



# COUNTY OF WILL

WILL COUNTY OFFICE BUILDING • 302 N. CHICAGO STREET • JOLIET, ILLINOIS 60432

November 27, 2012

Tom Holbrook  
Chairman, Illinois Pollution Control Board  
James R. Thompson Center  
100 W. Randolph  
Suite 11-500  
Chicago, Illinois 60601

RECEIVED  
CLERK'S OFFICE

NOV 29 2012

STATE OF ILLINOIS  
Pollution Control Board

PC# 55

Re: Illinois Pollution Control Board (IPCB) Rulemaking Case R12-9 (Land) for Clean Construction & Demolition Debris (CCDD) & Uncontaminated Soil Fill Operations

Dear Chairman Thomas Holbrook:

This letter is being written in response to the current comment period (ending 12/1/12) established by the IPCB at the request of the Joint Committee on Administrative Rules (JCAR) for Rulemaking Case R12-9. The main concern is the lack of a groundwater monitoring requirement in the rulemaking for CCDD & Uncontaminated Soil Fill Operations.

Will County is concerned that if there isn't adequate testing requirements that protect our water supplies from the contamination of materials disposed at CCDD and Uncontaminated Soil Only sites, our groundwater will be at serious risk. A groundwater monitoring requirement would ensure that the facility operators are in fact following the new regulations and accepting the right materials (as it would show up in testing results), and curtail future liability.

In an effort to assist the IPCB and the JCAR Commission in their evaluation of the costs associated with the implementation of a groundwater monitoring program, Will County hired a professional engineer and hydrogeologist to perform a study to determine the costs of groundwater monitoring at CCDD sites. The study includes the creation of the overall groundwater plan; installing a groundwater monitoring network of 5 wells (1 more than the IEPA has recommended); annual sampling; analysis from an IEPA certified laboratory, including data evaluation, report preparation and project management by a hydrogeologist/geologist.

The total estimated cost for the work outlined above including the creation and installation of the groundwater monitoring network and program is \$156,300. The annual operational costs in current years for sampling, including analyzing and filing a report for the groundwater data is \$18,700 for five wells. For this cost analysis, the amount was then increased by 3% (average CPI) per year. The amount of years operating and the cubic yards of capacity were then used to provide a breakdown per cubic yard.

The cost of the work as outlined above was applied to 4 CCDD sites in Will County using information the subject sites provided to the IEPA as part of their permit. The cost for these sites with a site capacity ranging in age from 3 years (1,363,786 cubic yards) is \$.16 per cubic yard to 33 years (23,000,000 cubic yards) is \$.06 per cubic yard. The CCDD sites generally charge between \$4.50 and \$5.00 per cubic yard. It appears that once broken down to the cubic yard, as opposed to looking at the entire cost of implementing a groundwater program for the site's life all at once, the cost of a groundwater program is a fraction of what the site charges per cubic yard.

Please keep in mind that these sites would also have every right to add the cost of implementing a groundwater monitoring program to their fees, so they could recapture this operating cost. In addition, the costs outlined above are in line with the data submitted to the IPCB by the IEPA and Waste Management during the rulemaking process.

To provide more detail as to how Will County and its consultant PSC arrived at the cost of implementing a groundwater monitoring program, we have attached the report we received from PSC. Finally, we want to address the assertion that counties and municipalities have the authority to include groundwater monitoring and testing requirements in special use permits issued by those entities. While local governments can certainly impose additional rules, many do not. If Will County adopts more stringent rules that include groundwater monitoring, CCDD site owners may opt to annex to a municipality with fewer restrictions. We believe that when the General Assembly crafted and passed PA96-1416, it was their intent that all CCDD sites in Illinois would be subject to the same environmental rules and regulations.

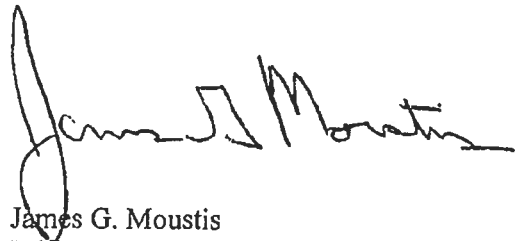
It is our sincere hope that the additional information that we have provided will help alleviate any concerns that IPCB members might have with regard to the costs associated with groundwater monitoring at CCDD sites. We hope with the information provided, the IPCB would add a groundwater monitoring requirement at CCDD and Uncontaminated Soil Operations. Since it is now known that for a mere \$.06 or even \$.16 per cubic yard, we would have a way to ensure that Will County and other residents throughout the State have a clean drinking water source. In Will County, clean groundwater (and thus drinking water) is vital to the livelihood of our residents and businesses.

