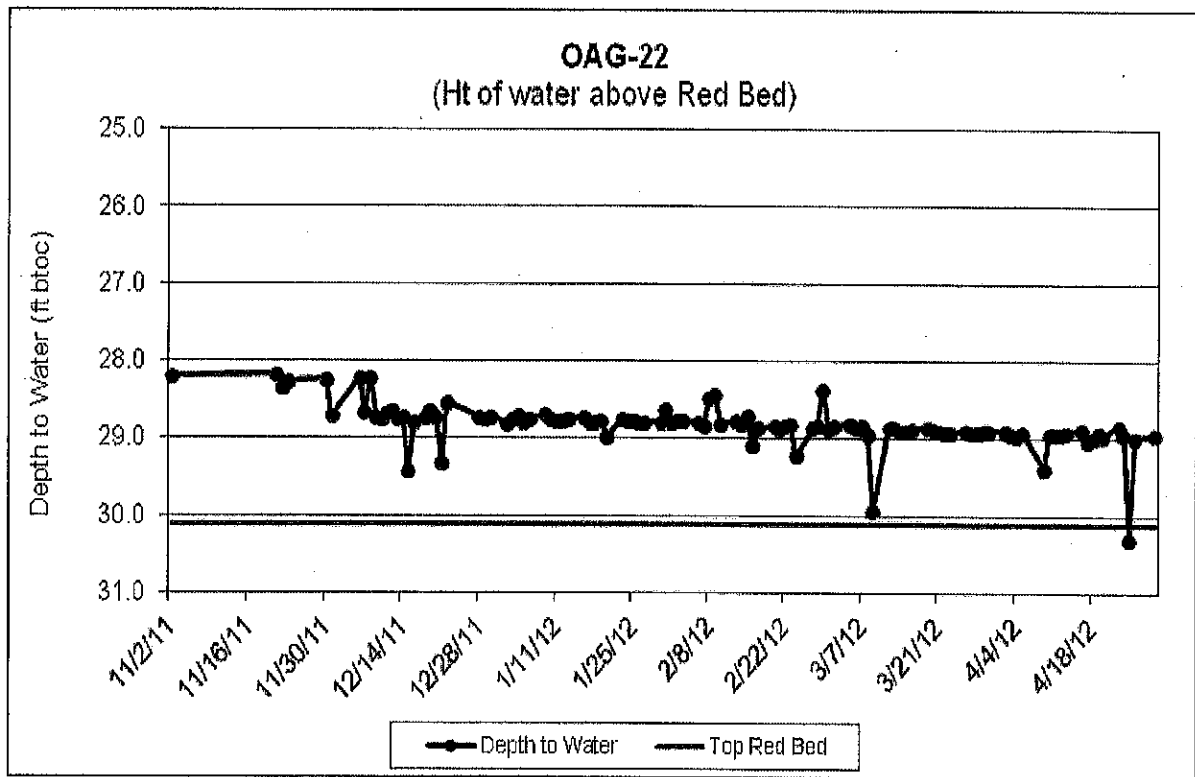
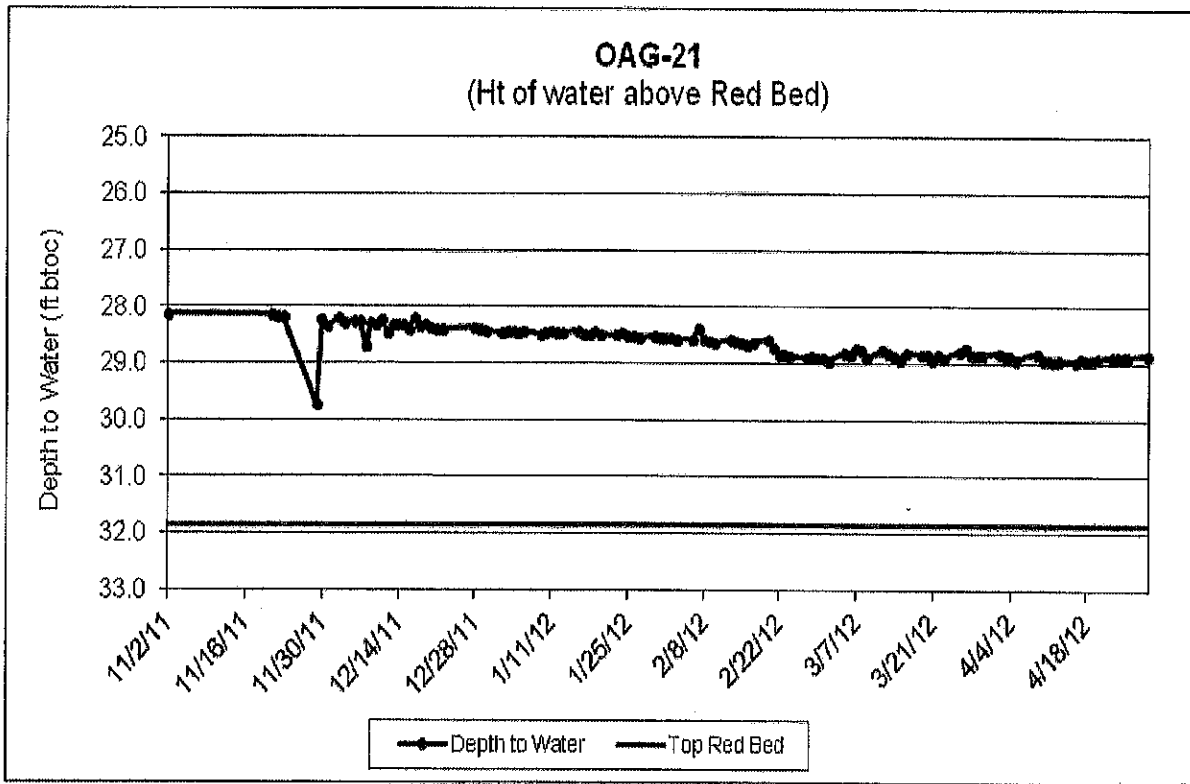
cc: Charles Maguire, TCEQ  
William Dornsife, P.E., WCS  
Jim Van Vliet, WCS  
Linda Beach, WCS  
Jane Grimm, WCS  
Pam Giblin, Baker Botts  
WCS Regulatory Compliance  
WCS Records Management

