BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS, Complainant, v. INTRA-PLANT MAINTENANCE CORPORATION, an Illinois corporation, IRONHUSTLER EXCAVATING, INC., an Illinois corporation, and RON BRIGHT, d/b/a Quarter Construction, Respondents.	)	PCB No. 12-21 (Enforcement - -Land)

NOTICE OF ELECTRONIC FILING

To: See Attached Service List

PLEASE TAKE NOTICE that on August 26th, 2013, I electronically filed with the Office of Clerk of the Pollution Control Board a MOTION TO RECONSIDER AND MODIFY BOARD ORDER, a MOTION FOR LEAVE TO FILE INSTANTER, and RESPONDENTS' OBJECTIONS TO COMPLAINANT'S MOTION FOR SUMMARY JUDGMENT AND CROSS-MOTION FOR SUMMARY JUDGMENT, all on behalf of Respondents IRONHUSTLER EXCAVATING, INC., and RON BRIGHT, d/b/a Quarter Construction, a copy of each of which is herewith served upon you.

Respectfully submitted,

\s\ *Thomas J. Immel*

Thomas J. Immel

Feldman Wasser Draper & Cox
PO Box 2418
1307 South Seventh Street
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(217) 544-3403

timmel@feldman-wasser.com

CERTIFICATE OF SERVICE

The undersigned attorney hereby certifies that a copy of the foregoing Notice of Electronic Filing has been served upon the following persons by placing the same in a sealed envelope, addressed as stated, with First Class postage fully prepaid and by depositing the same in the United States mail at Springfield, Illinois this 26th day of August, 2013:

Charles M. Rock
Hassellberg Rock Bell & Kuppler, LLP
4600 North Brandywine Dr.
Suite 200
Peoria, IL 61614

Raymond Callery, AAG – Environmental
Office of the Illinois Attorney General
500 South Second Street
Springfield, IL 62706

Carol Webb, Hearing Officer
Illinois Pollution Control Board
1021 North Grand Avenue East
PO Box 19274
Springfield, IL 62794-9274

and electronically filed with the Clerk of the Pollution Control Board on the same date.

\s\ *Thomas J. Immel*

Thomas J. Immel

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS, Complainant, v. INTRA-PLANT MAINTENANCE CORPORATION, an Illinois corporation, IRONHUSTLER EXCAVATING, INC., an Illinois corporation, and RON BRIGHT, d/b/a Quarter Construction, Respondents.	)	**PCB No. 12-21** (Enforcement - -Land)

MOTION FOR LEAVE TO FILE *INSTANTER*

NOW COME Respondents, IRONHUSTLER EXCAVATING, INC., an Illinois corporation, and RON BRIGHT, d/b/a Quarter Construction (hereinafter "Respondents"), by their undersigned attorney, and for their Motion For Leave to file *Instanter*, state as follows:

1. For the reasons noted in their companion Motion to Reconsider the Board's Order entered on July 25, 2013, Respondents ask for leave to file their attached Objections to Complainant's Motion for Summary Judgment, and Cross-Motion for Summary Judgment.

2. This Motion is made in good faith and not for purposes of delay.

WHEREFORE, Respondents pray this Motion for Leave to file *Instanter* be granted and that Respondents be allowed to file their attached Objections to

Complainant's Motion for Summary Judgment, and Cross-Motion for Summary Judgment.

Respectfully Submitted,
Respondents Ironhustler & Bright

By: \s\ *Thomas J. Immel*,
Their attorney

Feldman Wasser Draper & Cox
PO Box 2418
1307 South Seventh Street
Springfield, Illinois 62705
(217) 544-3403

timmel@feldman-wasser.com

Certificate of Service

The undersigned attorney hereby certifies that a copy of the foregoing *Motion For Leave to file Instanter* has been served upon the persons listed below by emailing same to each of them and also placing the same in a sealed envelope, addressed as indicated, with postage fully prepaid and by depositing the same in the United States mail at Springfield, Illinois this 26th day of August, 2013:

Raymond J. Callery
Assistant Attorney General
Environmental Enforcement Bureau
Office of the Illinois Attorney General
500 South Second Street
Springfield, Illinois 62706

Charles M. Rock
Hassellberg Rock Bell & Kuppler, LLP
4600 North Brandywine Dr.
Suite 200
Peoria, IL 61614

Carol Webb, Hearing Officer
Illinois Pollution Control Board
1021 North Grand Avenue East
PO Box 19274
Springfield, IL 62794-9274

and that the original of said *Motion For Leave to file Instanter* has been e-filed with the Clerk of the Illinois Pollution Control Board on the same date.

\s\ *Thomas J. Immel*

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS, Complainant, v. INTRA-PLANT MAINTENANCE CORPORATION, an Illinois corporation, IRONHUSTLER EXCAVATING, INC., an Illinois corporation, and RON BRIGHT, d/b/a Quarter Construction, Respondents.	)	**PCB No. 12-21** (Enforcement - -Land)

MOTION TO RECONSIDER AND MODIFY BOARD ORDER

NOW COME Respondents, IRONHUSTLER EXCAVATING, INC., an Illinois corporation, and RON BRIGHT, d/b/a Quarter Construction (hereinafter "Respondents"), by their undersigned attorney, and for their Motion to Reconsider and Modify the Order of this Board entered on July 25, 2013, state as follows:

1. The aforesaid Order of the Board, entered on July 25, 2013 (the "Order"), was served by certified mail upon the undersigned on the afternoon of August 1, 2013, from which date the Respondents have 35 days to request reconsideration or modification of same pursuant to the Board's Procedural Rules, all as noted at the foot of the Order.

2. The undersigned was in the process of completing the complex task of preparing objections to the Complainant's pending Motion for Summary Judgment when the Order arrived, and was taken by surprise because the Board's Hearing

Officer had just convened a phone status conference and entered an order on July 8, 2013 which noted on its face that the Respondents' (Ironhustler & Bright) Objections to the Complainant's pending Motion for Summary Judgment would be filed "within 30 days, along with a motion for leave to file *Instanter*".

3. Thus, the undersigned did not know or anticipate that the Order later entered on July 25th was forthcoming from the Board; and the Hearing Officer (Carol Webb) has since advised the undersigned and AAG Raymond Callery that she was unaware that a Board Order was "in the works" at the time of her own July 8th order, and would have so notified counsel at the time of the phone conference if she was. Had the undersigned been so advised, he would have promptly filed an appropriate motion directly with the Board.

4. The Complainant's pending Motion for Summary Judgment was not susceptible of a proper response at the time of its filing because additional discovery was prompted by its contents and depositions of IEPA personnel were required. In addition, the development and preparation of counter-affidavits was also required, sorting and assemblage of important exhibits provided to the Complainant but unmentioned in its Motion had to be fully reviewed and appended to the Response; and pending action by the U.S. Supreme Court was expected to further illuminate a particular point that the Respondents wished to raise in their pleading. All of this was discussed by counsel and the Hearing Officer over the course of multiple phone status conferences after the Complainant's pending Motion for Summary Judgment was filed.

5. Against that backdrop, the time for filing Respondent's pleading was extended twice. Upon the undersigned's request for a 3rd extension, driven in the main by intervening, persistent and unresolved personal health issues, AAG Callery advised that he would have to object due to his client's "policy", and he did so. Hearing Officer Webb advised by phone conference that the Board's "policy" was not to grant extensions "unless the People agree" to same. Thus, *the facial merits or substance of an extension request could not prevail against the aforesaid policies*; but, obviously aware of the undersigned's health problems, she did offer that the Respondents "should file the response, along with a motion for leave to file *Instanter*, as soon as possible", as recited in her order of March 28, 2013, and reiterated in substance in her order of July 8th.

6. In this context, the undersigned continued working on the response to Complainant's pending Motion for Summary Judgment, and it is now complete – as soon as possible. Respondents verily believe that they have meritorious defenses to Complainant's pending Motion for Summary Judgment, as well as valid reasons supporting their own Cross-Motion for such relief – all set forth in their responsive pleadings now completed – and that the interests of fairness and accuracy would be best served if those matters were considered by the Board in the course of rendering a final decision in an enforcement case filed 3 ½ years after the IEPA's investigation of the alleged violations asserted therein.

7. As matters presently stand the Board has granted the "drastic means" of ending this case without full knowledge of the underlying factual and legal

circumstances, and entered an Order on July 25th that ought to be reconsidered and modified to the extent that it be vacated to allow full consideration of the Respondents' objections and replies to the Complainant's Motion for Summary Judgment. Of course, the Complainant's own reply to the Respondents' now available Objections to the Complainant's Motion could further aid the Board.

WHEREFORE, Respondents pray that this Motion to Reconsider and Modify the Order of this Board entered on July 25, 2013 be granted and Respondents be given leave to file their *Instanter* Motion and their Objections to Complainant's Motion for Summary Judgment and Cross-Motion for Summary Judgment, now lodged with the Clerk of the Board.

Respectfully Submitted,
Respondents Ironhustler & Bright

By: \s\ *Thomas J. Immel*,
Their attorney

VERIFICATION

Under penalties as provided by law pursuant to Section 1-109 of the Code of Civil Procedure, the undersigned certifies that the statements set forth in the foregoing pleading are true and correct.

/s/ *Thomas J. Immel*
Thomas J. Immel

Feldman Wasser Draper & Cox
PO Box 2418
1307 South Seventh Street
Springfield, Illinois 62705
(217) 544-3403

timmel@feldman-wasser.com

Certificate of Service

The undersigned attorney hereby certifies that a copy of the foregoing Motion to Reconsider and Modify Board Order has been served upon the persons listed below by emailing same to each of them and also placing the same in a sealed envelope, addressed as indicated, with postage fully prepaid and by depositing the same in the United States mail at Springfield, Illinois this 26th day of August, 2013:

Raymond J. Callery
Assistant Attorney General
Environmental Enforcement Bureau
Office of the Illinois Attorney General
500 South Second Street
Springfield, Illinois 62706

Charles M. Rock
Hassellberg Rock Bell & Kuppler, LLP
4600 North Brandywine Dr.
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Peoria, IL 61614

Carol Webb, Hearing Officer
Illinois Pollution Control Board
1021 North Grand Avenue East
PO Box 19274
Springfield, IL 62794-9274

and that the original of said Motion to Reconsider and Modify Board Order has be e-filed with the Clerk of the Illinois Pollution Control Board on the same date.

\s\ *Thomas J. Immel*

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS, Complainant, v. INTRA-PLANT MAINTENANCE CORPORATION, an Illinois corporation, IRONHUSTLER EXCAVATING, INC., an Illinois corporation, and RON BRIGHT, d/b/a Quarter Construction, Respondents.	)	**PCB No. 12-21** (Enforcement - -Land)

RESPONDENTS' OBJECTIONS TO COMPLAINANT'S MOTION FOR SUMMARY JUDGMENT, AND CROSS-MOTION FOR SUMMARY JUDGMENT

NOW COME Respondents, IRONHUSTLER EXCAVATING, INC., an Illinois corporation ("Ironhustler"), and RON BRIGHT, d/b/a Quarter Construction ("Bright"), (also hereinafter referred to collectively as "Respondents"), and for their Objections to Complainant's Motion for Summary Judgment, and their Cross-Motion for Summary Judgment, state as follows:

The Complaint

Count II of the Complaint on file alleges that Respondent Bright operates an illegal dump site where "waste" was disposed and that he caused or allowed the "open dumping" of said waste in violation of Sections 21(a) and (e) of the Environmental Protection Act ("Act").

Count IV of the Complaint alleges that Respondent Ironhustler engaged in open dumping of waste at Bright's illegal disposal site in violation of the same Sections 21(a) and (e) of the Act.

Neither count of the Complaint against the Respondents alleges surface water or groundwater pollution, or the threat thereof, being caused by the actions of either Respondent; nor is any damage or threat to the environment asserted.

The conduct of the Respondents complained of occurred in or about January of the year 2008 and is subject only to the applicable legal standards that existed at that time.

The Actual Case History

Sometime during (or prior to) 2007, Altivity Packaging ("Altivity") decided to build a new "water treatment" building at its existing facility located at 1525 South 2nd Street in Pekin, Illinois on the bank of the Illinois River. They commissioned Testing Services Corporation ("TSC") to perform a soils exploration study of the subsoil on their property where the new building was to be located, and TSC generated a report of their study findings on January 4, 2008, the narrative portion of which is attached hereto as Respondents' Exhibit #1. As the report indicates, 3 soil borings revealed the physical presence of very loose "silt, sand and gravel along with notable amounts of cinders and brick fragments" (no mention of "slag" or "broken concrete") extending as deep as 15 feet, and all physically unsuitable for the intended slab foundation for the new building because it could not be sufficiently compacted to prevent undesirable future settlement once the building was

constructed and water treatment equipment installed. It was therefore suggested that the entire footprint of the proposed concrete slab be excavated to a depth of about 11 feet and replaced with denser fine grained sand and gravel, placed and compacted in such manner as to properly support the concrete slab that would then be poured above. The soil to be excavated is nowhere characterized as a waste and the report's admonition that it not be "reused" clearly refers to its reuse in the construction project. The only conclusion offered regarding the soil is that it is unsuitable for a properly compacted foundation.

The TSC report was provided to Respondent Intra-Plant Maintenance Corporation ("IPM"), the contractor selected by Altivity to construct the building to house the water treatment equipment. IPM, in turn, issued a notice to prospective bidders for the excavation phase of the project, specifying that the "poor soil" would need to be hauled off, all as set forth in Respondents' attached Exhibit #2. There is no mention of "waste" in IPM's notice issued on January 7, 2008.

IPM awarded the excavation and backfill sub-contract to Respondent Ironhustler on January 21, 2008. The contract document, attached hereto as Respondents' Exhibit #3, provided in pertinent part that "All unsuitable material shall be hauled off site and disposed of legally".

Ironhustler acquired the specified backfill material from Bright, delivering the excavated soil to Bright for use as road base, and backhauling the replacement material for the foundation to the Altivity construction site in Pekin, all as described in the Affidavit of Ron Bright attached hereto as Respondents' Exhibit

#11. Bright's Affidavit details the beneficial use he made of the excavated soil, using it for road base in his quarry (also sometimes referred to as the "Clouse Pit").

On March 5, 2008, The Illinois Environmental Protection Agency ("EPA") issued a Notice of Violation ("NOV") to each of the originally named Respondents in this case, asserting that *water pollution or the threat thereof* had been caused by the disposition of "contaminated waste" at Bright's quarry and also the alleged violations set forth in the instant Complaint. [Note that when the Complaint was actually filed, no water pollution allegations were contained therein.]

Rapps Engineering and Applied Science was commissioned by the Respondents to evaluate the EPA's NOV and generated a letter report with multiple attachments to the undersigned dated April 22, 2008 (a true copy of which is attached hereto as Exhibit #4). This report was supplied to EPA at a meeting attended by Agency personnel (including its counsel) and representatives of all Respondents, including report author Michael W. Rapps, on May 6, 2008. It was discussed in some detail and the EPA was asked to back away from its contentions (a) that the Altivity soil delivered to Bright by Ironhustler was a "waste", and (b) that the laboratory results regarding TACO standards demonstrated "violations" which proved, according to EPA, that the material was a "contaminated waste".

Following this meeting, and responsive thereto, a 21 day response to the meeting was generated by the undersigned and directed to EPA on May 28, 2008, a true copy of which is attached hereto as Respondents Exhibit #5. The letter drew upon the Rapps report (Exhibit #4) and his exposition of same at the May 6th

meeting, reiterated that the soil in question was not a "waste", that its use at the quarry was not an imposition on the environment in any way, and asked that the NOV be withdrawn.

Then, on June 17, 2008 EPA sent a response letter "rejecting" Exhibit #5, continuing to characterize the Altivity soil as a "waste", and indicating its intent to refer the matter for enforcement proceedings, a true copy of which is attached hereto as Respondents Exhibit #6. Goaded by the fact that EPA had ignored all the technical and historical information provided to them, as well as the proposed Sampling and Analysis Plan, Respondents caused a letter dated July 9 2008 to be directed back to EPA, a true copy of which is attached hereto as Respondents' Exhibit #7.

Later in time, after the EPA had made its referral to the Illinois Attorney General ("AG"), further discussion with the AG and EPA ensued, during the course of which the AG and EPA were provided with a three-page report issued on May 13, 2008 from PDC Laboratories of Peoria, Illinois. [Also, Altivity provided the PDC report to the AG in the course of discovery.] Said report is attached hereto as Respondents' Exhibit #8. The report shows the analytical results of water samples collected at the Altivity plant. Page one reports on the post-production process water outfall at the on-site lagoon and is completely uneventful. Page two covers the raw water produced by Altivity's on-site well (which is drilled directly through the same 15-20 foot layer of soil that was excavated and delivered to Bright's quarry) that is used to produce food packaging and must meet food quality standards, the

most stringent. This report is also uneventful. Respondents renewed their offer to implement the Rapps Sampling and Analysis Plan set forth in Exhibit #4, but were again rebuffed.

The filing of the Complainant's Motion for Summary Judgment prompted the need to take the depositions of EPA personnel. In that connection the deposition of Jason Thorp was taken on November 28, 2012, a transcript of which is attached hereto as Respondents' Exhibit #9. In pertinent part, with page numbers noted, Thorp testified that he was a field inspector for the EPA, working out of the Peoria office (p.7); that he inspected the Bright quarry on January 24th and 30th in 2008 (p. 28); that he observed and photographed three (3) piles of excavated Altivity soil that had been delivered by Ironhustler the first time (Thorp depo. Ex. #1) and again saw it a few days later while it was being committed to grade by Ron Bright (p.27), and then again when he took photos on August 24, 2008 on his 3rd visit (Thorp depo. Ex. #s 3-4). Thorp knows the difference between a grab sample and a composite sample (p.16). During his January 30th visit he collected grab samples. What's reported as samples X-102 and X-103 are not, in fact, two different samples. Rather, a single grab sample was divided into two sample jars. *Thus, X-102 and X-103 are indeed a single sample* (p.29). Thorp noted the presence of "pieces of cinder" and possibly "slag" in the Altivity soil, but makes no mention of concrete (p.30). Sample X-101 was grabbed about 30 feet from the first sample location (p.39); and, he opined, the entire area over which the 3 soil piles had been spread was about 1/5th of an acre (p.44). The intent in collecting samples was to confirm "that the material did not

meet the definition of CCDD" (p.40). He did not employ the use of a sampling grid (p.41).

Thorp never received the physical grab samples back from the EPA lab and has no idea as to their whereabouts. He does not possess a physical sample of the Altivity soil (p.50).

Further, he collected no background samples from the Bright quarry (p.51); does not know how far the quarry might be from the closest residential well or whether it is within a setback zone (p.55). No steps have been taken to determine the hydraulic conductivity of the quarry soil. It remains an unknown (p.57). He also knew that no 10-12 inch borehole had been drilled by the EPA to serve as a sampling well (p.51). [Thus, there was no effort at all to establish the presence of Class I groundwater beneath the Bright quarry site.]

Thorp attended a meeting where the quarry's intent to use the Altivity soil as road base was discussed, but he didn't know about that at the time of his initial inspections in January, 2008 (p.71).

The next deposition taken was that of Paul Purseglove on November 29, 2012, the transcript of which is attached hereto as Respondents' Exhibit #12. He serves as the Manager of Field Operations for the Bureau of Land (p.6).

Initially, inquiry was made concerning the reuse of the Altivity soil as road base material at the Bright quarry. Purseglove acknowledged that the "beneficial reuse" of what might otherwise be a "waste" took such material outside the definition of a "waste' because it is not being "discarded" (p.9). He went on to

describe the EPA program in place that is called the "Beneficial Use Determination" (hereinafter "BUD") and described it as a straightforward method by which someone seeking to reuse an otherwise waste material applies to the EPA for a BUD, provides the information requested on Agency forms, and obtains the sought after BUD (pp.8-11). Later in the deposition he criticized Respondents for not "exploring opportunities to beneficially reuse" the Altivity soil he thought they should have known would be regarded as a "waste" by EPA (viz., apply for a BUD) (p.35). [That is where the BUD subject was left, there being no reason to embarrass the witness with the reminder that the BUD program, 45 ILCS 5/22.54, only became law on August 14, ***2009*** with the passage of P.A. 96-489, a full 1½ years after the Altivity/Ironhustler/Bright transaction had occurred.]