Thank you for your consideration to our comments and concerns.

Sincerely,



Lawrence M. Walsh  
Will County Executive



James G. Moustis  
Will County Board Chairman

## ATTACHMENT

### Groundwater Cost Analysis for CCDD & Uncontaminated Soil Only Sites

Please see below 4 sites in Will County that have indicated they would be operating for 3+ years (using their own permit application information provided to the IEPA) & applying the cost of well installation & monitoring cost analysis that was provided by the groundwater consultant:

Site	Capacity cubic yard (cy)	Operating Years Remaining	Cost (Well Installation & Monitoring Annually/cy)
A	14,098,300 cy	25	<b>\$.06/cy</b> (\$156,300 wells + \$686,004 monitoring for 25yrs)
B	8,731,000 cy	20	<b>\$.08/cy</b> (\$156,300 wells + \$505,551 monitoring for 20 yrs)
C	23,000,000 cy	33	<b>\$.05/cy</b> (\$156,300 wells + \$1,036,389 monitoring for 33 yrs)
D	1,363,786 cy	3	<b>\$.16/cy</b> (\$156,300 wells + \$58,048 monitoring for 3 yrs)

NOTE: The estimate of well installation cost (\$156,300) is part of the cost estimate from the consulting firm which is in a separate attachment. This estimate is for 5 wells, 1 more than the IEPA had suggested in their proposal to the IPCB. The monitoring cost is based on a cost estimate (\$18,700 for the 1<sup>st</sup> year) of monitoring for the recommended parameters for the 5 wells & escalating the cost 3% each year (average consumer price index). Applying this cost per 15 cy load delivered ranges from \$.75 to \$2.40. The typical price charged per 15 cy load is \$70. This equates to a 1.1% – 3.4% increase in operating cost per 15 cy load to monitor groundwater.



July 20, 2012

Mr. Dean Olson  
Division Director  
Will County Land Use Department – Resource Recovery & Energy Division  
58 E. Clinton Street, Suite 500  
Joliet, Illinois 60432

Dear Mr. Olson:

**Subject: Budgetary Costs for Groundwater Monitoring  
Clean Construction & Demolition Debris Facilities  
Will County, Illinois**

At the request of Will County Land Use Department – Resource Recovery & Energy Division, PSC Industrial Outsourcing, LP (PSC) is providing budgetary costs for implementing and continuing a groundwater monitoring program for clean construction and demolition debris (CCDD) facilities. These costs are for budgetary and planning purposes and have been developed for an assumed scenario and should not be considered applicable to a specific site.

#### **ESTIMATING SCOPE**

The following items are considered to be part of a scope for evaluating budgetary costs:

##### *Groundwater Monitoring Plan*

A groundwater monitoring plan would be prepared by an experienced senior engineer or senior hydrogeologist and under the supervision of a licensed, senior professional engineer or professional geologist. The purpose of the plan would be to identify the appropriate quantity and location of monitoring wells, identify the appropriate depths and construction, and detail the sampling requirements that would apply to a specific facility. The Groundwater Monitoring Plan would be prepared for submittal to the Illinois Environmental Protection Agency (IEPA).

##### *Borehole Drilling/Well Installation*

As a general scenario, this would include drilling of five boreholes and the installation of five monitoring wells at a facility. An assumed depth for each borehole and monitoring well is 120 feet below ground surface. Continuous soil sampling and rock coring would be performed to characterize the subsurface geology. Soil sampling would be performed with a continuous tube sampler system. Rock coring would be performed using a NX rock core barrel system.



After drilling and sampling, the borehole would be reamed to the appropriate diameter to permit the proper installation of the monitoring well. Each well would be constructed with 2-inch diameter, stainless steel well material.

#### Hydrogeologist/Engineering Oversight

A senior environmental geologist would oversee the drilling and well installation. The soil and rock would be logged and data recorded on standard IEPA borehole logs. Well installation data would be recorded on standard IEPA well completion records and IDPH well completion forms. After installation, an Illinois licensed surveyor would survey the locations and the elevations of each monitoring well.

#### Well Purging/Groundwater Sampling

Each monitoring well would be purged of three well volumes of water. Purging would be performed with a submersible pump. Low-flow pumping would be used for purging the wells. Groundwater quality parameters would be monitored during purging. Water would be discharged to the ground surface and not containerized. The estimate is for a single monitoring event.