**ATTACHMENT A**  
Hydrographs through April 30, 2012 for  
OW-1, OW-2, OAG-21, OAG-22, and TP-173

HYDROGRAPHS

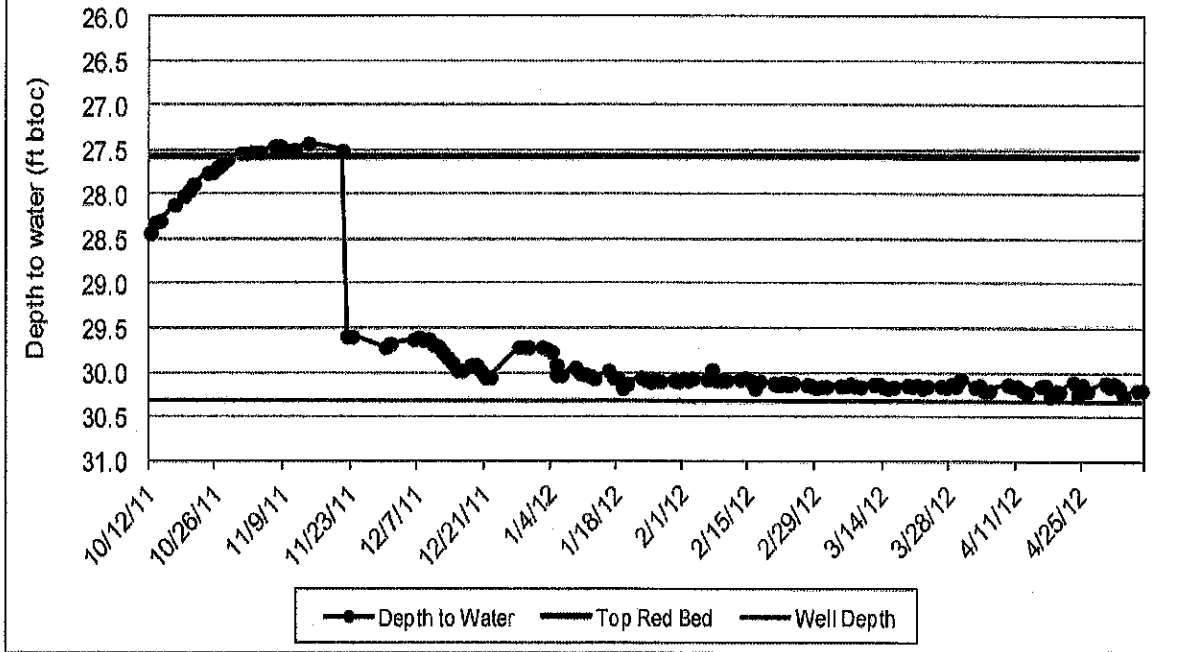


HYDROGRAPHS



HYDROGRAPHS

TP-173  
(Water levels relative to Top Red Bed)