Other matters were explored with witness Purseglove. He testified that in about 2001 the Agency defined "uncontaminated" soil to be that which had been placed in situ by the action of" God or the Glaciers", and that everything else was by definition "contaminated" (p.15-16). This definition had never been adopted in a regulation, but Purseglove had seen it discussed in an EPA document within "the last six months", and in connection with the regulations (R12-9) soon to be approved by this Board on June 7, 2012 (p.17-20). AAG Callery, representing Purseglove in the deposition was asked to supply the document to which the witness was referring, and he said he would seek to do so (p. 19); *but the document was never produced.*

Purseglove specifically testified that until the effective date of R12-9, the non-regulatory, in house, EPA "God and Glaciers" definition of "uncontaminated" was the working standard for making waste determinations within EPA (p.20).

According to Purseglove, in 2008, when the events of the instant case were unfolding, the EPA only used the "God and Glaciers" standard to judge whether a substance was a waste (p. 22), although TACO *might* be used in making a "God and Glaciers" uncontaminated decision in some instances, and there was controversy among EPA senior staff about how – and whether – to do that (p.25). TACO is not a tool for making "waste" determinations, but is, rather, intend to be used as a cleanup and remediation tool (p.27).

Purseglove understood that the Altivity soils had to be excavated and replaced because "the engineer said it was unstable for the purposes of the foundations necessary for the building" to be constructed (p.34).

Importantly, Purseglove made a meaningful comment at page 35 of his deposition when speaking of the soils excavated from the Altivity property:

> *"So they ran into this fill, which is, you know a problematic kind of material all over the state. What are we going to do with this stuff. It was maybe placed there early 1900's. I don't know when it was placed there, but it's not – it's, by today's standards, waste."*

The Affidavit of Michael W. Rapps, with attachments, is attached hereto in support of the Respondents instant pleading as Exhibit #12. Said Affidavit covers a number of subjects and serves to: amplify on his letter report (Respondents' Exhibit #4); confirm the status of the Bright quarry and Bright's narrative in Exhibit #11;

further confirm the nature and volume of the fill soils at and around the Altivity site on the Pekin, Illinois riverfront; critique the IEPA grab sampling methodology utilized in this matter and state the proper methodology that *should* have been followed; etc. The Affidavit speaks for itself and is submitted as an aid to the Board in further evaluating this case.

Discussion and Argument for Respondents

Complainant's Motion for Summary Judgment – like their Complaint – must necessarily fail.

The material excavated at the Altivity construction site is not a "waste". It is simply the natural soil resident upon the riverfront of Pekin, Illinois, containing constituent content which typifies the area from which it was removed. Thus, as stated by EPA's Office of Chemical Safety, *"Certain areas of the state have been impacted by diffuse anthropogenic sources and therefore represent regional conditions which vary from naturally occurring background but still are representative of contemporary background conditions"*. (pp. 1-2, Attachment 1 to Rapps Affidavit (Ex. #12)). As Rapps notes, there are well over 4 *million* cubic yards of this same material in the immediate vicinity of the Altivity property, and then extending for great distances. Note that State Hwy 29 and the parallel railroad tracks, which existed in 1905, are underlain by this soil, necessitating that it have been placed there well over 110 years ago. Drawing on Purseglove's deposition testimony and Rapps' Affidavit, this situation is found all over Illinois' riverfronts, extensively within most urban areas, and, of course, the lakefront of Chicago itself.

(i.e., Northerly Island, f/k/a Meigs Field, is constructed entirely of such material). In short, there are literally **thousands of millions of cubic yards of fill that have been placed since the settlers arrived** – all of which EPA now considers to be "waste". In EPA's view, three piles of this "waste" (Thorp photos, Deposition Ex. #1) went missing. Never mind that they ended up as road base at Bright's quarry, for which they were ideally suited.

Thus, it is the Agency's desire for a "bright line standard", and its own administrative convenience, that drives the engine of this case and would enormously expand the Agency's reach. And so, the EPA's own earlier recognition of *"contemporary background conditions"* is simply washed away. Apart from the lack of any science to support the proposition that every residue of human presence is a "waste", there is nothing rational about it either. Granting that in 2008 there was a dearth of guidance for EPA beyond their unpublished, home grown *"God and the Glaciers"* standard to characterize the Altivity material, but believing that it simply *HAD* to be a "waste", the EPA went through a series of gyrations to achieve the desired end, going so far as to drag the completely inapplicable TACO clean up guidelines into the mix. Purseglove's deposition (Ex. #10) and the attached affidavit of Rapps (Ex. #12) throw considerable light on this tortured process. Purseglove candidly admits that TACO standards have no application to the waste characterization process; but a review of the Complaint and the Summary Judgment Motion reveal that repeated references to the TACO "remediation objectives" and "ingestion exposure route for Class I groundwater" are being very

selectively used by Complainant to aid in characterizing the Altivity soil as a waste. [Undisclosed by Complainant, and only revealed by the Thorp deposition cited above, EPA *never* made the effort required by Ill.Admin.Code 35, Subtitle F, Ch.1, Sec. 620.210 to establish the presence of Class I underlying the Bright quarry.]

Therefore, Complainant's repeated references to *"exceeding TACO remediation objectives for ... groundwater ingestion exposure route for Class I groundwater"*, though absurdly inapplicable, are an allegation of water pollution in a case that has NO water pollution count. They are utterly superfluous, unproveable, and should simply be stricken or, at least, ignored by the Board.

Thus, between Purseglove's deposition (Ex. #10) and the Complainant's pleadings, we must conclude that insofar as the state is concerned, TACO does not apply to this case *unless* it is convenient to say that it does.

In fact, it doesn't, and the Board should not join in the Complainant's confusion. If a bright line other than pure reason is needed to aid in navigating the facts of this case, the attached affidavit of Rapps (Ex. #12) serves well, read in conjunction with his earlier letter report (Ex. #4). And the Board could conclude that the Altivity soils are not properly regarded as a "waste" without going further.

But, going further, it only gets worse for Complainant. Consider the BUD disaster contained within the Purseglove deposition, wherein he explains that because *he believed* the soil was a "waste", Ironhustler/Bright had two choices: 1) dispose of the excavated soil in a landfill – virtually doubling the cost of the

construction excavation phase, and for no known reason; or 2) seek a BUD from the Agency in January, 2008 - 18 months ***before*** the BUD program even existed!!

As the uncontestable facts disclose, even reluctantly assuming *arguendo* that the Altivity soil was a "waste", its beneficial reuse would take it outside the definition of waste; and here it is clear and certain that the material would have been deemed beneficially reused had there been a statutory mechanism in place to so deem it.

Road base is a commonly used commodity, without which roads of the type needed by Bright (or anyone) could not exist. And, there is a cost associated with building such roads, which includes the cost of needed materials. As Bright's affidavit makes plain (Ex. #11), he "paid" for the Altivity soil by giving Ironhustler a favorable price on the material they back hauled to Pekin; and then he used the delivered soil as road base to meet the needs and purposes he described. Thus, the Altivity soil was returned to the economic mainstream, just as approved in 2004 by the Illinois Supreme Court in *Alternative Fuels v. EPA*, 294 Ill.2d 219 (2004).

Concerning the physical state of the Altivity material itself, there is confusion and difficulty. Bright's affidavit (Ex. #11) describes the material. Rapps' affidavit (Ex. #12) amplifies on that by noting the presence of pieces of cinders – not noted by Bright. Neither of them saw any "slag" or "broken concrete", and there is also no mention of same in the TSC soils report noted above (Ex. #1). Thorp's affidavit, attached to Complainant's Motion, says slag and broken concrete were present. In his deposition (Ex. #9) he makes no mention of the presence of "concrete". The

photos attached to the Complainant's Motion and to Thorp's deposition are of no help in that they just look like mixed dirt and gravel.

Thus, to assess the character of the material and determine whether it comports with the description asserted in the Complaint's pleadings, the Board would need to be able to view the material and reach its own conclusions. But, it cannot. Why? Because Thorp did not retain a sample of the material (composite or otherwise), and that which he submitted to the EPA lab appears to be gone.

Discovery has not revealed the existence of a surviving sample and AAG Callery advises that he does not have one. Complainant has no physical evidence to present in support of its claims.

Throughout its convoluted pleadings and body of argument it is evident that the Complainant is seeking to retroactively apply portions of:

- CCDD regulations that didn't exist in January, 2008,
- The BUD process that didn't exist until August 14, 2009,
- Public Act 96-1416, effective July 30, 2010, and
- Board Amendments to CCDD regulations in R12-9, adopted June 7, 2012.

Such action is strictly forbidden by the historical legal bar to the imposition of *ex post facto* laws, the most recent – and extensive – discussion of which is found in the U.S. Supreme Court's decision rendered in *Peugh v. United States*, 133 S. Ct. 2072, on June 10, 2013.

As to the matters raised in Complainant's Motion for Summary Judgment, there are unresolved disputes of fact (and applicable law) that preclude summary disposition in Complainant's favor, and that motion must be denied.

Respondents' Cross-Motion for Summary Judgment

In its Order of July 25, 2013, the Board summarized the applicable case law that governs the circumstances that permit a matter to be disposed of on summary judgment, and there is no need to repeat it. In point of fact, and as set forth above, the Respondents are entitled to summary judgment because – in order of importance:

1. Even if treated as "waste", the Altivity soils excavated by Ironhustler and delivered to Bright were beneficially reused as road base, exactly as intended, and were returned to the economic mainstream.
2. There is no evidence whatsoever that the Altivity soils excavated by Ironhustler and delivered to Bright were "discarded".
3. In January, 2008, no extant statute or regulation dictated that the Altivity soils excavated by Ironhustler and delivered to Bright were to be defined as "contaminated".
4. Complainant has not alleged that the Altivity soils excavated by Ironhustler and delivered to Bright were, or are, a threat to the environment or pose a threat of water pollution; and, further, no evidence in the record proves otherwise.

5. The record clearly demonstrates that riverfront soils in Pekin, Illinois have been impacted by diffuse anthropogenic sources and therefore represent regional conditions which vary from naturally occurring background but still are representative of contemporary background conditions.

Therefore, as to the pending Complaint, there is no basis upon which the Complainant could prevail, and Respondents Ironhustler and Bright are entitled to summary judgment.

Conclusion

WHEREFORE, Respondents pray that this Board duly note and consider their foregoing Objections to Complainant's Motion for Summary Judgment; that the Board then Deny said Complainant's Motion for Summary Judgment; and that the Board Grant Respondents' Cross-Motion for Summary Judgment.

Respectfully Submitted,
Respondents Ironhustler & Bright

By: \s\ *Thomas J. Immel*,
Their attorney

Feldman Wasser Draper & Cox
PO Box 2418
1307 South Seventh Street
Springfield, Illinois 62705
(217) 544-3403

timmel@feldman-wasser.com

VERIFICATION

Under penalties as provided by law pursuant to Section 1-109 of the Code of Civil Procedure, the undersigned certifies that the statements set forth in the foregoing pleading are true and correct.

/s/ *Thomas J. Immel*

Certificate of Service

The undersigned attorney hereby certifies that a copy of the foregoing *Objections to Complainant's Motion for Summary Judgment, and Cross-Motion for Summary Judgment* has been served upon the persons listed below by emailing same to each of them and also placing the same in a sealed envelope, addressed as indicated, with postage fully prepaid and by depositing the same in the United States mail at Springfield, Illinois this 26th day of August, 2013:

Raymond J. Callery
Assistant Attorney General
Environmental Enforcement Bureau
Office of the Illinois Attorney General
500 South Second Street
Springfield, Illinois 62706

Charles M. Rock
Hassellberg Rock Bell & Kuppler, LLP
4600 North Brandywine Dr.
Suite 200
Peoria, IL 61614

Carol Webb, Hearing Officer
Illinois Pollution Control Board
1021 North Grand Avenue East
PO Box 19274
Springfield, IL 62794-9274

and that the original of said Objections to Complainant's Motion for Summary Judgment, and Cross-Motion for Summary Judgment has been e-filed with the Clerk of the Illinois Pollution Control Board on the same date.

\s\ *Thomas J. Immel*

January 4, 2008
L - 70,618

REPORT OF SOILS EXPLORATION
TREATMENT BUILDING
ACTIVITY PACKAGING
PEKIN, ILLINOIS

INTRODUCTION

This report presents results of our site exploration which was performed to determine subsurface soil and groundwater conditions for the proposed treatment building to be located at Activity Packaging in Pekin, Illinois. The geotechnical services were performed at the request of Mr. Pete Wintersteen of Intra-Plant Maintenance in accordance with the scope of services outlined in TSC Proposal No. 39,772, dated November 19, 2007, and the attached General Conditions which are incorporated herein by reference. Results of field and laboratory work and recommendations based upon that work are included in the following sections of this report.

SITE/PROJECT DESCRIPTION

The existing Activity Packaging facility is located at 1525 South Second Street in Pekin, Illinois. The new treatment building is planned on the south central portion of the facility directly west of the existing boiler house. At the time our field exploration was completed, preliminary site work including installation of new underground utility lines was in progress. Based upon ground surface elevations at the boring locations, the site was fairly level with a change in grade of less than one-half foot within the limits of our exploration. Ground surface elevations at each of the borings are shown on the Boring Location Plan included in the Appendix of this report.

We understand that the new treatment building will be a pre-engineered metal building. It will be a single story, slab on grade structure with overall plan dimensions of 40' x 90'. We have assumed that minimal changes to the existing grades will be required to complete the planned construction. The proposed new site features are shown on the Boring Location Plan.

FIELD EXPLORATION

A total of three (3) soil test borings were completed on the project site near opposite corners and the center of the planned building. Two (2) of these borings were extended to a depth of 15 feet below the existing ground surface. The remaining boring was drilled to a depth of 20 feet in order to provide subsurface information below relatively loose deposits which were encountered in the upper zones. The boring locations are shown on the Boring Location Plan.

The borings were drilled and sampled according to currently recommended American Society for Testing and Materials (ASTM) specifications. Outlines of these procedures are included in the Appendix. Soil sampling was performed at 2-1/2 foot intervals to a depth of 15 feet and at 5 foot intervals thereafter to the termination depth of each boring. Samples were obtained in conjunction with the Standard Penetration Test, for which the driving resistance of a 2 inch diameter split-spoon sampler provides an indication of the relative density of granular materials and consistency of cohesive soils. Water level readings were taken during and following completion of the drilling operations.

LABORATORY TESTING

Soil samples were examined in the laboratory to verify field descriptions and to determine classifications in accordance with the Unified Classification System. Laboratory testing included moisture content determinations on all cohesive soil types. Measurements of unconfined compressive strengths on natural cohesive soil samples were made. A calibrated penetrometer was also utilized to provide estimates of the unconfined compressive strength.

All phases of the laboratory testing program were conducted in general accordance with applicable ASTM standards. The results of these tests are shown on the Boring Logs included in the Appendix.

SUBSURFACE CONDITIONS

Deposits of miscellaneous fill materials were noted at the ground surface at each of the boring locations. The fill included deposits of silt, sand and gravel along with notable amounts of cinders and brick fragments. In the upper 3 to 7 feet, this fill is firm in relative density with N values in excess of 10 blows per foot. At greater depths, these deposits are loose in relative density with N values of 2 to 4 blows per foot. The fill appears to extend to depths ranging from approximately 7 to 11 feet below the ground surface.

The underlying native soils consist predominately of sand with some silt. These soils are also loose in relative density with N values between 2 and 6 blows per foot. These soils were sampled to the bottom of Borings B-1 and B-3 which were terminated at a depth of 15 feet. At Boring B-2, drilled in the approximate center of the planned building, the loose native soils were noted to a depth of approximately 16 feet. The underlying deposits consist of very tough silty clay which has an unconfined compressive strength of 3.0 tons per square foot (tsf). The clay soils were noted to a depth of slightly more than 19 feet where loose sand and gravel was noted to the termination depth of 20 feet.

Each of the bore holes were dry while drilling and upon completion and removal of the augers indicating that groundwater was in excess of 20 feet below grade at the time our field exploration was completed.

RECOMMENDATIONS

Foundation Recommendations

As previously noted, the near surface soils consist of previously placed fill which is generally very loose at and below conventional bearing depths typically associated with a shallow spread footing foundation system. Furthermore, the underlying native soils consist of loose silt and/or sand to a depth of approximately 15 feet with low strength clays to a depth of approximately 16 feet. Significant settlement of foundations bearing on or above these deposits is expected. To minimize the potential for excessive settlement, removal and replacement of the loose fill or construction of a deeper foundation extending below the fill to allow for bearing on the higher strength native clay soils found at a depth of about 16 feet at Boring B-2 will be required.

In order to remove the existing fill, it appears that an excavation extending to a depth of approximately 11 feet below the existing ground surface will be required. In view of the miscellaneous debris within the fill, we do not recommend re-use of this material. After the existing fill is removed, we recommend that the exposed sand be densified in place with vibratory compaction equipment prior to placing new fill. The replacement fill may consist of clean crushed aggregate or sand and gravel. An aggregate gradation conforming to Illinois Department of Transportation (IDOT) criteria for CA-1, CA-3, CA-5 and CA-7 generally has a maximum size of 3 inches and a minimum size of 1/4 inch and contains no fines. This material type is not as sensitive to moisture conditions at the time of placement and generally required less compactive effort to obtain the required stability. If this type of material is used, it should be placed in 12 inch lifts and each lift should be compacted with vibratory compaction equipment to provide densification.

Sand and gravel with up to 15 percent fine material passing the #200 sieve may also be used as replacement fill. This material type does require a greater level of moisture control and more compactive effort to achieve the required stability. It is recommended that compaction be to a minimum of 95 percent of maximum dry unit weight as determined by the Modified Proctor Test (ASTM D 1557). The fill should also be placed in approximate 9-inch lifts loose measure, with each lift compacted to the specified dry unit weight prior to placement of additional fill. It is recommended the moisture content of the new fill be within 3 percent of the optimum moisture as established by the Modified Proctor Test. If the fill is compacted too dry, it will have an apparent stability which will be lost if it later becomes saturated. If the fill is too wet, the Contractor will not be able to achieve proper compaction.

Conventional spread footings bearing on the new fill may be designed using a net allowable bearing pressure of 3,000 pounds per square foot (psf). For frost considerations, all exterior footings should be constructed at least 3-1/2 feet below the exterior finished grade and 4 feet below grade for foundations located outside of heated building limits. Interior footings may be constructed at higher elevations as long as they are protected against frost heave in the event of winter construction.

An alternate to removal and replacement of the existing loose fill materials is to support the structure on a drilled pier foundation system. Based upon the subsurface conditions at Boring B-2, it appears that drilled piers extending to a depth of 16 feet will be required to provide support below the loose deposits. Should this foundation system be selected, a net allowable bearing pressure of 5,000 psf is recommended for design.

In view of the presence of the loose fill and sand deposits above the recommended bearing depth, it is recommended that temporary steel casing be used to support the walls of the shaft. These loose overlying deposits will also make construction of belled caissons impractical. The use of casing will also reduce the inflow of water during drilling and cleaning operations should groundwater be encountered. Pumps may also be required to remove water that does seep into the shaft to allow placement of concrete under dry conditions.

Care should be exercised in the installation of the casing to make sure that it is sealed into a clay layer that will maintain a water-tight seal when the soil is removed from inside the casing. The last few feet of clay drilling and the removal of a portion of the clay from inside the casing should be delayed until concrete is on the job. When the drilling operations and inspections are complete, concrete should be placed inside the casing immediately. During simultaneous concrete placing and casing removal operations, sufficient concrete should be maintained inside the casing to offset the hydrostatic head of the groundwater outside the casing and prevent the intrusion of soil and groundwater in the pier concrete.

Drilled pier shafts must be clean and free of all loose material prior to the placement of concrete. A qualified representative of the soils engineer should document that the drilled piers are bearing on competent bearing materials and that the installation procedures meet specifications.