#### Groundwater Sample Analysis

Each groundwater sample collected would be submitted to an Illinois certified laboratory for laboratory analysis. The groundwater samples would be analyzed for the all the parameters identified in the Illinois Groundwater Quality Standard (IAC 620) to the required detection limits. A duplicate sample would be submitted for quality control/quality assurance purposes. Standard turnaround time would be requested for analyses. A total of six samples would be analyzed. The estimate is for a single monitoring event.

#### Data Evaluation and Report Preparation

Upon receipt of laboratory analytical data and field data, the data would be reviewed and evaluated. Groundwater level measurements would be used to generate groundwater elevation contour maps. Analytical results would be compared to the groundwater quality standards. Field procedures and results would be summarized in a summary report. The estimate is evaluation of data for a single monitoring event.

### **COST ESTIMATING CONDITIONS**

The following conditions were assumed for the development of the budgetary costs:

- The facility is located in Will County, Illinois.



- Geologic information published by the Illinois State Geological Survey (ISGS) for Will County indicates that the general geology for the county consists of unconsolidated soils overlying dolomite/limestone bedrock. Geologic maps for Will County published by the ISGS and the Illinois Environmental Protection Agency (IEPA) indicate that the depth to bedrock on the western portion of the county can be less than 25- to 50-feet below ground surface.
- PSC has assumed that field personnel to include engineering oversight geologists, sampling personnel, and drilling services will be through a contractor from the greater Chicago metropolitan area. Costs for mobilization to the site are assumed at one hour for any party involved in field activities.
- Five monitoring wells are part of a groundwater monitoring program. Only a single monitoring well will be installed at each monitoring location.
- The boreholes for each monitoring well will be drilled to a depth of 120 feet below ground surface (bgs). PSC has assumed 30 feet of unconsolidated soils overlying 90 feet of consolidated, dolomite/limestone bedrock. Continuous soil sampling and bedrock coring will be required in order to properly characterize the geology and identify the proper depth for placement of well screens. Each borehole will be reamed after drilling to the appropriate diameter for well installation.
- The locations for all monitoring wells can be readily accessed by a standard, multi-wheeled drill rig. Locations for drilling will not require the construction of temporary roads or clearing of brush or vegetation. Weather and surface conditions are such that a drill rig and could drive to the designated location.
- Wells will be constructed of inert, stainless steel material with 2 feet of sand pack above the top of the screen. The remaining annular space will be backfilled with a bentonite/cement grout mixture. The wells will be completed with aboveground well protectors and three bollards for protection of the well.
- Borehole drilling and well installation will take place in uncontaminated materials. Drill cuttings and unused portions of samples can be dispersed across the drilling area. Drilling fluids (drilling mud) can be discharged to the ground surface.
- No soil samples will be retained for either laboratory chemical analyses or for geotechnical soil testing.
- Each well will be surveyed for horizontal and vertical control by an Illinois Licensed Surveyor. The wells will be surveyed to the nearest 0.5 foot for horizontal and nearest 0.01 foot for vertical control.
- Groundwater monitoring will be performed for only a single monitoring event per year.
- Each monitoring well will recharge freely during the development and purging process with minimal drawdown.



- Well purging will be performed using portable, submersible pumps and low-flow groundwater purging techniques. Purged groundwater will be monitored during pumping for water quality parameters to include conductivity, pH level, temperature, and dissolved oxygen. Stability parameters can be achieved within three well purge volumes. Groundwater will be discharged to the ground during purging and development.
- No overnight stays, meals, lodging, or per diem costs are part of the estimates.
- No meetings with clients or agency personnel are part of the estimates.

**BUDGETARY COST ESTIMATE**

The budgetary costs for these activities are summarized below:

Preparation & Submittal of Groundwater Monitoring Plan	\$ 7,500
Borehole Drilling/Well Installation (5 BH/5 MW to 120 feet)	\$ 97,800
Environmental Hydrogeologist Oversight for Drilling/Well Installation	\$ 51,000
Purge/Sample Monitoring Wells – One Event (5 wells)	\$ 3,900
Laboratory Analysis – One Event (5 primary/1 duplicate sample)	\$ 11,200
Data Review, Reporting, Project Management	<u>\$ 3,600</u>
Total	\$175,000

We hope this budgetary estimate will be of assistance to the Will County Land Use Department. If you have any questions or require further information, please feel free to contact me at (618) 281-7173 (ext 1583) or [mcrutcher@pscnow.com](mailto:mcrutcher@pscnow.com).

Sincerely,

**PSC INDUSTRIAL OUTSOURCING, LP**

Michael Crutcher, PE, PG  
Senior Professional Engineer/Hydrogeologist