**WASTECONTROL  
SPECIALISTS LLC**

April 3, 2012

VIA Express Mail  
EG 728476315 US

Mr. Kelly Cook, Director (MC-172)  
Critical Infrastructure Division  
Office of Compliance and Enforcement  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, TX 78711-3087

- References: (1) Radioactive Material License No. R04100, Amendment 12  
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Subject: Monthly Report of Water Level Measurements from OW-1, OW-2, OAG-21,  
OAG-22, and TP-173.

Dear Mr. Cook,

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*Corporate*  
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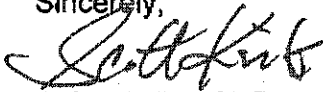
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Hydraulic conductivity associated with OAG-21 is sufficient to allow groundwater pumping; while OAG-22 and TP-173 do not recharge at a rate sufficient to provide effective evacuation of water. Hydrographs of water level measurements for wells OW-1, OW-2, OAG-21, OAG-22, and TP-173 are provided in Attachment A. As of March 30, 2012, after removing about 23,250 gallons of water, the height of the perched groundwater column above the Dockum/OAG contact has been reduced to slightly more than 3.0 ft in OAG-21. WCS proposes to continue pumping the water from OAG-21.

Temporary observation well OW-1 remains dry after a brief indication of water in the well. On March 9, 2012, OW-2 showed an initial reading of 0.59 ft of end cap water in the well. Total well depth was measured at 28.65 ft below top of casing (btoc) and the depth to water was at 28.06 ft btoc. Before that time, temporary observation well OW-2 had been dry since its installation in January 2012. As shown on the attached hydrograph, water levels in OW-2 continue to fluctuate but the OAG formation is unsaturated at that location.

WCS requests that a copy of all correspondence regarding this matter be directly emailed ([skirk@valhi.net](mailto:skirk@valhi.net)) to my attention as soon as possible after issuance. If you have any questions or need additional information, please call me at 432-525-8500.

Sincerely,



J. Scott Kirk, CHP

Vice President, Licensing, Corporate Compliance and Radiation Safety Officer

Enclosure

cc: Lorrie Council, P.G., TCEQ  
Jim Van Vliet, WCS  
Linda Beach, WCS  
Dale Bodman, WCS  
Jane Grimm, WCS  
Pam Giblin, Baker Botts  
WCS Regulatory Compliance  
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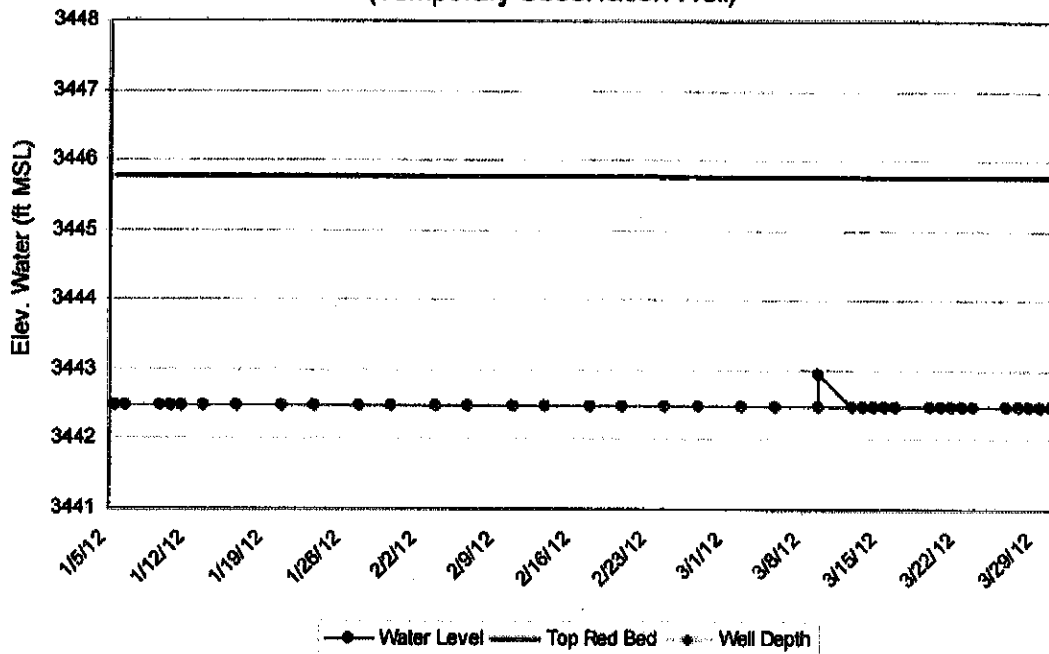