It should be noted that there is some risk of settlement resulting in cracking of the floor slab if it is supported on or above the existing loose fill. If a drilled pier foundation system is selected and the existing fill is not removed, design and construction of a structural slab supported on this foundation is suggested to minimize the potential of settlement and cracking.

Groundwater Control

Based upon measurements made during completion of the soil borings, minimal amounts of groundwater seepage are anticipated during site excavating and/or foundation construction. We anticipate that conventional sump and pump arrangements will be capable of removing groundwater seepage or surface runoff during periods of wet weather.

Activity Packaging
Pekin, Illinois
L - 70,618
January 4, 2008

CLOSURE

It is recommended that full time site observations and testing be provided by Testing Service Corporation personnel during foundation construction to document that soils capable of achieving the recommended bearing capacity have been encountered at the planned bearing elevation. In addition, monitoring of building materials and fill placement and compaction should be completed to document compliance with the recommended procedures and specifications.

The analysis and recommendations submitted in this report are based upon the data obtained from the three (3) soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings, the nature and extent of which may not become evident until during the course of construction. If variations are then identified, the recommendations contained in this report should be reevaluated after performing on-site observations.

We are available to review this report with you at your convenience.

Douglas P. Ramsey
Registered Professional Engineer
Illinois No. 062-040905

IPM CORP.
www.intra-plant.com
3116 N. Main St. East Peoria, Illinois 61611
Phone: (309)-694-0964 * Fax: (309)694-4201
e-Mail: mail@intra-plant.com

To: All Interested Bidders
From: Pete Wintersteen
Date: January 7, 2008
Re: Pekin Paper Products

We are the contractor for the construction of a new pre-engineered building at Pekin Paper in Pekin, IL. We had hoped for a better soils report for the foundations but that wasn't the case. Please give me a budgetary cost proposal for the excavation of the poor soils to an elevation of -11' – 0" and the compaction of the existing soil at elevation – 11' – 0" and the installation of granular fill and compaction of such up to elevation – 3' – 6". The site is accessible, open, has no overhead hazards, and would be ready for construction as soon as we decide on the best method. Please figure in hauling off all of the pour soil. The building area is fairly flat with a slight grade change of approximately 1'- 0"; the building will be 40' wide and 90' long. If you have any questions you may contact me at 309-472-9631.

RESPONDENT'S EXHIBIT 2

IPM CORP.
www.intra-plant.com
3116 N. Main St. East Peoria, Illinois 61611
Phone: (309)-694-0964 * Fax: (309)694-4201
e-Mail: mail@intra-plant.com

SUBCONTRACT AGREEMENT

Contract No. 07-231-6

Project Name: Treatment Building

Owner: Altivity Packaging

Subcontractor: IronHustler Excavating Inc.
P.O. Box 120026 Peoria, IL. 61614
309-691-9894 Fax 309-691-2690

IPM Corp. Job #: 07-231

DOCUMENTS TO BE INCORPORATED INTO THIS AGREEMENT:

1. Soils Report as Produced By TSC Dated January 4, 2008
2. Attachment "C" – Contractor's Insurance Requirements

SCOPE OF WORK:

IronHustler shall provide all labor, material and equipment to excavate the building area approximately 50' wide x 100 'long and 11' deep. The excavation shall be backfilled and compacted as per the soils engineer's requirements for materials and compaction. All unsuitable material shall be hauled off site and disposed of legally. Backfill to -3' 6" per IPM scope letter Dated 1-7-08 REV. 1-29-08 (ATTACHED)

Any obstructions encountered or utilities uncovered will be removed and repaired by IPM if required. The resulting downtime will be handled on a time and material basis with our on site supervision.

This agreement is made this 21 day of January, 2008, by and between IPM Corp. (hereafter called Contractor) and Ironhustler Excavating (hereafter called Subcontractor) to perform the work identified above under Scope of Work, in accordance with the Documents listed above. This is a tax exempt project the owner's tax exempt number is 2494-0658. We will bill Altivity as soon as your work is complete the turnaround time on their purchase orders is usually 30 days. Please reference our job number on all invoicing.

Contract Amount: $ 53,805.00 (Fifty Three Thousand Eight Hundred Five Dollars and xx/100)

In witness whereof, the parties have executed this Agreement under Seal, the day and year first written above.

RESPONDENT'S EXHIBIT 3

Contractor:
IPM Corp.

By: Peter D. Wintersteen

Signed: Peter D. Wintersteen

Title: Proj. Mgr.

Subcontractor:
IronHustler Excavating Inc.

By: (print) Kenneth E Sidwell

Signed: Kenneth E Sidwell

Title: Vice-Pres.

Subcontractor's Fed. ID #: 37-1242591

RAPPS
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ESTABLISHED IN 1978
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April 22, 2008

Thomas J. Immel
Feldman, Wasser, Draper & Benson
1307 South Seventh Street
P.O. Box 2418
Springfield, Illinois 62705

Privileged Communication

Re: Illinois EPA Violation Notice L-2008-01051 (March 8, 2008)
1798095009 – Tazewell County
Hopedale/Clouse, Darrell

Tom:

Per your request, I have reviewed the above referenced violation notice. This letter provides my thoughts on the core issue raised by the Illinois Environmental Protection Agency (IEPA), namely, that the subject fill material delivered to the Clouse Pit was a "contaminated" waste.

Regulatory Background

Solid waste disposal has been regulated in Illinois since the mid-1960's, first by the Illinois Department of Public Health, and since 1970 and through the present, by the Illinois Environmental Protection Agency. Throughout most of this period there was recognition that commercial disposal sites that accepted municipal refuse could be differentiated from those that accepted construction and demolition (C&D) debris. Although this distinction was not codified, the regulatory agencies drew a *de facto* distinction by regulating municipal landfills far more stringently than their C&D counterparts. A third variety of disposal facility was the so-called clean fill site that accepted discarded soil with bricks, rocks, concrete and other non-flammable and non-putrescible materials. These sites did not seek or receive government permits and technically could have been considered illegal dumps. But, unless they were the subject of public nuisance complaints, they were typically ignored by the regulators.

In 1990 the Illinois Pollution Control Board adopted new solid waste regulations that significantly changed the regulatory scheme just outlined. Title 35, Subtitle G, Part 811 created a new landfill system that envisioned **putrescible waste** landfills, **chemical waste** landfills, and **inert waste** landfills. The new rules sidestepped the long recognized C&D operations in favor of the theoretical inert waste sites. The Part 811 regulations are among the most stringent solid waste rules in the United States so it wasn't long before

RESPONDENT'S EXHIBIT
4

most of the Illinois landfill that existed in 1990 closed, including all of the previously permitted C&D landfills. Since that time, disposal costs at the remaining Illinois landfills have skyrocketed. And, to this date, there still are no inert waste landfills in the State, the definition of "inert" being nearly impossible to meet.

Because disposal costs at the municipal (i.e., putrescible) waste sites have soared, because those sites are now few in number, and because there are no dedicated C&D or "inert" landfills, building and demolition contractors have sought other disposal outlets. For example, concrete recyclers now exist who can crush broken concrete into reusable aggregate, recycling re-bar in the process. And, in a fairly recent development, Chicago-land developers have begun a new "industry" that uses "clean fill" to recover stone quarries and gravel pits. This became the source of controversy roughly two years ago when a shoe-string relative to the father-in-law of the Governor was found to be co-mingling roofing shingles with his "clean fill." From this emerged legislation that codified the terminology for what is known as "clean construction or demolition debris" (CCDD). A copy of the statute, which you will find to be just about as clear as mud, is included as Attachment 1.

The CCDD legislation came about through the efforts of a Chicago-land trade group, the Land Reclamation & Recycling Association (LR&RA). Rank and file staff members at IEPA are not happy with the CCDD statute and have been strictly enforcing the Agency's interpretation of "clean", or so I am told. As a sidebar, this may in part explain the Agency's actions regarding the matter at hand.

The LR&RA has joined with the Chicago Public Building Commission to seek a legislative fix to perceived problems with the CCDD statute. A proposed amendment to the statute has made it through committee and stands some chance of passage this legislative session. A copy of the most recent version is enclosed herein as Attachment 2. The City of Chicago favors the proposed revision to the law, while the National Solid Waste Management Association (i.e., Waste Management, Inc.) is opposed, as is IEPA. In the interest of full disclosure, we are working for the proponents through their attorney, Claire Manning. I do not see a conflict

Tiered Approach to Corrective Action Objectives (TACO)

TACO (35 ILL Adm Code 742) is a codified system used to construct risk-based cleanup objectives for the remediation of contaminated properties such as dry cleaners and service stations. As a regulatory tool it has validity only in the context of the IEPA Site Remediation Program (SRP), a voluntary cleanup program administered per 35 ILL Adm Code 740, and the Leaking Underground Storage Tank (LUST) program administered per 35 ILL Adm. Code 732. In its simplest form TACO presents a (Tier 1) look-up table of chemicals and chemical concentrations that are deemed allowable for properties of varying uses, i.e., residential, industrial, etc., and for varying exposure routes, i.e.,

inhalation, ingestion, etc. TACO also introduces "area background" conditions as a factor in prescribing a site-specific cleanup objective.

It is important to note that the published TACO Tier 1 cleanup objectives are counterintuitive. They are not *per se* cleanup standards, nor does an exceedance of Tier 1 equate to "contamination" as has been implied in IEPA's March 8, 2008 Violation Notice (see Jason Thorp's 1-24-08 inspection narrative). Rather, soil concentrations of chemicals less than the listed TACO Tier 1 levels are presumed to be safe. It is not, in the alternative, presumed that levels in excess of Tier 1 are dangerous, or that soils so affected should be treated or removed. Soils that contain TACO listed substances or compounds do not, by their mere existence, represent a violation of the Environmental Protection Act, or regulations thereunder. Many areas of Illinois, Chicago is a glaring example, possess background soils that contain TACO listed compounds that greatly exceed Tier 1. That said, building and demolition contractors, developers, and financial institutions, often use Tier 1 as a benchmark to delineate acceptably "clean" soil. A similar approach is now being contemplated in connection with negotiations concerning revisions to the CCDD statute.

Background Soils

That part of Pekin from which the subject excavated soil originated consists of a substantial thickness of non-putrescible fill material. Using well logs obtained from the Illinois State Geological Survey (Attachment 3), we have constructed a contour map (Figure 1) that illustrates the thickness and areal extent of fill in and around the area from which the subject soil was excavated. The fill extends over a large area, possibly including parts of Illinois Route 29, and is as much as twenty-five feet thick. The average thickness of fill in the area is on the order of 15 to 20 feet. It is thus difficult to argue that the material is not ***terra firma***, at least in that part of Pekin, Illinois. This is not unusual, it is generally well established that many communities built along the major rivers in Illinois, as well as along Lake Michigan, are partially built atop fill. The same is true of the commercial areas of most Illinois cities.

Chemical Analyses

A summary of IEPA's analytical data for heavy metals in the subject soil are included herein as Figure 2, a spreadsheet that includes tabulated TACO standards, Illinois effluent standards, TACO inorganic constituent background soil concentration data, and Chicago soil background data. The latter is included as a point of reference because it reflects perhaps the most comprehensive analysis of a metropolitan soil in Illinois that is presently available.

IEPA collected three grab samples of the subject fill material that were analyzed for total metals, and leachable metals. The latter test relied on a method of sample preparation known as the Toxic Characteristic Leaching Procedure (TCLP). The TCLP test is used to determine if a waste is a characteristically hazardous waste as defined by federal Resource Conservation and Recovery Act (RCRA) regulations. It is a very aggressive "shake" test in which a solid sample is vigorously shaken in an (acidic) liquid solution. The TCLP is also referenced in TACO as one means to compare the leaching of a sample to tabulated soil remediation objectives (SRO's) for the "soil component of the groundwater ingestion exposure route".

TACO also allows use of the less aggressive Synthetic Precipitation Leaching Procedure (SPLP) as a substitute for the TCLP. The SPLP is also an aggressive shake test but it uses non-acidic water as the leaching medium. The SPLP would have been a better choice of test in the instant case. Had the SPLP procedure been used there is some likelihood that concentrations of metallic compounds in the leachate solution would have been less than those identified with the TCLP procedure.

The TCLP and SPLP options are used to compare against fixed SRO values tabulated in TACO, Section 742, Appendix B, Table B. TACO also provides that the total concentration of certain chemicals of concern, including the heavy metals, may be compared against pH dependent SRO values (TACO Appendix B, Table C or D). The choice of options belongs to the applicant in the SRP program.

The three samples tested by IEPA are probably too few to properly characterize the subject material. Notwithstanding, IEPA's tests indicate that if the samples reflect a "waste", the waste is not a RCRA hazardous waste. In addition, the TCLP leachate from the material does not exceed Illinois effluent standards for the tested metals. Consequently, the existing test data does not support the Agency contention that the subject material threatens to cause water pollution.

In comparison of the data generated from the three samples of the subject fill material to remediation objectives allowed by TACO, one cannot conclude that there are is an exceedance of a TACO SRO. As previously mentioned, an SRP applicant may select one of three methods for satisfying TACO Tier 1 requirements (see notation "m" to Appendix A, Tables A and B) for the soil component of the groundwater ingestion exposure route.

Although IEPA correctly observes that the total lead concentration in samples X102 and X103 exceeds the pH specific Class I groundwater ingestion route remediation objective, the Agency fails to note that the same samples produce a TCLP leachate that does not exceed the Tier 1 (Appendix B, Table A or B) SRO for lead. The IEPA is also correct in identifying a cadmium exceedance of the Tier 1 (Appendix A, Tables A and B) Class I

groundwater ingestion route remediation objective in samples X101, X102 and X103 (TCLP results). But, in this instance the total cadmium concentrations do not exceed the pH specific Class I soil component of the groundwater ingestion route value. In drawing the conclusion that Tier 1 has been exceeded the Agency has cherry-picked worse case TACO methods while ignoring the best case options that any reasonable SRP applicant would have used. Thus, the Agency contentions in this regard are only half-true, and perhaps only a third true, had the SPLP option been employed. By using options available per Appendix B, Table A and B (see notation "m"), it can be demonstrated that TACO remediation objectives, if applied to the subject fill material, have been met.

The Agency narrative attached to the Violation Notice indicates that some total cadmium, total lead, total mercury and total selenium concentrations are higher than values listed in the TACO table "Concentrations of Chemicals in Background Soils Within Metropolitan Statistical Areas" (Appendix A, Table B). While this statement is true, it must be noted that the concentrations listed in Appendix A, Table G are statewide statistical values of inorganic chemicals in background soils. In connection with the SRP, background values may be used as the upper limit SRO of the area background concentration for chemicals of concern at a site, but typically are not. The state-wide background data offers an interesting factoid but said data seldom comes into play in an actual SRP matter. For example, not one of the total metal analyses from the Clouse gravel pit samples exceeds the average background concentration of the same test parameter found in the surface soils of the City of Chicago. And, the Clouse samples do not exceed the background levels of nearby Pekin if only because the Clouse samples reflect the actual background levels of Pekin. To the point, the statewide background statistics are not regulatory cleanup objectives.

Definitions

I earlier used the term ***terra firma*** to emphasize that background soils in Illinois, particularly along rivers and lakes, and in urban areas, are often somewhat different than that which predated the settlers. At present, background soils in Pekin would seemingly include those that are the subject of the violation notice.

My reading of the statute, Section 3.160 of the Environmental Protection Act, suggests that the subject fill material might be considered to be "clean construction or demolition debris (CCDD)", if it is not "contaminated." On the other hand, it might also be thought of simply as urban soil, which is not regulated. You will note that Section 3.165 of the Act defines contaminant as any solid, liquid, or gaseous matter, any odor, or any form of energy, from whatever source. This would seem to imply that any heterogeneous material must be contaminated if only because it is not homogeneous.

So, whether or not the material in question is a "waste", the other issue is whether the Pekin soil is "contaminated." IEPA implies that the material is contaminated because the Agency's tests indicate that it contains total lead and TCLP cadmium that exceed TACO limits in two categories, and cadmium, lead, mercury and selenium concentration exceed statewide background values. As previously mentioned, TACO was never intended to create the bright line that distinguishes contaminated from uncontaminated. Apart from the strange definition of contaminant given in Section 3.165, I am unaware of any clear definition of contamination in the statutes or regulations. It is a term of art.

The definition of waste (Sec. 3.535) is clearer in that it refers to "discarded material." A material used for a beneficial purpose, i.e., recycled, is, generally speaking, not thought to be discarded, although on the contrary IEPA has been known to select certain recycled materials that it wishes to regulate and then calls them waste, used oil is a case in point. If the Pekin soil (subject fill material) delivered to the Clouse gravel pit was to be used for a beneficial purpose, e.g., road-bed construction, it could be argued that the material was not discarded, and hence is not a waste.

As an aside, the Clouse gravel pit is very close to the Indian Creek Landfill, a commercial facility that is operated by the Peoria Disposal Company. Their respective locations are shown in Figure 3. The companion Attachment number 4 contains the logs for water wells that are located near the gravel pit. The logs suggest that the local groundwater would likely fall under the Class I heading.

Soil Characterization

Soil boring logs generally describe the soil (subject fill material) as sand and gravel with cinders and broken bricks. The material is seemingly inorganic and non-putrescible. The cinders are most likely from the combustion of coal, either from a boiler system, or from home heating in bye-gone days. Having been excavated and relocated, the material is not stratified, and although inherently heterogeneous, it now exists as a somewhat homogeneous deposit.

If the material is to be characterized chemically, we recommend that composite sampling be used to reduce bias. If IEPA's proposition that TACO limits define "contaminated" prevails, the sampling and analysis would be used to specifically characterize the subject fill material (generate statistically significant data), and definitively answer that question. In the absence of that issue, there is no other clear purpose to sample and analyze the material. However, if the decision is made to environmentally characterize the subject fill material, the Sampling and Analysis Plan included herein as Attachment 5 should satisfy minimum requirements. The plan calls for the analysis of a total of ten composite soil samples constructed from a total of fifty aliquots. The estimated cost for conducting the sampling and analysis program is $11,320. This is lined out in Attachment 6.

Summary Conclusion

1. The Agency's actions in this matter dovetail with ongoing controversies involving Chicago area CCDD operations which are also the subject of a legislative proposal (SB 2166) currently pending in a Illinois Senate committee.

2. The CCDD debate that surrounds SB 2166 is as to the method in which one would distinguish contaminated fill from "clean" fill. Tier 1 has been proposed, by an industry group, and by the Chicago Public Building Commission, as a bright line test for accomplishing this purpose. Ironically, that proposal has been rejected by IEPA

3. The violation notice, contrary to IEPA's position regarding SB 2166, relies on TACO Tier 1 to define "contaminated". This is not supported by the statutes or regulations and is inconsistent with the actual meaning and purpose of TACO Tier 1.

4. Even if Tier 1 is used to support the Agency's contention to declare the fill material as "contaminated", a proper use of Tier 1 can be used to refute that notion.

5. The three samples collected by IEPA are insufficient to properly characterize the fill material. That material is estimated to consist as a volume of roughly 2,000 cubic yards.

6. If negotiations fail to satisfy the IEPA that the subject material is not a waste, and that it not "contaminated", the Sampling and Analysis plan included herein may be used to properly characterize the material.

7. The estimated cost for conducting the sampling and analysis program is $11,320.

Should you have any questions regarding this letter, attachments or figures, or if I can otherwise be of assistance, please give me a call.

Sincerely,

Michael W. Rapps, P.E.
Rapps Engineering & Applied Science, Inc.

Enclosures

ATTACHMENT 1

(415 ILCS 5/3.160) (was 415 ILCS 5/3.78 and 3.78a)
Sec. 3.160. Construction or demolition debris.

(a) General construction or demolition debris" means non-hazardous, uncontaminated materials resulting from the construction, remodeling, repair, and demolition of utilities, structures, and roads, limited to the following: bricks, concrete, and other masonry materials; soil; rock; wood, including non-hazardous painted, treated, and coated wood and wood products; wall coverings; plaster; drywall; plumbing fixtures; non-asbestos insulation; roofing shingles and other roof coverings; reclaimed asphalt pavement; glass; plastics that are not sealed in a manner that conceals waste; electrical wiring and components containing no hazardous substances; and piping or metals incidental to any of those materials.