**ATTACHMENT A**

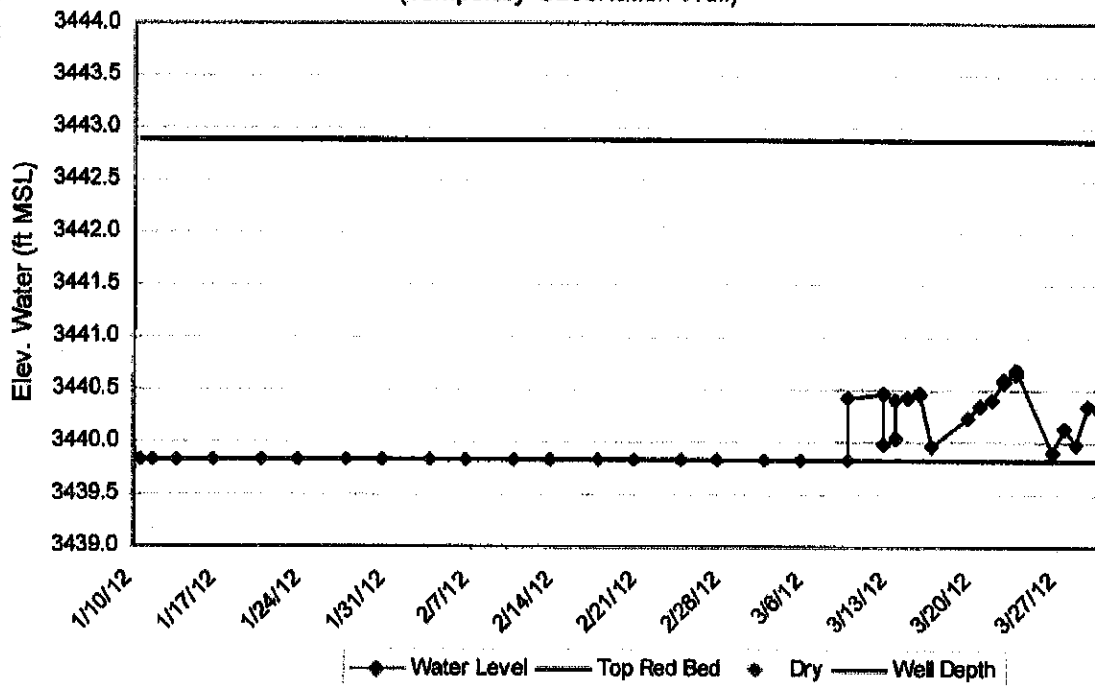
**March 2012 water level measurements and Hydrographs for  
OW-1, OW-2, OAG-21, OAG-22, and TP-173**