General construction or demolition debris does not include uncontaminated soil generated during construction, remodeling, repair, and demolition of utilities, structures, and roads provided the uncontaminated soil is not commingled with any general construction or demolition debris or other waste.

To the extent allowed by federal law, uncontaminated concrete with protruding rebar shall be considered clean construction or demolition debris and shall not be considered "waste" if it is separated or processed and returned to the economic mainstream in the form of raw materials or products within 4 years of its generation, if it is not speculatively accumulated and, if used as a fill material, it is used in accordance with item (i) in subsection (b) of this Section.

(b) "Clean construction or demolition debris" means uncontaminated broken concrete without protruding metal bars, bricks, rock, stone, reclaimed asphalt pavement, or soil generated from construction or demolition activities.

Clean construction or demolition debris does not include uncontaminated soil generated during construction, remodeling, repair, and demolition of utilities, structures, and roads provided the uncontaminated soil is not commingled with any clean construction or demolition debris or other waste.

To the extent allowed by federal law, clean construction or demolition debris shall not be considered "waste" if it is **(i)** used as fill material outside of a setback zone if the fill is placed no higher than the highest point of elevation existing prior to the filling immediately adjacent to the fill area, and if covered by sufficient uncontaminated soil to support vegetation within 30 days of the completion of filling or if covered by a road or structure, or **(ii)** separated or processed and returned to the economic mainstream in the form of raw materials or products, if it is not speculatively accumulated and, if used as a fill material, it is used in accordance with item (i), or **(iii)** solely broken concrete without protruding metal bars used for erosion control, or **(iv)** generated from the construction or demolition of a building, road, or other structure and used to construct, on the site where the construction or demolition has taken place, a manmade functional structure not to exceed 20 feet above the highest point of elevation of the property immediately adjacent to the new manmade functional structure as that elevation existed prior to the creation of that new structure, provided that the structure shall be covered with sufficient soil materials to sustain vegetation or by a road or structure, and further provided that no such structure shall be constructed within a home rule municipality with a population over 500,000 without the consent of the municipality.

For purposes of this subsection (b), reclaimed or other asphalt pavement shall not be considered speculatively accumulated if: (i) it is not commingled with any other clean construction or demolition debris or any waste; (ii) it is returned to the economic mainstream in the form of raw materials or products within 4 years after its generation; (iii) at least 25% of the total amount present at a site during a calendar year is transported off of the site during the next calendar year; and (iv) if used as a fill material, it is used in accordance with item (i) of the second paragraph of this subsection (b). (Source: P.A. 94-272, eff. 7-19-05; P.A. 95-121, eff. 8-13-07.)

(415 ILCS 5/3.165) (was 415 ILCS 5/3.06)
Sec. 3.165. Contaminant.
"Contaminant" is any solid, liquid, or gaseous matter, any odor, or any form of energy, from whatever source. (Source: P.A. 92-574, eff. 6-26-02.)

ATTACHMENT 2

Full Text of SB2166

Sen. John J. Millner

Filed: 4/11/2008

09500SB2166sam001 LRB095 19613 HLH 49434 a

AMENDMENT TO SENATE BILL 2166

AMENDMENT NO. _____. Amend Senate Bill 2166 by replacing everything after the enacting clause with the following:

"Section 5. The Environmental Protection Act is amended by changing Sections 3.160 and 22.51 as follows:

(415 ILCS 5/3.160) (was 415 ILCS 5/3.78 and 3.78a)

Sec. 3.160. Construction or demolition debris.

(a) "General construction or demolition debris" means non-hazardous, uncontaminated materials resulting from the construction, remodeling, repair, and demolition of utilities, structures, and roads, limited to the following: bricks, concrete, and other masonry materials; soil; rock; wood, including non-hazardous painted, treated, and coated wood and wood products; wall coverings; plaster; drywall; plumbing fixtures; non-asbestos insulation; roofing shingles and other roof coverings; reclaimed or other asphalt pavement; glass;

plastics that are not sealed in a manner that conceals waste; electrical wiring and components containing no hazardous substances; and piping or metals incidental to any of those materials.

General construction or demolition debris does not include uncontaminated soil generated during construction, remodeling, repair, and demolition of utilities, structures, and roads provided the uncontaminated soil is not commingled with any general construction or demolition debris or other waste.

To the extent allowed by federal law, uncontaminated concrete with protruding rebar shall be considered clean construction or demolition debris and shall not be considered "waste" if it is separated or processed and returned to the economic mainstream in the form of raw materials or products within 4 years of its generation, if it is not speculatively accumulated and, if used as a fill material, it is used in accordance with item (i) in subsection (b) of this Section.

(b) "Clean construction or demolition debris" or "CCDD" means broken concrete without protruding metal bars, bricks, rock, stone, or reclaimed or other asphalt pavement, that is generated from construction or demolition activities. "CCDD" also includes clean soil generated from construction or demolition activities, alone or in combination with the materials referenced in this paragraph.

(1) "CCDD" is not waste if it is not mixed with any waste and if it is:

(A) used as fill material in a current or former quarry, mine, or other excavation pursuant to Section 22.51 of this Act and the rules adopted under that Section;

(B) used as fill material outside of a setback zone if the fill is placed no higher than the highest point of elevation adjacent to the fill area immediately prior to the filling and is covered with sufficient

residual soil to support vegetation within 30 days of filling or is covered by a road or structure;

(C) separated or processed and returned to the economic mainstream in the form of raw materials or products and is not speculatively accumulated; for purposes of this item, reclaimed or other asphalt pavement shall not be considered speculatively accumulated if: (i) it is not commingled with any other clean construction or demolition debris or any waste, and (ii) it is returned to the economic mainstream in the form of raw materials or products within 4 years after its generation;

(D) consists solely of broken concrete without protruding metal bars and is used for erosion control;

(E) generated from the construction demolition of a building, road, or other structure if it is used to construct, on the site where the construction or demolition has taken place, a manmade functional

structure that does not exceed 20 feet above the highest point of elevation of the property immediately adjacent to the new manmade functional structure as that elevation existed prior to the creation of that new structure, provided that the structure shall be covered with sufficient soil materials to sustain vegetation or shall be covered by a road, and further provided that no such structure shall be constructed within a home rule municipality with a population over 500,000 without the consent of the municipality; or

(F) used on the site where the clean construction or demolition debris was generated.

(c) "Clean soil" means soil that contains concentrations of regulated substances that are within the most stringent residential Tier 1 remediation objective adopted by the Board under Title XVII of this Act or as specified in Section 22.51

(d) of this Act. Clean soil is not waste. Clean soil is CCDD and subject to the requirements of subsection (b) of this Section and, for CCDD fill operations, subject also to the requirements of Section 22.51. "Clean fill soil" means soil that (i) does not contain contaminants which exceed a list of contaminants that shall be published by the Agency, which shall not exceed 50% of the most stringent residential Tier 1 remediation objectives adopted by the Board under Title XVII of this Act; (ii) is not co-mingled with CCDD; and (iii) does not contain waste. Clean fill soil is not regulated under this Act.

Soil excavated from a developed commercial site in an urban area, an industrial site, or a site enrolled in the site remediation program shall not be considered clean soil or clean fill soil unless it has been properly characterized as it exists at the site of origin in accordance with a statistically valid method of sampling and analysis conducted pursuant to standards adopted by the United States Environmental Protection Agency, the Agency, or the American Society for Testing and Materials and which has been certified as to its accuracy by a licensed professional engineer.

(b) ~~"Clean construction or demolition debris" means uncontaminated broken concrete without protruding metal bars, bricks, rock, stone, reclaimed or other asphalt pavement, or soil generated from construction or demolition activities.~~

~~Clean construction or demolition debris does not include uncontaminated soil generated during construction, remodeling, repair, and demolition of utilities, structures, and roads provided the uncontaminated soil is not commingled with any clean construction or demolition debris or other waste.~~

~~To the extent allowed by federal law, clean construction or demolition debris shall not be considered "waste" if it is (i) used as fill material outside of a setback zone if the fill is placed no higher than the highest point of elevation existing prior to the filling immediately adjacent to the fill area, and~~

~~if covered by sufficient uncontaminated soil to support vegetation within 30 days of the completion of filling or if~~

~~covered by a road or structure, or (ii) separated or processed and returned to the economic mainstream in the form of raw materials or products, if it is not speculatively accumulated and, if used as a fill material, it is used in accordance with item (i), or (iii) solely broken concrete without protruding metal bars used for erosion control, or (iv) generated from the construction or demolition of a building, road, or other structure and used to construct, on the site where the construction or demolition has taken place, a manmade functional structure not to exceed 20 feet above the highest point of elevation of the property immediately adjacent to the new manmade functional structure as that elevation existed prior to the creation of that new structure, provided that the structure shall be covered with sufficient soil materials to sustain vegetation or by a road or structure, and further provided that no such structure shall be constructed within a home rule municipality with a population over 500,000 without the consent of the municipality.~~

~~For purposes of this subsection (b), reclaimed or other asphalt pavement shall not be considered speculatively accumulated if: (i) it is not commingled with any other clean construction or demolition debris or any waste; (ii) it is returned to the economic mainstream in the form of raw materials or products within 4 years after its generation; (iii) at least 25% of the total amount present at a site during a calendar year is transported off of the site during the next~~

~~calendar year; and (iv) if used as a fill material, it is used in accordance with item (i) of the second paragraph of this~~

~~subsection (b).~~

(Source: P.A. 94-272, eff. 7-19-05; 95-121, eff. 8-13-07.)

(415 ILCS 5/22.51)

Sec. 22.51. Clean Construction or Demolition Debris Fill Operations.

(a) No person shall conduct any clean construction or demolition debris fill operation in violation of this Act or any regulations or standards adopted by the Board or without a permit. A clean construction demolition debris fill operation is any former quarry, mine, or other excavation that accepts CCDD, as defined in Section 3.160 of this Act, as fill. The term "other excavation" does not include holes, trenches, or similar earth removal created as part of normal construction, removal, or maintenance of a structure, utility, or transportation infrastructure.

(b)(1)(A) Beginning 30 days after the effective date of this amendatory Act of the 94th General Assembly but prior to July 1, 2008, no person shall use clean construction or demolition debris as fill material in a current or former quarry, mine, or other excavation, unless they have applied for a permit or an interim authorization from the Agency for the clean construction or demolition debris fill operation.

(B) The Agency shall approve an interim authorization upon

its receipt of a written application for the interim authorization that is signed by the site owner and the site operator, or their duly authorized agent, and that contains the following information: (i) the location of the site where the clean construction or demolition debris fill operation is taking place, (ii) the name and address of the site owner, (iii) the name and address of the site operator, and (iv) the types and amounts of clean construction or demolition debris being used as fill material at the site.

(C) The Agency may deny an interim authorization if the

site owner or the site operator, or their duly authorized agent, fails to provide to the Agency the information listed in subsection (b)(1)(B) of this Section. Any denial of an interim authorization shall be subject to appeal to the Board in accordance with the procedures of Section 40 of this Act.

(D) No person shall use clean construction or demolition debris as fill material in a current or former quarry, mine, or other excavation for which the Agency has denied interim authorization under subsection (b)(1)(C) of this Section. The Board may stay the prohibition of this subsection (D) during the pendency of an appeal of the Agency's denial of the interim authorization brought under subsection (b)(1)(C) of this Section.

(2) Beginning September 1, 2006, owners and operators of clean construction or demolition debris fill operations shall, in accordance with a schedule prescribed by the Agency, submit

to the Agency applications for the permits required under this Section. The Agency shall notify owners and operators in writing of the due date for their permit application. The due date shall be no less than 90 days after the date of the Agency's written notification. Owners and operators who do not receive a written notification from the Agency by October 1, 2007, shall submit a permit application to the Agency by January 1, 2008. The interim authorization of owners and operators who fail to submit a permit application to the Agency by the permit application's due date shall terminate on (i) the due date established by the Agency if the owner or operator received a written notification from the Agency prior to October 1, 2007, or (ii) or January 1, 2008, if the owner or operator did not receive a written notification from the Agency by October 1, 2007.

(3) On and after July 1, 2008, no person shall use clean construction or demolition debris as fill material in a current or former quarry, mine, or other excavation <u>in violation of</u>

this Act or any Board regulation adopted pursuant to this Act or without a permit granted by the Agency for the clean construction or demolition debris fill operation or in violation of any conditions imposed by such permit, including periodic reports and full access to adequate records and the inspection of facilities, as may be necessary to assure compliance with this Act and with Board regulations and standards adopted under this Act.

(4) This subsection (b) does not apply to:

(A) the use of clean construction or demolition debris as fill material in a current or former quarry, mine, or other excavation located on the site where the clean construction or demolition debris was generated;

(B) the use of clean construction or demolition debris as fill material in an excavation other than a current or former quarry or mine if this use complies with Illinois Department of Transportation specifications; or

(C) current or former quarries, mines, and other excavations that do not use clean construction or demolition debris as fill material.

(c) In accordance with Title VII of this Act, the Board may adopt regulations to promote the purposes of this Section, as provided below or as may later be necessary. The Agency shall consult with the mining and construction industries during the development of any regulations to promote the purposes of this Section.

(1) No later than December 15, 2005, the Agency shall propose to the Board, and no later than September 1, 2006, the Board shall adopt, regulations for the use of clean construction or demolition debris as fill material in current and former quarries, mines, and other excavations. Such regulations shall include, but shall not be limited to, standards for clean construction or demolition debris fill operations and the submission and review of permits

required under this Section.

(2) Until the Board adopts rules under subsection (c)(1) of this Section, all persons using clean construction or demolition debris as fill material in a current or former quarry, mine, or other excavation shall:

(A) Assure that only clean construction or demolition debris is being used as fill material by screening each truckload of material received using a device approved by the Agency that detects volatile organic compounds. Such devices may include, but are not limited to, photo ionization detectors. All screening devices shall be operated and maintained in accordance with manufacturer's specifications. Unacceptable fill material shall be rejected from the site; and

(B) Retain for a minimum of 3 years the following information:

(i) The name of the hauler, the name of the generator, and place of origin of the debris or soil;

(ii) The approximate weight or volume of the debris or soil; and

(iii) The date the debris or soil was received.

(d) CCDD fill operations that are former quarries, mines, or other excavations may accept soil within the Agency's Tiered Approach to Corrective Action Objectives (TACO) Tier 1

residential standards adopted by the Board under Title XVII of this Act and as hereinafter may be amended, as relevant to specific site conditions at the CCDD fill operation and excluding the use of the ingestion and inhalation exposure

route-specific values found at 35 Ill. Adm. Code 742, Appendix B, Table A, provided the following conditions are met:

(1) Deed. The CCDD fill operation has recorded a land use restriction that restricts the fill operation property to industrial or commercial use and that such restriction is recorded in the chain of title for the property on which the quarry, mine, or other excavation is located.

(2) Soil Acceptance Plan. The CCDD fill operation has implemented a soil acceptance plan, certified by a licensed professional engineer, which delineates the parameters of the soil the facility will be authorized to accept, consistent with this subsection.

(3) Soil Testing Plan. The CCDD fill operation has implemented a soil testing plan, certified by a licensed professional engineer, which sets forth a sampling, screening, and testing protocol for all incoming and filled soil, sufficient to demonstrate that the conditions outlined in this subsection will be achieved.

(4) Groundwater Protection. The CCDD fill operation has implemented a groundwater protection plan, certified by a licensed professional engineer, which demonstrates, through the use of engineered barriers and other

appropriate groundwater and surface water controls and monitoring, that the fill operation will not violate this Act.

(5) Closure and Post Closure Plan. The CCDD fill operation shall develop for implementation a Closure and Post-Closure Plan, certified by a licensed professional engineer, which provides that, upon closure, the fill site will be covered with a minimum of 3 feet of soil meeting the strictest TACO Tier I residential standards. Upon closure, a CCDD fill operation that sufficiently demonstrates to the Agency that the site meets the stringent residential Tier 1 remediation objective adopted

by the Board under Title XVII of the Act, shall be eligible for removal of the land use condition set forth in paragraph (1) above, pursuant to procedures that may be adopted pursuant to this Section.

(6) Record Keeping. The CCDD fill operation shall maintain adequate records as may be necessary to ensure compliance with paragraphs (1) through (5) and this Act. The Agency shall have full access to such records and to the inspection of CCDD fill operations.

(7) Permit Procedures. The Agency is authorized to develop permit conditions and procedures with sufficient specificity as may be necessary to ensure compliance with this subsection. Any such permit procedures and conditions are subject to Sections 39 and 40 of this Act.

~~(d) This Section applies only to clean construction or demolition debris that is not considered "waste" as provided in Section 3.160 of this Act.~~

(e) For purposes of a clean construction or demolition debris fill operation:

(1) The term "operator" means a person responsible for the operation and maintenance of a clean construction or demolition debris fill operation.

(2) The term "owner" means a person who has any direct or indirect interest in a clean construction or demolition debris fill operation or in land on which a person operates and maintains a clean construction or demolition debris fill operation. A "direct or indirect interest" does not include the ownership of publicly traded stock. The "owner" is the "operator" if there is no other person who is operating and maintaining a clean construction or demolition debris fill operation.

(f) This Section does not apply to State agencies and units of local government that reuse CCDD or clean soil, when both the site of excavation and the site of fill is within their

jurisdictional territories so long as such use is consistent with Section 3.160(c) of this Act. Such entities may, by ordinance or regulation, develop procedures and protocols for such reuse.

(Source: P.A. 94-272, eff. 7-19-05; 94-725, eff. 6-1-06.)

Section 99. Effective date. This Act takes effect upon becoming law.".

ATTACHMENT 3

ILLINOIS STATE GEOLOGICAL SURVEY

Industrial Water Well	Top	Bottom
fill	0	9
light brown clay	9	15
gray clay with gravel embedded	15	19
coarse sand to coarse gravel	19	21
sty brn med s to crs gvl (strk cl 22-23)	21	32
med sand to coarse gvl (sty)	32	52
fine sand to fine gravel	52	93
soft and hard shale	93	100
Total Depth		100

Casing: 20" SCH 40 from -2' to 53'
20" STAINLESS STEEL from 53' to 73'
20" STAINLESS STL SCREEN from 73' to 93'

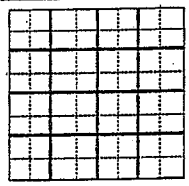
Screen: 20' of 20" diameter .08 slot
Grout: CEMENT from 0 to 56.
Grout: BENTONITE CHIPS from 56 to 60.
Grout: NORTHERN NO 2 from 60 to 93.
Water from sand & gravel at 73' to 93'.
Static level 27' below casing top which is 2' above GL
Pumping level 35' when pumping at 1200 gpm for hours
Permanent pump installed at 70' on June 24, 2007, with a capacity of 1000 gpm

Address of well: Koch
Pekin, IL

Location source: Location from permit

Permit Date: April 20, 2007 Permit #: 179-112

COMPANY Layne Western
FARM Aventine Renewable Energy
DATE DRILLED June 24, 2007 NO. 15
ELEVATION COUNTY NO. 25158
LOCATION SE NE SE
LATITUDE 40.55745 LONGITUDE -89.6659
COUNTY Tazewell API 121792515800 4 - 24N - 5W



ILLINOIS STATE GEOLOGICAL SURVEY

	Top	Bottom
SS #69231 (0-100')	0	0
cinders, black soil	0	21
black & brown clay	21	26
fine sand clay mixed	26	39
coarse sand gravel (boulders)	39	46
black peat	46	48
coarse sand gravel	48	79
medium sand gravel	79	99
gray shale	99	104
Total Depth		104

Casing: 20" 3/8" WALL STEEL from -2' to 50'
20" STAINLESS STEEL from 50' to 77'
20" STAINLESS STL SCREEN from 77' to 97'

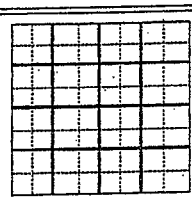
Screen: 20' of 20" diameter .06 slot
Grout: SAND/BENTONITE from 0 to 56.
Grout: GRAVEL PACK from 56 to 58.
Grout: NORTHERN GRAVEL from 58 to 98.

Static level 22' below casing top which is 0' above GL
Pumping level 35' when pumping at 1168 gpm for 7 hours
Sample set # 69231 (0' - 100') Received: October 1, 2003

Location source: Location from the driller

Permit Date: Permit #:

COMPANY Layne-Western Co.
FARM Williams Bio Energy
DATE DRILLED March 2, 2002 NO. 14
ELEVATION 0 COUNTY NO. 24788
LOCATION 1600'N 1775'E SW/c
LATITUDE 40.55734 LONGITUDE -89.65686
COUNTY Tazewell API 121792478800 3 - 24N - 5W



ILLINOIS STATE GEOLOGICAL SURVEY

3

Industrial Water Well	Top	Bottom
#SS #66653 (0'-306')	0	0
misc. fill, gravel, cinders, bricks etc	0	13
black clayey gravel & sand	13	17
black sand w/clay & other misc.	17	25
loos crs sand to crs gravel & boulders	25	50
med brn sand-crs gvl w/clay pckts & lyrs	50	60
coarse sand to coarse gravel	60	66
loose med s-sml gvl, occ bldrs & crs gvl	66	95
dark gray lime	95	96
dark gray shale	96	100
Total Depth		100

Casing: 20" STEEL .375 WALL from -2' to 55'
20" STAINLESS 7 GAUGE from 70' to 75'

Screen: 25' of 20" diameter .1 slot
Grout: CEMENT from 58 to 60.
Water from sand & gravel at 70' to 95'.
Static level 30' below casing top which is 2' above GL
Pumping level 42' when pumping at 1230 gpm for 8 hours
Permanent pump installed at 70' on December 31, 1988, with a capacity of 1200 gpm

Sample set # 66829 (0' - 90') Received: March 7, 1989
Sample set # 66653 (0' - 306') Received: March 7, 1989

Location source: Location from permit

Permit Date: December 28, 1988 Permit #: 139532

COMPANY Neupert, Thomas A.
FARM Pekin Energy Co.
DATE DRILLED December 22, 1988 NO. 12
ELEVATION 0 COUNTY NO. 22048
LOCATION 1100'S line, 1600'W line of section
LATITUDE 40.555965 LONGITUDE -89.657928
COUNTY Tazewell API 121792204800 3 - 24N - 5W

ILLINOIS STATE GEOLOGICAL SURVEY

4

Non Potable Water Well	Top	Bottom
cinders black soil	0	21
black & brown clay	21	26
fine sand w/soft clay mixed	26	39
large gravel & coarse sand	39	41
coarse sand & some small gravel	41	52
coarse sand w/streaks of small gvl	52	79
fine to coarse sand w/some small gvl	79	98
fine silty sand	98	99
dk gray shale & hd dk color limestone	99	103
Total Depth		103

Casing: 20" SCH 40 STEEL from -2' to 50'
20" 7 GA. SS STEEL from 50' to 77'
20" SS SCREEN from 77' to 99'

Screen: 22' of 20" diameter .06 slot
Grout: from 0 to 0.
Grout: BENTONITE CHIPS from 56 to 58.
Grout: NORTHERN #2 from 58 to 98.
Water from sand & gravel at 77' to 97'.
Static level 22' below casing top which is 2' above GL
Pumping level 36' when pumping at 1276 gpm for 0 hours
Permanent pump installed at 70' on March 6, 2002, with a capacity of 1000 gpm

Address of well: Williams (Bio-Energy)
Pekin IL

Location source: Location from permit

Permit Date: December 21, 2001 Permit #:

COMPANY Layne Western
FARM Williams Ethanol Services
DATE DRILLED March 2, 2002 NO. 14
ELEVATION 0 COUNTY NO. 24626
LOCATION SE NW SW
LATITUDE 40.557354 LONGITUDE -89.661176
COUNTY Tazewell API 121792462600 3 - 24N - 5W

ILLINOIS STATE GEOLOGICAL SURVEY

Non Potable Water Well	Top	Bottom
parking lot gravel & fill	0	4
coarse s & g w/buff colored clay layers	4	17
yellow brown coarse s & g w/boulders	17	47
f to med sd w/coarse gravel & sand	47	81
firm gray shale	81	85
Total Depth		85

Casing: 20" STEEL X .375" from 4' to 65'
Grout: CONCRETE from 0 to 20.
Size hole below casing: 42"

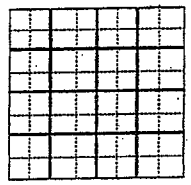
Water from sand & gravel at 65' to 85'.
Static level 17' below casing top which is 4' above GL
Pumping level 29' when pumping at 1529 gpm for 6 hours
Permanent pump installed at 60' on August 31, 1993, with a capacity of 1500 gpm

Address of well: South Front Street

Location source: Location from permit

Permit Date: June 15, 1993 **Permit #:**

COMPANY John Anthony Kopp
FARM - Midwest Grain Prod. Co.
DATE DRILLED July 7, 1993 **NO.** 1753
ELEVATION 0 **COUNTY NO.** 22377
LOCATION NW SE SE
LATITUDE 40.5556 **LONGITUDE** -89.668374
COUNTY Tazewell **API** 121792237700



4 - 24N - 5W

ILLINOIS STATE GEOLOGICAL SURVEY

6

Non Potable Water Well	Top	Bottom
fill	0	16
black & gray peaty clay with sand	16	26
yellow & brown coarse sand & gravel	26	50
fine sand & gravel	50	61
fine sand, coarse gravel & boulders	61	83
gray clay	83	85
Total Depth		85

Casing: 20" STEEL X .375" from -2' to 69'
Screen: 20' of 20" diameter .1 slot
Grout: CONCRETE from 0 to 20.
Size hole below casing: 42"

Water from sand & gravel at 69' to 94'.
Static level 21' below casing top which is 2' above GL
Pumping level 35' when pumping at 1515 gpm for 8 hours
Permanent pump installed at 60' on August 31, 1993, with a capacity of 1500 gpm

Address of well: South Front Street

Location source: Location from permit

Permit Date: June 15, 1993 Permit #:

COMPANY John Anthony Kopp
FARM Midwest Grain Prod. Co.
DATE DRILLED July 20, 1993 NO. 1752
ELEVATION 0 COUNTY NO. 22378
LOCATION NW SE SE
LATITUDE 40.5556 LONGITUDE -89.668374
COUNTY Tazewell API 121792237800 4 - 24N - 5W

ILLINOIS STATE GEOLOGICAL SURVEY

7

Non Potable Water Well	Top	Bottom
black & brown sandy topsoil	0	2
bricks & fill	2	4
black clayey sand	4	7
sand & gravel	7	16
coarse sand to small gravel	16	23
coarse sand & gravel with boulders	23	45
fine sand to coarse gravel with boulders	45	59
f to crs s w/med to crs g layers & bldrs	59	95
firm gray shale	95	100
Total Depth		100

Casing: 20" STEEL X .375" from -2' to 62'
Screen: 20' of 20" diameter .1 slot
Grout: CONCRETE from 0 to 20.
Size hole below casing: 42"

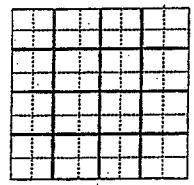
Water from sand & gravel at 62' to 82'.
Static level 11' below casing top which is 2' above GL
Pumping level 23' when pumping at 1507 gpm for 8 hours
Permanent pump installed at 60' on August 31, 1993, with a capacity of 1500 gpm

Address of well: South Front Street

Location source: Location from permit

Permit Date: June 15, 1993 Permit #:

COMPANY John Anthony Kopp
FARM Midwest Grain Prod. Co.
DATE DRILLED August 3, 1993 NO. 1751
ELEVATION 0 COUNTY NO. 22379
LOCATION NW SE SE
LATITUDE 40.5556 LONGITUDE -89.668374
COUNTY Tazewell API 121792237900 4 - 24N - 5W



ILLINOIS STATE GEOLOGICAL SURVEY

8

Non Potable Water Well	Top	Bottom
black sand, gravel & cement fill	0	12
brown sand & small gravel	12	25
gray clay with gravel	25	27
coarse sand & gravel	27	104
Total Depth		104

Casing: 30" .5 STEEL from -2' to 84'
30" .09" SS SCREEN from 84' to 104'

Screen: 20' of 30" diameter .09 slot
Grout: CEMENT from 0 to 60.
Grout: NORTHERN GRAVEL from 60 to 104.
Water from sand & gravel at 84' to 104'.
Static level 20' below casing top which is 2' above GL
Pumping level 32' when pumping at 1770 gpm for 8 hours
Permanent pump installed at 70' on June 2, 2006, with a capacity of 1700 gpm

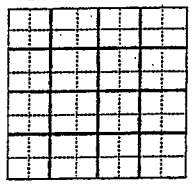
Additional location info: Lot: Subdivision: At Test Hole 3-03

Address of well: same as above

Location source: Location from permit

Permit Date: April 19, 2006 **Permit #:** 179-368

COMPANY Layne Western
FARM MGP Ingredients
DATE DRILLED May 31, 2006 **NO.** 1755
ELEVATION 640 **COUNTY NO.** 25091
LOCATION NW SE SE
LATITUDE 40.555588 **LONGITUDE** -89.668241
COUNTY Tazewell **API** 121792509100 4 - 24N - 5W



ILLINOIS STATE GEOLOGICAL SURVEY

	Top	Bottom
SS #56230	0	0
cindres, fill	0	2
fine to coarse sand & gravel	2	35
f to crs, sand, fine to crs gravel bldrs	35	74
f to crs sand	74	80
f to crs sand, medium gravel	80	93
Total Depth		93

Casing: 48" ARMCO #3 GA from -7' to 58'
26" ARMCO #3 GA from -7' to 73'

Screen: 20' of 26" diameter 5 slot
Size hole below casing: 48"

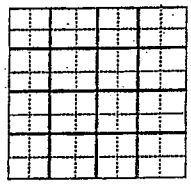
Water from sand & gravel at 2' to 93'.
Static level 29' below casing top which is 2' above GL
Pumping level 41' when pumping at 1705 gpm for 6 hours

Driller's Log filed
Sample set # 56230 (0' - 90') Received: May 16, 1969

Location source: Location from permit

Permit Date: January 1, 1968 **Permit #:** 5180

COMPANY Layne-Western Co.
FARM American Distilling Co
DATE DRILLED November 21, 1968 **NO.** 6
ELEVATION 0 **COUNTY NO.** 00413
LOCATION 800'S line, 1600'E line of SE
LATITUDE 40.555029 **LONGITUDE** -89.670488
COUNTY Tazewell **API** 121790041300 **4 - 24N - 5W**



ILLINOIS STATE GEOLOGICAL SURVEY

10

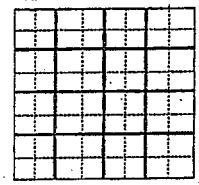
Industrial Water Well	Top	Bottom
gravel	0	2
loam	2	4
sand black, clay mix	4	15
sand black, wood	15	19
clay black, gray mix	19	26
sand med to coarse loose	26	28
sand fine to med	28	35
sand med to coarse, some gravel	35	40
sand fine to med, trace coarse	40	48
sand med to coarse	48	54
sand coarse, fine gravel	54	59
sand med to coarse	59	63
sand med to crs, tr gry cl (backfilled)	63	66
sand fine to med (backfilled)	66	72
gray shale at	72	
Total Depth		72

Casing: 5" SDR 21 from -2' to 55'
4.75" SS SCREEN .020 SLOT from 55' to 59'
4.75" SS SCREEN .015 SLOT from 59' to 63'

Screen: 8' of 4.75" diameter slot
Grout: BENSEAL T-100 from 0 to 48.
Grout: NORTHERN #00 from 48 to 50.
Grout: NORTHERN #0 from 50 to 63.
Water from sand & gravel at 55' to 63'.
Static level 17' below casing top which is 2' above GL
Pumping level 24' when pumping at 100 gpm for 1 hour
Permanent pump installed at 42' on September 24, 2007, with a

Permit Date: August 21, 2007 **Permit #:** 179-114

COMPANY Sauder, Steven E.
FARM Agridyne LLC
DATE DRILLED September 14, 2007 **NO.**
ELEVATION 460 **COUNTY NO.** 25159
LOCATION NE NE NE
LATITUDE 40.551194 **LONGITUDE** -89.669417
COUNTY Tazewell **API** 121792515900



9 - 24N - 5W

ILLINOIS STATE GEOLOGICAL SURVEY

11

	Top	Bottom
cinders and brick	0	2
sand, medium	2	14
sand, coarse	14	18
coal	18	19
sand	19	20
sand, coarse, and gravel, 3m	20	39
sand, coal, and boulders, 9m	39	48
clay and rock	48	50
sand, coarse, 3m	50	55
sand, coarse, 2m	55	63
sand, medium, 5m	63	66
sand, 3m, 10s	66	76
shale at	76	76
Total Depth		76

Casing: 25" ID SCREEN from 35' to 75'
Screen: 40' of 25" diameter slot

Static level 20' below casing top which is 0' above GL
Pumping level 23' when pumping at 450 gpm for 0 hours
Driller's Log filed
Additional location info: Lot: Subdivision: 400' from well #1

Location source: Location from the driller

Permit Date: **Permit #:**

COMPANY owner
FARM Standard Brands, Inc.
DATE DRILLED January 1, 1926 **NO.** 2
ELEVATION 0 **COUNTY NO.** 00128
LOCATION 46'S 700'W NE/c SE NE
LATITUDE 40.54903 **LONGITUDE** -89.667197
COUNTY Tazewell **API** 121790012800 **9 - 24N - 5W**

ATTACHMENT 4

#1
Closest To River

ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay yellow	0	3
sand dirt	3	10
sand & gravel	10	12
clay yellow	12	14
sand & gravel	14	26
clay gray traces gravel	26	35
clay gray	35	46
sand & gravel	46	49
clay gray	49	61
sand & gravel dirty	61	76
sand fine to medium	76	96
sand coarse	96	103
sand & gravel	103	114
Total Depth		114

Casing: 5" SDR 21 from -2' to 110'
4.75" STAINLESS STL SCREEN from 110' to 114'

Screen: 4' of 4.75" diameter .02 slot
Grout: NORTHERN #00 from 106 to 114.
Grout: BENSEAL EZ MUD from 0 to 106.
Water from sand & gravel at 110' to 114'.
Static level 37' below casing top which is 2' above GL
Pumping level 37' when pumping at 24 gpm for 1 hour
Address of well: 25925 Iron Mt. Rd.
Tremont, IL

Location source: Location from permit

Permit Date: July 13, 2004 **Permit #:**

COMPANY Sauder, Steven E.
FARM Wagenbach, Si
DATE DRILLED July 23, 2004 **NO.**
ELEVATION 0 **COUNTY NO.** 24953
LOCATION SW NE NE
LATITUDE 40.465289 **LONGITUDE** -89.441539
COUNTY Tazewell **API** 121792495300 9 - 23N - 3W

#2

ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay-yellow	0	11
sand & gravel	11	14
clay with some sand layers-gray	14	46
sand-fine to medium	46	89
sand & gravel	89	92
Total Depth		92

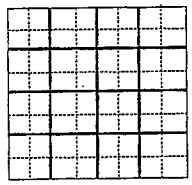
Casing: 5" PVC from -2' to 88'
Screen: 4' of 4.75" diameter .012 slot
Grout: BENSEAL SLURRY from 0 to 85.
Water from sand & gravel at 88' to 92'.
Static level 28' below casing top which is 2' above GL
Pumping level 39' when pumping at 50 gpm for 1 hour
Permanent pump installed at 65' on July 21, 1992, with a capacity of 22 gpm

Address of well: Iron Mountain Road

Location source: Location from permit

Permit Date: July 9, 1992 Permit #:

COMPANY Sauder, Steven E.
FARM Wagenbach, Jim
DATE DRILLED July 20, 1992 NO.
ELEVATION 555GL COUNTY NO. 22339
LOCATION NW NW NE
LATITUDE 40.467068 LONGITUDE -89.446418
COUNTY Tazewell API 121792233900 9 - 23N - 3W



ATTACHMENT 5

Clouse Pit Sand and Gravel Quarry

Sampling and Analysis Plan

Characterization and Horizontal/Vertical Delineation of Fill Material
April 2008

1.0 Introduction

The Illinois Environmental Protection Agency's (IEPA) January 24, 2008 investigation at the Clouse Pit sand and gravel quarry found several stockpiles of "miscellaneous fill material" deposited at the quarry. The IEPA determined that the miscellaneous fill material was from construction activities at Altivity Packaging, LLC located in Pekin, Illinois. Three random grab samples of the miscellaneous fill material were obtained by the IEPA and submitted to an analytical laboratory for analysis. Based on the results of the three analyses, the IEPA concluded that the miscellaneous fill material is contaminated soil and thus has suggested a remediation effort be conducted by the parties responsible for the miscellaneous fill material that was deposited at the quarry. The IEPA suggested remediation effort includes removing the miscellaneous fill material from the quarry and disposing the material at an IEPA permitted landfill.

Rapps Engineering & Applied Science (RAPPS) has prepared this Sampling and Analysis Plan to further characterize the subject fill material and delineate the horizontal and vertical extents of the fill material stockpiles. Because the IEPA has based its conclusion that the miscellaneous fill material is a contaminated soil on the analytical results of only three samples of the material, RAPPS recommends that a more thorough characterization of the miscellaneous fill material deposited at the Clouse Pit quarry be performed. This characterization would include the taking of additional samples of the fill material using a sampling strategy more suited to obtaining representative samples from the piles. This strategy includes obtaining multiple aliquots of the fill material and compositing the aliquots into one sample for laboratory analysis. Depending on the size of a fill material pile, several composite samples may be obtained from each pile. Site work to determine the horizontal and vertical extent of the fill material piles will consist of using surveying equipment (hand-held GPS device and/or level) to determine the dimensions and elevations of the fill material stockpiles. This work will be conducted at the same time composite sampling of the fill material is being performed. The Specifics of the proposed fill material characterization plan are detailed in the following sections.

2.0 Fill Material Sampling and Analysis Procedures

The size of the fill material pile will influence the number of composite samples obtained from the pile in that increasing size is often accompanied by increased variability in the chemical characteristics of the pile. At least one composite sample will be obtained from each fill material pile. Piles consisting of one to two delivered loads will be sampled as one pile. Larger piles will be divided into quadrants with one composite sample being obtained from each side. Actual sampling locations will be chosen in the field by RAPPS' personnel. For piles that are very large, one or more additional composite samples may be obtained from the top of the pile, if sampling personnel can safely access the pile top.

The process of obtaining a composite sample of the fill material will vary slightly depending on the size of the fill material pile being sampled. A composite sample obtained from a small pile will consist of taking four aliquots of fill material from each sidewall (0 to 6 inches into the sidewall), and one aliquot of fill material from a deeper depth into the pile (12 to 18 inches or deeper if possible). For larger piles, composite sampling will be conducted on a pile sidewall or on top of the pile. At a large pile sampling location, five aliquots of fill material from a 10 feet square area will be obtained. One aliquot will be taken from the center of the square into the pile (12 to 18 inches or deeper if possible), and one aliquot will be obtained from each of the corners of the area (0 to 6 inches into the pile).

The aliquots will be taken using a hand auger equipped with a stainless steel cutting head/bucket, a stainless steel hand shovel or a stainless steel sampling spoon, and shall all consist of equal portions of fill material. The aliquots taken at a sampling location will be placed into either a clean stainless steel bucket or a one gallon or larger sealable plastic food bag. The contained fill material will then be thoroughly mixed inside the container using the sampling implement. After mixing, the composited fill material sample will be carefully placed into one or more clean glass sample container(s) provided by the analytical laboratory contracted to analyze the fill material samples. Each glass sample jar will be completely filled with material and tightly sealed with a screw-on lid.

Only soil like material will be collected for the composite samples. Course grained brick and cinder fragments, and chunks of slag, brick, and concrete are not to be included in the composite sample.

RAPPS' personnel will perform the sample collection using dedicated latex or nitrile gloves that will be changed at each separate composite sampling location. The re-usable sampling equipment and soil-mixing container will be field-decontaminated after use at each composite sampling location. Sealable plastic food bags will be disposed after a single use.