# HYDROGRAPHS

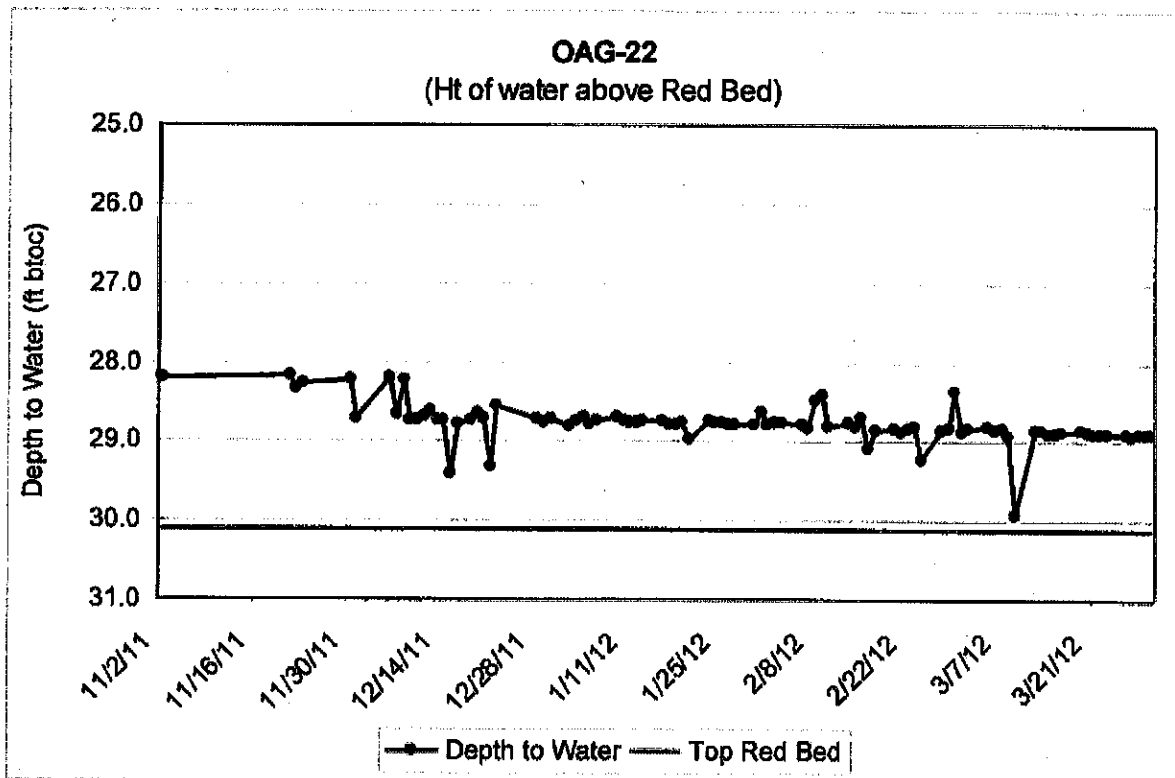
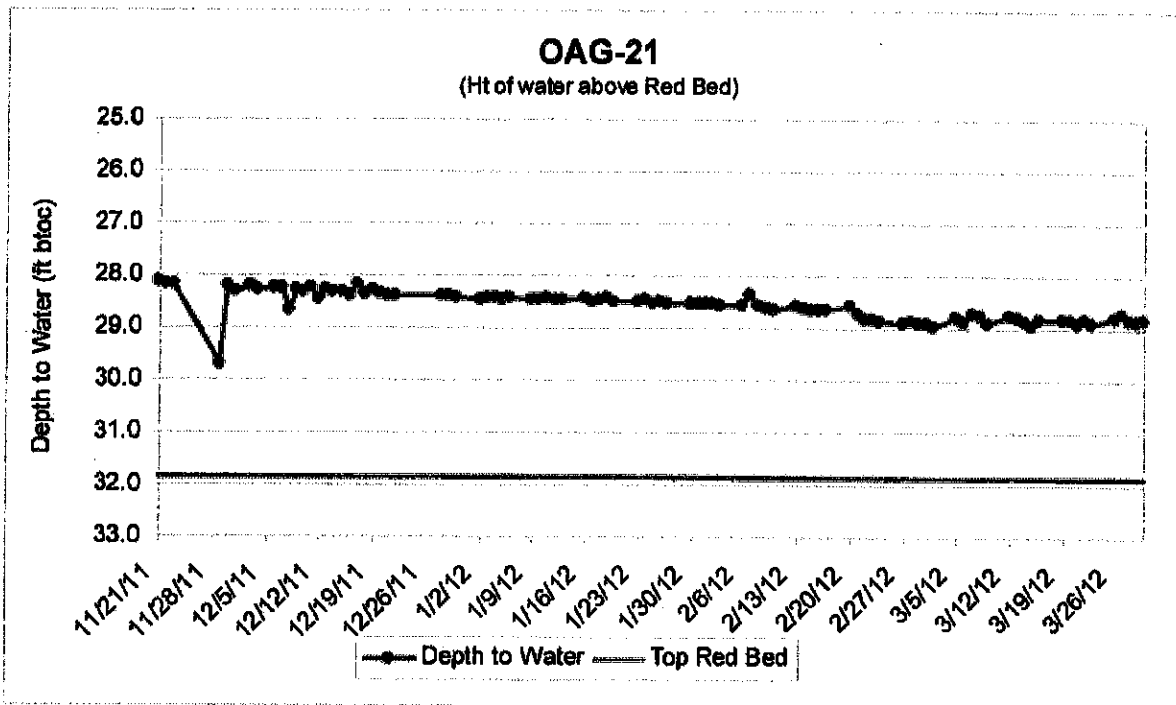
## OW-1 (Temporary Observation Well)



## OW-2 (Temporary Observation Well)



# HYDROGRAPHS



# HYDROGRAPHS

## TP-173

(Water levels relative to top red bed)