The clean glass sample jars will be prepared and provided by the analytical laboratory performing the fill material analyses. RAPPS' field personnel will label each jar using an indelible marker with the following information:

Project Name	Sample ID
Date	Collection Time
Personnel	Analytical Parameters

The labeled composite samples will be placed in an iced cooler and will be handled using proper chain-of-custody procedures from the time of collection until hand-delivered to the analytical laboratory.

RAPPS' personnel will photograph each composite sampling location and obtain a location determination recorded with a hand-held GPS mapping device. This information will be used to document sampling locations with respect to the piles of fill material at the Clouse Pit quarry.

2.1 Analytical Parameters

It is anticipated that at least 10 composite samples of the subject fill material will be obtained. Analytical parameters for each composite sample include total concentrations for Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver; SPLP (SW-846 Method 1312) concentrations for Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver, and pH. In addition, one of the composite samples selected at random will be analyzed according to typical waste disposal facility acceptance requirements.

2.2 Quality Assurance Measures

All standard field sampling activities relative to sample collection, documentation, preparation, labeling, storage, shipment and security, quality assurance and quality control, acceptance criteria, corrective action, and decontamination procedures will be conducted in accordance with the guidance found in "Test Methods for Evaluating Solid

Waste, Physical/Chemical Methods" (SW-846), Vol. One, Ch. One (Quality Control) and Vol. Two (Field Manuel). All field measurement activities relative to equipment and instrument operation, calibration and maintenance, corrective action, and data handling will be conducted in accordance with SW-846 Vol. One, Ch. One (Quality Control).

2.3 Analytical Laboratory Quality Assurance

The contract laboratory used for the project will be required to have a Quality Assurance Plan that ensures analytical results are valid, accurate, timely and are in compliance with regulatory requirements. Further, the contract laboratory will be required to demonstrate that it is an accredited laboratory in accordance with the requirements of 35 IAC Code 186.

All laboratory quantitative analysis of soil samples used to determine concentrations of regulated substances will be conducted fully in accordance with SW-846, relative to all facilities, equipment and instrumentation, operating procedures, sample management, test methods, equipment calibration and maintenance, quality assurance and quality control corrective action, data reduction and validation, reporting, and records management. The practical quantification limit (PQL) of the test methods selected must be less than or equal to appropriate remediation objective concentrations for the subject fill material.

2.4 Analytical Results Comparison

Laboratory analytical results for the discrete composite samples will be compared to appropriate TACO Tier 1 Remediation Objectives (ROs) for Residential Properties and for Industrial/Commercial Properties. All appropriate exposure routes will be considered in the TACO Tier 1 evaluation. The results for total concentrations will also be compared to the Concentrations of Chemicals in Background Soils Within MSAs (35 IAC Part 742, Appendix A, Table G.

Per the procedures in 35 Adm. Code 742.225(c), (d) and (e) the analytical results for the composite samples will be mathematically averaged with the results then compared to the applicable TACO Tier 1 remediation objectives. The averaged results will also be compared to the Concentrations of Chemicals in Background Soils Within MSAs.

3.0 Horizontal/Vertical Delineation of Fill Material

Site work performed by RAPPS' field personnel to determine the horizontal extent of the piles of fill material will consist of using a hand-held GPS mapping device to obtain location determinations around the perimeter of each pile of subject fill material

deposited at the Clouse Pit quarry. The IEPA has described the subject fill material as being dark brown in color consisting of fine grained sand with medium to course grained brick and cinder fragments. The fill material is also described by the IEPA as containing slag, brick and concrete. Using this description, a field visual identification of the subject fill material and a delineation between the fill material and the natural sand and gravel site material should be possible. GPS mapping data would then be used to develop accurate horizontal dimensions of the fill material piles that can be shown on a site map of the Clouse Pit quarry.

Either a hand-held GPS mapping device or a surveying level will be used to determine the vertical extent of the fill material piles. IEPA photographs taken at the time of its January 24, 2008 inspection at the quarry, show the subject fill material being deposited on what appears to be a relatively flat base grade. Below grade depositing of the fill material was not observed by the IEPA during its inspection. Elevation readings will be taken around the base of each pile and at locations on the sides and top of each pile. The elevation information will allow for volume calculations of the fill material deposited at the quarry and when combined with the horizontal data, will allow the generation of cross-section drawings for the piles.

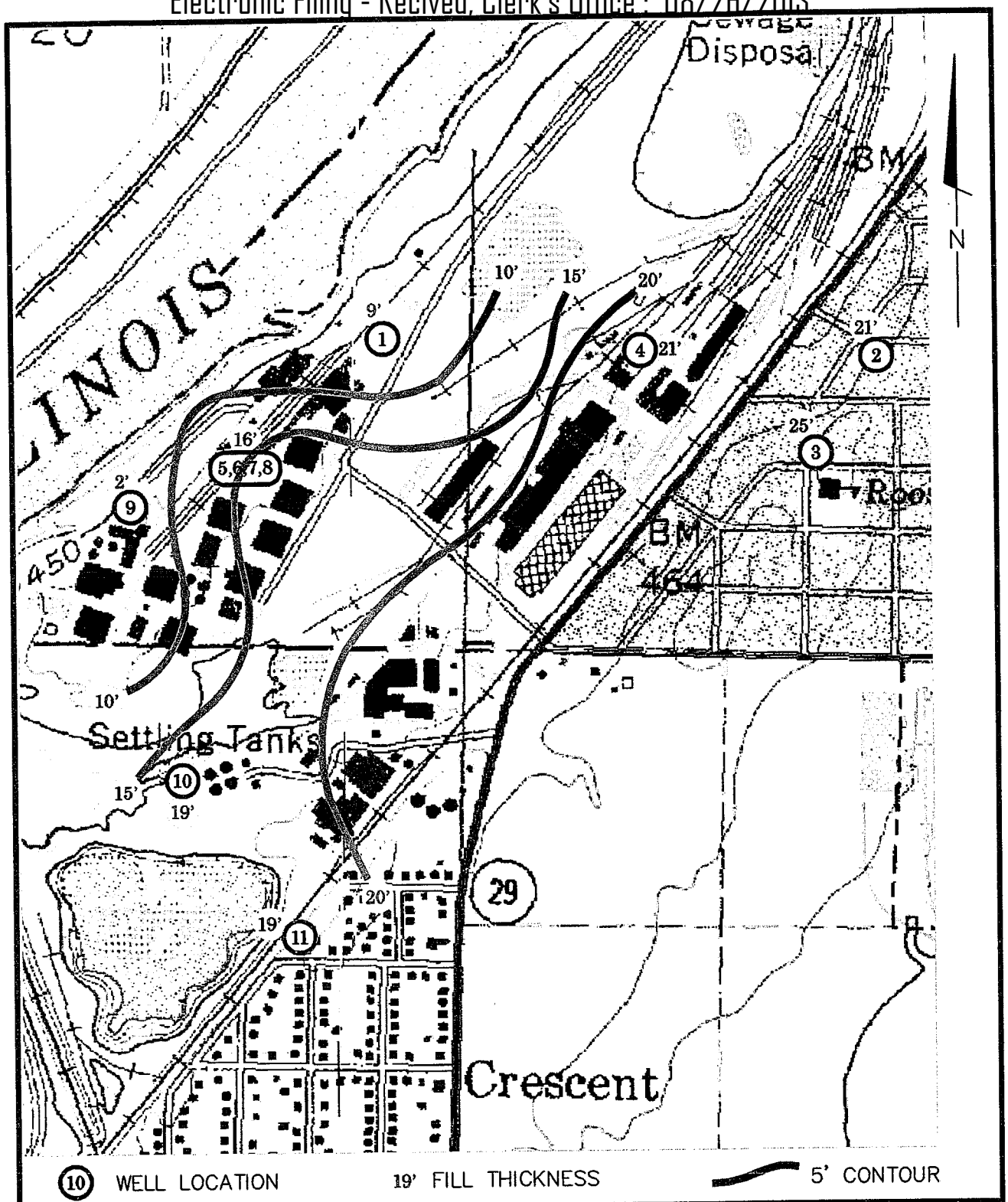
ATTACHMENT 6

Cost Estimate
Clouse Pit Sand and Gravel Quarry
Sampling and Analysis Plan

1.0 LaboratoryAnalytical Costs		
10* total samples @ $355 each		$3,550
1 sample disposal analysis @ $250		$ 250
	Sub-total	$3,800
2.0 RAPPS Labor (Fill Sampling)		
Sampling Preparation, 4 Hrs. @ $95/Hr.		$ 380
On-site Sampling, 2 persons @ $180/Hr. x 8 Hrs.		$1,440
On-site Surveying (GPS), 4 Hrs. @ $85/Hr.		$ 340
	Sub-total	$2,160
3.0 Miscellaneous Expenses		
Vehicle Milage, 200 miles @ $.55/ Mile		$ 110
Surveying Equipment Use		$ 100
Sampling Equipment Use		$ 100
Field Supplies		$ 50
	Sub-total	$ 360
4.0 Sampling Report		
Report Preparation Lump Sum		$5,000
	Grand Total	**$11,320**

* It is anticipated that 10 samples of the subject fill material will be obtained. However, should it be necessary to obtain more than 10 samples, Laboratory Analytical costs will increase by $355 per sample. Example: 5 additional samples will increase project Grand Total by $1,775 to $13,095.

FIGURE 1



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ILLINOIS PROFESSIONAL DESIGN FIRM No. 184-001130

Figure 1

FILL THICKNESS

IN THE VICINITY OF
PEKIN, ILLINOIS

RE: HOPEDALE / CLOUSE

PROJECT: SA08028 DRAWING: CCDD DATE: 04/2008

FIGURE 2

FIGURE 2 CLOUSE GRAVEL PIT SAMPLES

	IEPA Sample No. 1.		
	X101	X102	X103
Test Parameter	Total (mg/kg)	Total (mg/kg)	Total (mg/kg)
As	5.75	4.11	10.3
Ba	23.0	37.8	268
Cd	1.41	10.0	7.93
Cr	6.89	6.34	12.1
Pb	16.2	113	141
Hg	0.048	0.046	0.109
Se	0.29	0.46	0.600
Ag	U	U	U

	IEPA Sample No.		
	X101	X102	X103
Test Parameter	TCLP (mg/l)	TCLP (mg/l)	TCLP (mg/l)
As	U	0.0025	U
Ba	0.423	0.419	0.401
Cd	0.0071	0.0262	0.0278
Cr	0.0026	0.0040	0.0033
Pb	U	0.0053	0.0039
Hg	0.0002	0.0002	0.0002
Se	U	0.0041	0.0027
Ag	U	0.0203	U
Ph	7.27	7.41	7.32

TACO Industrial/ Commercial 2.		TACO Construction Worker 2		TACO Metro*	Chicago Background Range		Statistics**
Ingestion (mg/kg)	Inhalation (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Background (mg/kg)	Low (mg/kg)	High (mg/kg)	Arithmetic Mean (mg/kg)
13	1,200	61	25,000	13	<10	220	19.5
140,000	910,000	14,000	870,000	110	100	697	427.2
2,000	2,800	200	59,000	0.6	<2	7	NC
10,000	920	4,100	8,800	16.2	8	363	71.2
400	NA	400	NA	36	13	1,910	395
610	540,000	61	52,000	0.06	<0.02	13.1	0.6
10,000	NA	1,000	NA	0.48	<0.2	3.1	1
10,000	NA	1,000	NA	0.55	<2	<2	NC

TACO Soil Component of the Groundwater 2. Ingestion Exposure Route		3. Illinois Effluent Standards	RCRA 4. Hazardous Waste
Class I (mg/l)	Class II (mg/l)	(mg/l)	TCLP (mg/l)
0.05	0.2	0.25	5.0
2	2	2.0	100.0
0.005	0.05	0.15	1.0
0.1	1	1.0	5.0
0.0075	0.1	0.2	5.0
0.002	0.01	0.0005	0.2
0.05	0.05	NA	1.0
0.05	NA	0.1	5.0

1. Samples collected 1-24-08
2. TACO Section 742 Appendix B, Table B
3. Title 35, Subtitle C Sec. 304.124
4. Title 35, Subtitle G Sec. 721.124

Where: U - Analyte not detected, i.e. concentration is less than the reporting limit (RL) or the method detection limit (MDL).
NC - Not Calculated; NA - No Applicable Standard

*Illinois TACO Regulations Section 742 Appendix A, Table G: Concentrations of Inorganic Chemicals in Background Soils, Counties Within Metropolitan Statistical Areas

**Concentrations of Polynuclear Aromatic Hydrocardons and Inorganic Constituents in Ambient Surface Soils, Chicago, Illinois: 2001-02, USGS, Water-Resources Investigations Report 03-4105

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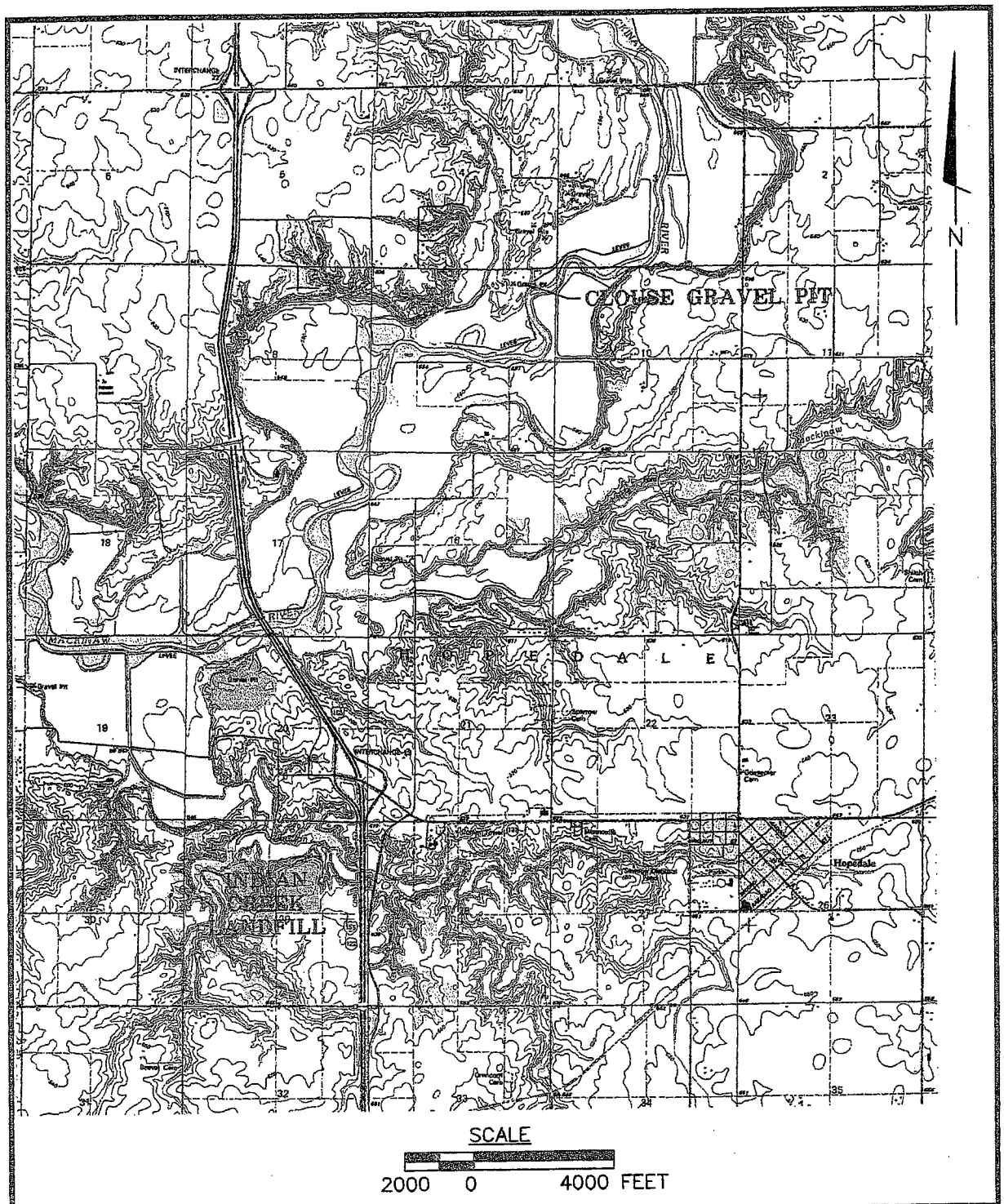
FIGURE 3



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ILLINOIS PROFESSIONAL DESIGN FIRM No. 184-001180

Figure 3

CLOUSE GRAVEL PIT & INDIAN CREEK LANDFILL

PROJECT: SA08028 DRAWING: PITLOC DATE: 04/2008

FELDMAN, WASSER, DRAPER & COX

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Of Counsel

May 28, 2008

VIA CERTIFIED MAIL AND TELECOPY

Jason Thorp
Illinois Environmental Protection Agency
7620 N. University Street, Suite 201
Peoria, Illinois 61614

Re: Violation Notices **L-2008- 01048 to 01051** and related notice numbers / Ironhustler Excavating, Inc. / Quarter Construction / Darrell Clouse / Altivity Packaging / Perkin Properties LLC / IPM Corporation (the "Group")
1798095009 -- Tazwell County
21 Day Response By All Parties to 31(a) Meeting Held on May 6, 2008
Our File No. 983641P

Dear Mr. Thorp:

Thank you for meeting with the entire Group of recipients of the above referenced Violation Notices on May 6th. It was a useful discussion, and what follows below is the Group's 21 day response called for by Section 31(a)(5) of the Act. Please note that this response contains a significant amount of information and input that was prepared for the Group by Mike Rapps, of Rapps Engineering and Applied Science, who attended the meeting as our technical representative.

Per our request, Mr. Rapps reviewed the above referenced Violation Notices. This letter covers the thoughts he expressed on behalf of our Group at the May 6th meeting regarding the core issue raised by your Violation Notices; namely, that the subject fill material delivered to the Clouse Pit was a "contaminated" waste.

Regulatory Background

Solid waste disposal has been regulated in Illinois since the mid-1960's, first by the Illinois Department of Public Health, and since 1970 and through the present, by the Illinois Environmental Protection Agency. Throughout most of this period there was recognition that commercial disposal sites that accepted municipal refuse could be differentiated from those that accepted construction and demolition (C&D) debris. Although this distinction

RESPONDENT'S EXHIBIT 5

1307 South Seventh Street * P.O. Box 2418 * Springfield, Illinois 62705 * 217/544-3403

Facsimile: 217/544-1593 Writer's Email: timmel@feldman-wasser.com www.feldman-wasser.com

was not codified, the regulatory agencies drew a *de facto* distinction by regulating municipal landfills far more stringently than their C&D counterparts. A third variety of disposal facility was the so-called clean fill site that accepted discarded soil with bricks, rocks, concrete and other non-flammable and non-putrescible materials. These sites did not seek or receive government permits and technically could have been considered illegal dumps. But, unless they were the subject of public nuisance complaints, they were typically ignored by the regulators.

In 1990 the Illinois Pollution Control Board adopted new solid waste regulations that significantly changed the regulatory scheme just outlined. Title 35, Subtitle G, Part 811 created a new landfill system that envisioned **putrescible waste** landfills, **chemical waste** landfills, and **inert waste** landfills. The new rules sidestepped the long recognized C&D operations in favor of the theoretical inert waste sites. The Part 811 regulations are among the most stringent solid waste rules in the United States so it wasn't long before most of the Illinois landfills that existed in 1990 closed, including all of the previously permitted C&D landfills. Since that time, disposal costs at the remaining Illinois landfills have skyrocketed. And, to this date, there still are no inert waste landfills in the State, the definition of "inert" being nearly impossible to meet.

Because disposal costs at the municipal (i.e., putrescible) waste sites have soared because those sites are now fewer in number, and because there are no dedicated C&D or "inert" landfills, building and demolition contractors have sought other disposal outlets. For example, concrete recyclers now exist who can crush broken concrete into reusable aggregate, recycling re-bar in the process. And, in a fairly recent development, Chicago-area developers have begun a new "industry" that uses "clean fill" to recover stone quarries and gravel pits. This became the source of controversy roughly two years ago from which emerged legislation that codified the terminology for what is known as "clean construction or demolition debris" (CCDD). The statute that resulted is not clear and difficult to administer. A proposed amendment to the statute has made it through legislative committee and may stand some chance of passage this legislative session.

Tiered Approach to Corrective Action Objectives (TACO)

TACO (35 ILL Adm Code 742) is a codified system used to construct risk-based cleanup objectives for the remediation of contaminated properties such as dry cleaners and service stations. As a regulatory tool it has validity only in the context of the IEPA Site Remediation Program (SRP), a voluntary cleanup program administered per 35 ILL Adm Code 740, and the Leaking Underground Storage Tank (LUST) program administered per 35 ILL Adm. Code 732. In its simplest form, TACO presents a (Tier 1) look-up table of chemicals and chemical concentrations that are deemed allowable for properties of varying uses, i.e., residential, industrial, etc., and for varying exposure routes, i.e.,

inhalation, ingestion, etc. TACO also introduces "area background" conditions as a factor in prescribing a site-specific cleanup objective.

It is important to note that the published TACO Tier 1 cleanup objectives are counterintuitive. They are not *per se* cleanup standards, nor does an exceedance of Tier 1 equate to "contamination" as has been implied in the Violation Notices. Rather, soil concentrations of chemicals less than the listed TACO Tier 1 levels are presumed to be safe. It is not, in the alternative, presumed that levels in excess of Tier 1 are dangerous, or that soils so affected should be treated or removed. Soils that contain TACO listed substances or compounds do not, by their mere existence, represent a violation of the Environmental Protection Act, or regulations thereunder. Many areas of Illinois possess background soils that contain TACO listed compounds that greatly exceed Tier 1.

Background Soils

That part of Pekin from which the subject excavated soil originated consists of a substantial thickness of non-putrescible fill material that has existed in the area for over 100 years. [The excavation giving rise to this situation was prompted by the fact that this historic fill material is inadequately compact to support the foundations required for Altivity's construction of a new waste treatment plant on the site.] Using well logs obtained from the Illinois State Geological Survey, Mr. Rapps constructed a contour map that illustrates the thickness and areal extent of fill in and around the area from which the subject soil was excavated. Copies of the well logs and the contour map were distributed at the May 6th meeting. The fill extends over a large area, probably including parts of Illinois Route 29, and is as much as twenty-five feet thick. The average thickness of fill in the area is on the order of 15 to 20 feet. It is thus difficult to argue that the material is not ***terra firma***, at least in that part of Pekin, Illinois. This is not unusual. It is generally well established that many communities built along the major rivers in Illinois, as well as along Lake Michigan, are partially built atop fill. The same is true of the commercial areas of most Illinois cities. As discussed at the meeting, on and around the Pekin site in question there are several producing, potable water wells drilled through the fill material. Water from these wells is in daily use for food grade purposes, and such use has been completely uneventful.

The soil boring logs provided at the May 6th meeting generally describe the soil (subject fill material) as sand and gravel with cinders and broken bricks. The material is seemingly inorganic and non-putrescible. The cinders are most likely from the combustion of coal, either from a boiler system, or from home heating in bye-gone days. Having been excavated and relocated, the material is not stratified, and although inherently heterogeneous, it now exists as a somewhat homogeneous deposit.

Chemical Analyses

The Agency collected three grab samples of the subject fill material. If the subject material were to be characterized chemically, composite sampling should have been used to reduce bias. The analysis of at least ten composite soil samples constructed from a total of fifty aliquots would be required for the amount of material involved in the instant case. The grab samples were analyzed for total metals, and leachable metals. The latter test relied on a method of sample preparation known as the Toxic Characteristic Leaching Procedure (TCLP). The TCLP test is used to determine if a waste is a characteristically hazardous waste as defined by federal Resource Conservation and Recovery Act (RCRA) regulations. It is a very aggressive "shake" test in which a solid sample is vigorously shaken in an (acidic) liquid solution. The TCLP is also referenced in TACO as one means to compare the leaching of a sample to tabulated soil remediation objectives (SRO's) for the "soil component of the groundwater ingestion exposure route".

TACO also allows use of the less aggressive Synthetic Precipitation Leaching Procedure (SPLP) as a substitute for the TCLP. The SPLP is also an aggressive shake test but it uses non-acidic water as the leaching medium. The SPLP would have been a better choice of test in the instant case. Had the SPLP procedure been used, it is likely that concentrations of metallic compounds in the leachate solution would have been less than those identified with the TCLP procedure.

The TCLP and SPLP options are used to compare against fixed SRO values tabulated in TACO, Section 742, Appendix B, Table B. TACO also provides that the total concentration of certain chemicals of concern, including the heavy metals, may be compared against pH dependent SRO values (TACO Appendix B, Table C or D). The choice of options belongs to the applicant in the SRP program.

The three samples tested by the Agency are too few to properly characterize the subject material. Notwithstanding, your tests indicate that if the samples reflect a "waste", the waste is not a RCRA hazardous waste. In addition, the TCLP leachate from the material does not exceed Illinois effluent standards for the tested metals. Consequently, the existing test data does not support your apparent contention that the subject material threatens to cause water pollution.

In comparison of the data generated from the three samples of the subject fill material to remediation objectives allowed by TACO, one cannot conclude that there are is an exceedance of a TACO SRO. As previously mentioned, an SRP applicant may select one of three methods for satisfying TACO Tier 1 requirements (see notation "m" to Appendix A, Tables A and B) for the soil component of the groundwater ingestion exposure route.

Although the Agency correctly observes that the total lead concentration in samples X102 and X103 exceeds the pH specific Class I groundwater ingestion route remediation objective, the Agency fails to note that the same samples produce a TCLP leachate that does not exceed the Tier 1 (Appendix B, Table A or B) SRO for lead. The Violation Notices are also correct in identifying a cadmium exceedance of the Tier 1 (Appendix A, Tables A and B) Class I groundwater ingestion route remediation objective in samples X101, X102 and X103 (TCLP results). But, in this instance the total cadmium concentrations do not exceed the pH specific Class I soil component of the groundwater ingestion route value. In drawing the conclusion that Tier 1 has been exceeded the Agency has cherry-picked worse case TACO methods while ignoring the options that any reasonable SRP applicant would have used. By using options available per Appendix B, Table A and B (see notation "m"), it can be demonstrated that TACO remediation objectives, if applied to the subject fill material, have been met.

The Agency's narrative attached to the Violation Notices indicates that some total cadmium, total lead, total mercury and total selenium concentrations are higher than values listed in the TACO table "Concentrations of Chemicals in Background Soils Within Metropolitan Statistical Areas" (Appendix A, Table B). While this statement is true, it must be noted that the concentrations listed in Appendix A, Table G are statewide statistical ***median*** values of inorganic chemicals in background soils. In connection with the SRP, background values may be used as the upper limit SRO of the area background concentration for chemicals of concern at a site, but typically are not. The state-wide background data offers an interesting factoid but said data seldom comes into play in an actual SRP matter. For example, not one of the total metal analyses from the Clouse gravel pit samples exceeds the average background concentration of the same test parameter found in the surface soils of the City of Chicago. And, the Clouse samples do not exceed the background levels of nearby Pekin if only because the Clouse samples reflect the actual background levels of Pekin. To the point, the statewide background statistics are not regulatory cleanup objectives.

Definitions

Mr. Rapps used the term ***terra firma*** to emphasize that background soils in Illinois, particularly along rivers and lakes, and in urban areas, are often somewhat different than that which predated the settlers. At present, background soils in Pekin would seemingly include those that are the subject of the Violation Notices.

Our Group's reading of Section 3.160 of the Environmental Protection Act, suggests that the subject fill material might be considered "clean construction or demolition debris (CCDD)", if it is not "contaminated." On the other hand, it might also be thought of simply as urban soil, which is not regulated. You will note that Section 3.165 of the Act defines

contaminant as any solid, liquid, or gaseous matter, any odor, or any form of energy, from whatever source. This would seem to imply that any heterogeneous material must be contaminated if only because it is not homogeneous.

So, whether or not the material in question is a "waste", the other issue is whether the Pekin soil is "contaminated." You imply that the material is contaminated because the Agency's tests indicate that it contains total lead and TCLP cadmium that exceed TACO limits in two categories, and cadmium, lead, mercury and selenium concentration exceed statewide background values. As previously mentioned, TACO was never intended to create the bright line that distinguishes contaminated from uncontaminated. Apart from the strange definition of contaminant given in Section 3.165, we are unaware of any clear definition of "contamination" in the statutes or regulations. It is indeed a term of art.

The definition of "waste" (Sec. 3.535) is clearer in that it refers to "discarded material." A material used for a beneficial purpose, i.e., recycled, is, generally speaking, not thought to be discarded. Because the Pekin soil (subject fill material) delivered to the Clouse gravel pit was to be used for a beneficial purpose, e.g., road-bed construction, the material was not discarded, and hence is not a waste.

Summary Conclusion

1. The fill material in this matter is the historic *terra firma* of the Pekin riverfront. Its in situ placement on the riverfront ages ago cannot be distinguished from its use as road base today at the Clouse quarry site, and it cannot be regarded as a water pollution hazard in either location.

2. The three samples collected by IEPA are insufficient to properly characterize the fill material.

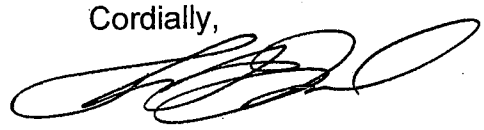
3. There is no extant bright line test for defining "clean fill" that applies in the instant case, and the Pekin fill material is not "waste".

4. The Violation Notices relies on TACO Tier 1 to define "contaminated". This is not supported by the statutes or regulations and is inconsistent with the actual meaning and purpose of TACO Tier 1.

5. Even if Tier 1 is used to support the Agency's position that the fill material is "contaminated", a proper use of Tier 1 can be used to refute that argument.

Given the conclusions set forth above, the Agency ought to withdraw the Violation Notices issued to the Group. We look forward to your response.

Cordially,



Thomas J. Immel

cc: John G. Tripses, IEPA (via email)
Michelle Ryan, IEPA (via email)
William R. Dever (via email
Kimberly R. Peterson (via email)
Eleni Kouimelis (vial email)
Darrell Clouse (via land mail)
John Larue (via email)
Peter Wintersteen (via email)
Mike Rapps (via email)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 – (217) 782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601 – (312) 814-6026

ROD R. BLAGOJEVICH, GOVERNOR DOUGLAS P. SCOTT, DIRECTOR

217/785-8604
TDD: 217/782-9143

June 17, 2008

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7007 2560 0003 2092 1644

Feldman, Wasser, Draper & Cox
Attention: Thomas J. Immell
P.O. Box 2418
Springfield, IL 62705

Refer to: **Rejection of Compliance Commitment Agreement**
Violation Notice, L-2008-01046 (Darrell Clouse)
Violation Notice, L-2008-01047 (Quarter Construction Co.)
Violation Notice, L-2008-01050 (Intra-Plant Maintenance Corp.)
Violation Notice, L-2008-01051 (Ironhustler Excavating, Inc.)
1798095009 -- Tazewell County
Clouse, Darrell
Compliance File

Dear Mr. Immell:

The Illinois Environmental Protection Agency ("Illinois EPA") **REJECTS** the Compliance Commitment Agreement ("CCA") proposed by you for Darrell Clouse, Quarter Construction Co., Intra-Plant Maintenance Corp., and Ironhustler Excavating, Inc. and postmarked May 28, 2008 in response to the Violation Notice Numbers L-2008-01046, L-2008-01047, L-2008-01050, and L-2008-01051 dated March 5, 2008.

The proposed CCA postmarked May 28, 2008 and received by the Illinois EPA on May 29, 2008 is rejected for the following reasons:

1. The proposed CCA does not agree to remove all waste by the date in the Suggested Resolutions of the Violation Notices or propose an alternate date that can be accepted.

2. The proposed CCA does not agree to submit receipts to document the removal of all waste by the date in the Violation Notices or propose an alternate date that can be accepted.

3. The proposed CCA was not submitted to the Illinois EPA with 21 days of the date of the meeting on May 6, 2008 as required by Section 31(a)(5) of the Illinois Environmental Protection Act (415 ILCS 5/31(a)(5)).

RESPONDENT'S EXHIBIT 6

4. Due to the nature and seriousness of the violations cited, please be advised that resolution of the violations may require the involvement of a prosecutorial authority for purposes that may include, among others, the imposition of statutory penalties.

Because the alleged violations remain the subject of disagreement between the Illinois EPA and Darrell Clouse, Quarter Construction Co., Intra-Plant Maintenance Corp., and Ironhustler Excavating, Inc., this matter will be considered for referral to the Office of the Attorney General, the States Attorney of Tazewell County, or the United States Environmental Protection Agency for formal enforcement action and the imposition of penalties.

Written communications should be directed to:

Illinois EPA
Attention: Jason Thorp
7620 N. University Street, Suite 201
Peoria, Illinois 61614

All communications must include reference to **VIOLATION NOTICE NUMBERS L-2008-01046, L-2008-01047, L-2008-01050, and L-2008-01051**.

Questions regarding this matter should be directed to **JASON THORP** at **309/693-5462.**

Sincerely,

for PMP

Paul M. Purseglove, Manager
Field Operations Section
Bureau of Land

cc: Darrell Clouse
10513 Levy Road
Tremont, IL 61568

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7007 2560 0003 2092 1668

Quarter Construction Co.
Attention: Ron Bright
10731 Levy Road
Tremont, IL 61568

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7007 2560 0003 2092 1651

FELDMAN, WASSER, DRAPER & COX

ATTORNEYS AND COUNSELORS AT LAW

Howard W. Feldman
Stanley N. Wasser
Carl R. Draper
J. Randall Cox
Kelli E. Gordon

Michelle L. Blackburn
Marissa Spencer

Thomas J. Immel,
Of Counsel

July 9, 2008

Illinois EPA / FOS / BOL
John Tripses, P.E., Manager
Attn: Jason Thorp
Peoria Regional Office
7620 N. University Street, Suite 201
Peoria, IL 61614

Re: Violation Notice **L-2008-01051** / Ironhustler Excavating, Inc. / Quarter Construction / Darrell Clouse / Altivity Packaging / IPM Corporation
Your June 17, 2008 CCA Rejection Letter
Our File No. 983641P

Dear Messrs. Tripses & Thorp:

We are in receipt of your Agency's letter dated June 17th wherein you "reject" the letter we sent to you by certified mail (with courtesy email copies) on May 28th responsive to our Meeting in your Springfield office on May 6th. Though not obligated to do so, we offer the following comments regarding your June 17th missive, which came over the signature of Paul Purseglove:

1) Our letter was *not* untimely. You have miscalculated the due date because you overlooked something.

2) Your letter offers absolutely no substantive response to the extensive discussion of the issues covered in our group letter of May 28th.

3) Your letter refers to the excavated dirt at issue as "waste" in spite of the fact that we have previously demonstrated to an apodictic certainty that such is an inappropriate characterization of the material:

4) If, as your letter suggests, you do decide to refer this matter to prosecutorial authorities, you will be required to send us a Notice of Intent to Pursue Legal Action, to which we would then respond. We would encourage you to rethink your position before taking such action.

Yours truly,

Thomas J. Immel

cc: All Parties & Counsel

1307 South Seventh Street * P.O. Box 2418 * Springfield, Illinois 62705 * 217/544-3403

Facsimile: 217/544-1593 Writer's Email: timmel@feldman-wasser.com www.feldman-wasser.com

PDC Laboratories, Inc.
P.O. Box 9071 • Peoria, IL 61612-9071
(309) 692-9688 • (800) 752-6651 • FAX (309) 692-9689

ACCREDITED IN ACCORDANCE WITH nelac

dba Altivity Packaging, LLC
Box 520
Pekin, IL 61554
Attn: Mr. Chris Hock

Date Received: 02-May-08
Date Reported: 13-May-08

Sample No: 08051229-1 Collect Date: 02-May-08 10:00
Client Id: NPDES Site: LAGOON DRAIN Locator: COMPOSITE

		Result	Units	Date / Time	Analyst
SM (18) 2540D					
Solids, Total Suspended		11	mg/l	02-May-08 15:14	acg
SM (18) 4500 NH3 B,H					
Nitrogen, Ammonia as N		8.4	mg/l	02-May-08 15:40	lgtth
SM (18) 5210B					
BOD, Carbonaceous		6.5	mg/l	02-May-08 14:25	JAM/SMS/JAM

Sample No: 08051229-2 Collect Date: 02-May-08 10:00
Client Id: NPDES Site: LAGOON DRAIN Locator: GRAB

		Result	Units	Date / Time	Analyst
SM (18) 9222D					
Fecal Coliform	H	30	cfu/100 ml	09-May-08 14:10	AMG2

Sample No: 08051229-3 Collect Date: 02-May-08 10:00
Client Id: NPDES Site: WELL WATER Locator: GRAB

		Result	Units	Date / Time	Analyst
EPA 200.7					
Sample Preparation				09-May-08 8:45	BAB
EPA 200.7 R4.4 MOD					
Aluminum	<	0.05	mg/l	13-May-08 10:00	JFA
Antimony	<	0.02	mg/l	13-May-08 10:00	JFA
Arsenic	<	0.02	mg/l	13-May-08 10:00	JFA
Barium		0.061	mg/l	13-May-08 10:00	JFA
Beryllium	<	0.005	mg/l	13-May-08 10:00	JFA
Boron		0.14	mg/l	13-May-08 10:00	JFA
Cadmium	<	0.002	mg/l	13-May-08 10:00	JFA
Calcium		90	mg/l	13-May-08 10:00	JFA
Chromium	<	0.004	mg/l	13-May-08 10:00	JFA
Cobalt	<	0.005	mg/l	13-May-08 10:00	JFA
Copper	<	0.01	mg/l	13-May-08 10:00	JFA
Iron		0.056	mg/l	13-May-08 10:00	JFA
Lead	<	0.01	mg/l	13-May-08 10:00	JFA
Magnesium		38	mg/l	13-May-08 10:00	JFA
Manganese		0.038	mg/l	13-May-08 10:00	JFA
Molybdenum	<	0.01	mg/l	13-May-08 10:00	JFA
Nickel	<	0.01	mg/l	13-May-08 10:00	JFA
Potassium		1.6	mg/l	13-May-08 10:00	JFA
Selenium	<	0.01	mg/l	13-May-08 10:00	JFA
Silver	<	0.01	mg/l	13-May-08 10:00	JFA
Sodium		11	mg/l	13-May-08 10:00	JFA

RESPONDENT'S EXHIBIT 8

PDC Laboratories, Inc.
P.O. Box 9071 • Peoria, IL 61612-9071
(309) 692-9688 • (800) 752-6651 • FAX (309) 692-9689

ACCREDITED IN ACCORDANCE WITH nelac

dba Altivity Packaging, LLC
Box 520
Pekin, IL 61554
Attn: Mr. Chris Hock

Date Received: 02-May-08
Date Reported: 13-May-08

Sample No: 08051229-3 Collect Date: 02-May-08 10:00
Client Id: NPDES Site: WELL WATER Locator: GRAB

		Result	Units	Date / Time	Analyst
EPA 200.7 R4.4 MOD					
Thallium	<	0.01	mg/l	13-May-08 10:00	JFA
Vanadium	<	0.005	mg/l	13-May-08 10:00	JFA
Zinc	<	0.01	mg/l	13-May-08 10:00	JFA
SM (18) 2540D					
Solids, Total Suspended	<	4	mg/l	02-May-08 15:36	acg
SM (18) 4500 H B					
pH	H	7.43	units	06-May-08 13:23	WRW
SM (18) 4500 NH3 B,H					
Nitrogen, Ammonia as N	<P	0.1	mg/l	06-May-08 15:15	lgtth
SM (18) 5210B					
BOD, Carbonaceous	<	4	mg/l	02-May-08 15:28	JAM/SMS/JAM

H - Method Hold Time Exceeded

Sample No: 08051229-4 Collect Date: 02-May-08 10:00
Client Id: NPDES Site: WET WELL A Locator: GRAB

		Result	Units	Date / Time	Analyst
SM (18) 9222D					
Fecal Coliform	<	10	cfu/100 ml	02-May-08 15:40	AMG2

Sample No: 08051229-5 Collect Date: 02-May-08 10:00
Client Id: NPDES Site: WET WELL B Locator: GRAB

		Result	Units	Date / Time	Analyst
SM (18) 9222D					
Fecal Coliform	<H	10	cfu/100 ml	09-May-08 14:10	AMG2

Sample No: 08051229-6 Collect Date: 02-May-08 10:00
Client Id: NPDES Site: WHITE WATER CHEST Locator: GRAB

		Result	Units	Date / Time	Analyst
SM (18) 9222D					
Fecal Coliform	<H	10	cfu/100 ml	09-May-08 14:10	AMG2

PDC Laboratories, Inc.
P.O. Box 9071 • Peoria, IL 61612-9071
(309) 692-9688 • (800) 752-6651 • FAX (309) 692-9689

ACCREDITED IN ACCORDANCE WITH nelac

dba Altivity Packaging, LLC
Box 520
Pekin, IL 61554
Attn: Mr. Chris Hock

Date Received: 02-May-08
Date Reported: 13-May-08

PDC Laboratories participates in the following laboratory accreditation/certification and proficiency programs. Endorsement by the Federal or State Government or their agencies is not implied.

NELAC Accreditation for Drinking Water, Wastewater, Hazardous and Solid Wastes Fields of Testing through IL EPA Lab No. 100230
State of Illinois Bacteriological Analysis in Drinking Water Certified Lab Registry No. 17533
Drinking Water Certifications: Indiana (C-IL-04); Kansas (E-10338); Kentucky (90058); Missouri (00870); Wisconsin (998294430)
Wastewater Certifications: Arkansas; Iowa (240); Kansas (E-10338); Wisconsin (99829443
Hazardous/Solid Waste Certifications: Arkansas; Kansas (E-10338); Wisconsin (998294430)
UST Certification: Iowa (240)

Certified by: Janet L. Clutters
Janet L. Clutters, Project Manager

BEFORE THE ILLINOIS

POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS, Complainant,	)	
and	)	PCB No. 12-21 Enforcement-Land
ALTIVITY PACKAGING, LLC, a Delaware limited liability company, INTRA-PLANT MAINTENANCE CORPORATION, an Illinois corporation, IRONHUSTLER EXCAVATING, INC., an Illinois corporation, and RON BRIGHT, d/b/a Quarter Construction, Respondents.	)	

Discovery deposition of JASON THORP, taken at the instance of the Respondents, on November 28, 2012, scheduled for the hour of 10:00 a.m., at 1307 South Seventh Street, Springfield, Illinois, before Donna M. Dodd, Certified Shorthand Reporter and Notary Public, pursuant to the attached stipulation.

DONNA M. DODD, CSR
donnadoddcsr@att.net
(217) 652-2474
(217) 487-7715

APPEARANCES:

THOMAS J. IMMEL
Feldman, Wasser, Draper & Cox
Attorneys at Law
P.O. Box 2418
1307 South Seventh Street
Springfield, Illinois 62705

Appeared on behalf of the Respondent, Ironhustler Excavating, Inc. & Ron Bright.

RAYMOND J. CALLERY
MELANIE JARVIS
Assistant Attorney Generals
Attorney General's Office
500 South Second Street
Springfield, Illinois 62701

Appeared on behalf of the Complainant.

RESPONDENT'S EXHIBIT 9

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EXHIBITS

Thorp Exhibit Nos. 1-4

(Exhibits attached to original transcript.)

IT IS HEREBY STIPULATED AND AGREED by and between Counsel for the Complainant and Counsel for the Respondents that this deposition may be taken in shorthand by DONNA M. DODD, an Illinois Certified Shorthand Reporter and Notary Public, and afterwards transcribed into typewriting, and the signature of the Witness is reserved by agreement.

(The witness was sworn by the Reporter.)

JASON THORP,

called as a witness herein, at the instance of the Respondents, having been duly sworn upon his oath, testified as follows:

DIRECT EXAMINATION

BY MR. IMMEL:

Q. Mr. Thorp, we know each other, but I'm Tom Immel. I'm the attorney for Ironhustler Excavating and for Ron Bright, doing business as Quarter Construction.

For the record, Attorney Chuck Rock, who represents IPM, has decided not to participate in the deposition at all, and Attorney Bill O'Neil, who represents Altivity, had intended to participate by phone from the Chicago office, but he's advised me by e-mail that he's going to be

5

tied up in court this morning and that he will not be participating, and he has asked that the reporter just send him a copy of the transcript, and I have given her a copy of the e-mail that he and I exchanged, so we're up-to-date there.

Mr. Thorp, for the record, would you state your name and spell your last name?

A. All right. Jason Thorp, T-H-O-R-P.

Q. Okay. Have you had your deposition taken before?

A. I have, but it wasn't -- it was unrelated to work.

Q. Okay. Well, let me just walk through quickly the rules that govern, or the protocols, not so much rules. The reporter sitting to my right and your left is taking down every word you say. It's also being recorded. The key there is word.

A. Uh-huh.

Q. Nods of the head and uh-huh and huh-uh, answers of that sort don't help her, and I'd ask you to avoid them and just speak clearly in all words.

The other thing I would point out is

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that I'm going to be asking you a lot of questions, and if you answer my question, I'm going to assume you understood it. If there's any doubt in your own mind as to what it is that I'm asking you, don't try and answer it, but ask me to clarify it, because I'm going to do the best I can to move this along, but I don't want -- I'm not here to trick you or anything. I just want to get answers to basic questions that have entered my mind.

If anybody at all needs to take a break for any reason, rest room or otherwise, just say so and we'll -- we'll, you know, adjourn briefly while that's done so that we can -- nobody's trapped in here. That's really all I had.

And now that we've got your name on the record, could you tell us where you reside? I don't want your street address. I'd just like city and state.

A. Work address?

Q. Where you reside.

A. Okay. All right. 926 Fox Road, F-O-X, Knoxville, Illinois.

Q. Is that near Peoria, Illinois?

A. It is, yes.

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Q. And Peoria, Illinois is where you work, is that right?

A. That is correct.

Q. And you are employed by the Illinois Environmental Protection Agency at this time, yes?

A. Bureau of Land.

Q. And that's at their Peoria Regional Office?

A. Yes.

Q. Okay. Now, how old of a fellow are you, Jason?

A. How old am I? I'm 40.

Q. Forty. And what is your educational background starting, well, starting with college? I know you went to college.

A. Right. I have a Bachelor's Degree in Geology from Monmouth College.

Q. In Monmouth?

A. Monmouth, Illinois.

Q. In Monmouth, Illinois. Okay.

And do you have any postgraduate degrees?

A. No.

Q. Are you working toward anything like --

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A. No.

Q. -- a Master's?

A. No.

Q. And what year did you graduate with that degree?

A. 1994.

Q. And I take it then that your degree being in Geology you had a focus in science type courses and geology, right?

A. Correct.

Q. Okay. Did you take courses in chemistry?

A. Yes.

Q. Did you take courses in biology?

A. Yes.

Q. Okay. Where was the first place you went to work after you graduated from school?

A. I started with the agency directly after graduating, May 1st, 1995.

Q. Okay. So the agency has effectively been your only employer since college?

A. Correct.

Q. Okay. And how long would that be now as of today?

A. Seventeen years.

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Q. Seventeen years.
A. **And some change.**
Q. And have you worked in -- you indicated you are currently in the Bureau of Land. Have you been there the whole 17 years?
A. **I have.**
Q. Okay. And have you been in the Peoria Regional Office that whole time?
A. **No. I started in the Rockford Field Office.**
Q. And Bureau of Land?
A. **Bureau of Land.**
Q. And any other regional offices?
A. **No.**
Q. Okay. So Rockford, ended up in Peoria. How long were you in Rockford?
A. **Well, from '95 until 2006, May of 2006.**
Q. Okay. And then you transferred over to Peoria?
A. **Uh-huh.**
MR. CALLERY: Answer out loud.
THE DEPONENT: Yeah. Yes.
BY MR. IMMEL:
Q. Was that a reassignment by the agency or

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did you request that?
A. **It was requested just for geographical purposes.**
Q. Okay. Would it -- were you -- had you been living in Knoxville the whole time?
A. **No. No.**
Q. Okay. But you preferred to be near Peoria?
A. **That's correct.**
Q. You have family in that area?
A. **Yes.**
Q. So it was just simpler for you?
A. **It was simpler.**
Q. Yeah. I got it. When you joined the agency initially you worked as a Field Inspector?
A. **Yes.**
Q. Did you have to go through a training program that the agency administered to commence to perform those duties?
A. **Well, initially everybody is required to take the 40 hour OSHA training, and that would be the initial training.**
Q. Okay. That's Occupational Health and Safety.

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A. **Haswoper Health and Safety training.**
Q. She's got to catch this now.
A. **Yeah.**
Q. And I know what you're saying, just said, but she doesn't. OSHA, O-S-H-A, all caps. But then what training was it?
A. **It's the Hazwoper training, the Hazardous Waste Operations. It's required for being present onsite, on federal and state superfund sites.**
Q. Okay. So that was a 40 hour course?
A. **Uh-huh.**
Q. Did you have any other courses?
A. **I've had numerous training courses, classroom, and like Webinar type courses. I don't have a list with me.**
Q. No. It's okay. Some of them will come to mind I think as I ask you a couple of questions to fine-tune this.
A. **Okay.**
Q. Did you receive any specific training in the collection of written -- the collection of samples --
A. **Yes.**
Q. -- in the field?

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Can you describe what that training was about or who did it and what its focus was, how it was done?
A. **Right. Sample collection, of course, you obviously, I would go out with senior people in the office that have had training, and I would learn from them. There was some other classroom type setting training.**
Q. Okay.
A. **Those were some time ago.**
Q. Did you -- were you provided with any written guidance materials to aid you?
A. **There is sample. There's a manual within the Bureau of Land for sample training.**
Q. Okay. Is that a manual that you keep available in your office?
A. **I have it in my office, yes.**
Q. Okay. Do you recall the name of it?
A. **I believe it's just the Bureau of Land Sampling Manual.**
Q. Okay. Did you ever receive any specific training, guidance, or orientation in the specific issue of sampling a waste pile?
A. **Yes.**

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Q. And was that a separate kind of a course or was it included within the scope of a broader course?

A. I think it was -- it was included within the general course. It was a part of a general course.

Q. Okay. Separate and apart from this case, have you in your 17 years had occasion to collect samples from waste piles?

A. Yes.

Q. Can you tell me approximately, and I know I'm testing your memory again, how many times you've been called upon to do that?

A. Several. When I was working with -- in the Rockford Field Office, I worked for Division of Remediation Management where we would score sites, the federal sites for CERCLA, and then also --

Q. CERCLA is C-E-R-C-L-A, all caps.

A. And then also for, there was some state superfund sites.

Q. And this, you're talking about scoring them, which is rating them as to how serious or not serious they are, right?

A. Right. We would go out and do site

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assessments and then score those sites and then that information was given to the USEPA.

Q. Well, when you said several sites, that puts me in mind of at least three.

A. That's correct.

Q. Could it be more than three?

A. Yes.

Q. Did you, in the course of your sampling of waste piles --

A. Uh-huh.

Q. -- and your training for that, become familiar with the range of sampling techniques that can be used for piles?

A. Yes.

Q. Can you describe that range?

A. For waste piles, are you speaking of the sampling tools or equipment or --

Q. No, not sampling tools and equipment, but the waste plan that you would, the sampling plan that you would follow for sampling a pile as opposed to catching a water sample or picking up a piece of dirt off the ground --

A. Yes.

Q. -- or grabbing a piece of waste out of a

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container.

A. As far as working with the Office of Site Evaluation, the project manager would develop a sampling plan.

Q. Uh-huh.

A. And that's what we would follow at the site for collecting samples.

Q. Did you ever yourself have to do the -- prepare the sampling plan?

A. No.

Q. So you've always been implementing someone else's plan in your work?

A. That's correct.

Q. All right. I'm going to ask you if the term random sampling has a specific meaning to you?

A. Yes.

Q. What does it mean to you?

A. It's as it indicates, it's random. There's no -- there's no set strategy. Basically it's, I mean, it's just that. It's random. I mean, if your looking at a surface area, it's not like, you know, you're establishing some sort of grid system or anything like that. It's just purely random.

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Q. Okay. In terms of a waste pile, does the term stratified sampling have any meaning to you?

A. Stratified would be associated with just different depth intervals.

Q. Okay. So, in other words, seeking to collect the sample from various depths within a pile?

A. That is correct.

Q. Or multiple piles doing it?

A. Yeah.

Q. Okay. Does the term composite sample have any meaning to you?

A. Yes. A composite sample would be, for example, say you have a waste pile, if you're only wanting to collect one sample from that pile, you could collect subsamples of that same pile and then you composite that into one sample.

Q. Which would involve bulking them together?

A. Yes.

Q. And mixing them up?

A. And then you collect one sample.

Q. Okay. And from the batch that you've collected and mixed up, then you withdraw one sample which is supposed to represent the entire

collection of samples you just called --
A. Yes.
Q. -- subsamples, is that right?
A. Yes.
Q. Okay. Now, you as the field person then doesn't necessarily decide what sampling method or plan to follow? Somebody else may have already given you a plan that you're simply implementing, right?
A. Yes.
Q. Okay. Calling your attention finally to the property that's in question in this case, and I know it's gone by different names. It's been called the Clouse pit. I think you've seen it and heard it called that. It's also been called the Ron Bright Quarry, and it's also been Quarter Construction, which is his d/b/a name. I'm going to call it the Bright Quarry. But if we can all agree we're talking about the same property when I say that, I'd appreciate it.
You went to inspect, as I understand it, first on January 24th of '08 you went to the Bright Quarry in response to an anonymous complaint, is that right?

A. That is correct.
Q. And where is that quarry? Where is it?
A. It's near Hopedale. It's near the intersection of Mountain and Levy Roads.
Q. Can you tell us how far that would be from Hopedale?
A. From Hopedale? I'm not sure of the exact. I'm not sure.
Q. A couple of miles?
A. I don't know.
Q. Okay. How far was -- would it be from Pekin?
A. From Pekin?
Q. Uh-huh.
A. I'm going to say 15 miles.
Q. Okay. And if you have to leave your field office in Peoria and go down there, do you ever -- do you log your mileage when you're out on these investigations for the purposes of your office?
A. The mileage is logged, a starting and ending mileage.
Q. Okay. So that would be a roundtrip, right?
A. Yes.

Q. What's your -- what's your roundtrip mileage to this place from your office?
A. I don't have that information with me.
Q. Memory. Best memory. You know, we're not going to go double check your records and charge you with perjury or something. It's, I'm trying to get your best memory as to how far this is. You got this anonymous call, complaint at your office probably and probably headed out there when you got the chance and --
A. Yes.
Q. -- and then you've been there more than once, yes?
A. I have been there three times.
Q. Okay. So I'm asking you if you can just give me a general idea of how far it is from your office?
A. Forty minutes.
Q. Forty minute drive. And do you have to traverse through Pekin on the way down there?
A. You don't have to. You can take 74 East to 155.
Q. Okay. And avoid Pekin altogether that way, circle around it and go around it?

A. Yes. You don't have to go through Pekin.
Q. Okay. But you've been to Pekin in connection with this case, too, to go to the Altivity plant. I call it Altivity. It's got lots of names.
A. That's correct. I actually -- I did follow a truck from the Clouse pit to the Altivity property.
Q. Okay. You filed a -- Mr. Callery filed a Motion for Summary Judgment in the case that's pending before the Illinois Pollution Control Board that we're here in, and attached to that is an affidavit signed by you. You recall signing an affidavit?
A. Yes.
MR. IMMEL: Ray, would it be possible to have the affidavit -- to have the affidavit in front of him if you have an extra copy so he can track with me?
MR. CALLERY: This is a copy, yes.
BY MR. IMMEL:
Q. At the bottom of the first page you've previously identified that you were there on January 24th. You say that your initial inspection

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was prompted by an anonymous phone complaint, that trucks were dumping soil and asphalt into this sand and gravel pit by which you're referring to the Bright Quarry?

A. Yes.

Q. Did you -- so then tell me about how you responded to this initial complaint. This was a phone complaint you say, which I presume that you took in your office?

A. I think that complaint was assigned to me by John Tripses. I think he received it and forwarded it to me.

Q. Did you ever speak to the anonymous Complainant --

A. No.

Q. -- yourself?

A. I did not.

Q. So the language about dumping soil and asphalt if it was used by the Complainant was reported to somebody else and then conveyed to you?

A. That's correct.

Q. Okay. And presumably then you headed out there after you got this referral from Mr. Tripses, right?

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A. Correct.

Q. Tripses is T-R-I-P-S-E-S.

Is he your supervisor or just another inspector?

A. No, he is my supervisor. He is the manager of the Peoria Field Office for the Bureau of Land.

Q. Okay. So you went out there anticipating that you might see dumped soil and dumped asphalt because that's what the complaint had said?

A. That was the allegations.

Q. Right. Okay.

A. You never know what to expect from allegations.

Q. When you went to the site did you ever find any evidence of piles of asphalt being dumped there?

A. I saw no asphalt.

Q. Okay. When you went to the site and entered the site were you greeted by anybody or did you encounter any working people there on the site when you arrived, first visit?

A. The first visit, no. The gate was open. There was nobody -- there was -- there was a field trailer present at the entrance. Nobody was available, so I proceeded further into the quarry where Ron Bright, who was later identified as Ron Bright, was on a wheel loader, and that was my first contact at the quarry.

Q. Okay. Did you have a conversation with him before doing any investigative work yourself on the site or did you just tell him you were going to look around? Tell me about what transpired between you and Mr. Bright.

A. Right. I identified myself to Mr. Bright and informed him of the complaint allegations. He informed me that trucks were entering the quarry and dumping materials being generated from the Ironhustler Construction project in Pekin at Altivity.

Q. Okay.

A. He showed me the area, so he directed me to the area and then that's when I started my complaint investigation.

Q. Okay. I'm going to show you a couple of photographs that you took which I have marked, the first being Thorp Exhibit 1, and I'll show you a copy. Exhibit 1 speaks for itself in terms of

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authorship. These are your photographs? Yes?

A. These are my photographs.

Q. And there's two of them on this page, correct?

A. Correct.

Q. And they're colored, and can you tell me how you would characterize what you're looking at? Are those piles, multiple piles?

A. Those are. There's a -- in the first photo?

Q. Let's stick with the one on top, the first one on top.

A. Okay. It appears the first photo is two separate loads.

Q. Okay.

A. And they are very recent loads as there's no snow cover, and you can see steam coming off of them. It was very cold that day.

Q. Yeah.

A. So --

Q. The one at the bottom, the second picture at the lower side of the page --

A. Uh-huh.

Q. -- is that a load --

A. Yes.
Q. -- as far as you could see?
A. Without the snow cover.
Q. Okay. And there's an odd portion on the right-hand side of that picture what appears to be a great big, almost round lump of something. Do you know what that is?
A. That is -- it appears to be just a frozen mass of the material.
Q. Okay. So this isn't like a bolder or something? This is --
A. No.
Q. This is -- but it's part of the load?
A. Correct.
Q. Okay. Well, since that lump doesn't appear in either of the photos, either of the piles in the top picture, should I assume that this is a third pile that you're photographing here?
A. Yes. Yes, it is. It was taken in a different direction.
Q. Okay.
MR. CALLERY: Tom, do you want to go off the record for a minute?
MR. IMMEL: Sure.

(Whereupon there was an off the record discussion.)
BY MR. IMMEL:
Q. I'm going to ask you, Jason, if you can recall, you saw in the photograph 3 piles on this page. Were there more?
A. Not -- not at the time of the inspection.
Q. Okay. Were there more piles on the site that had been placed there previously under that snow cover I'm looking at in the background? I just don't know where they were.
A. The material underlying the snow cover appeared to be the same composition as the material in the piles.
Q. And how did you determine that?
A. By just visual observation, the composition was, the sand and cinders.
Q. Well, you would have to get the snow out of the way to do that, wouldn't you?
A. Not necessarily. Where the wheel loader tracks are at, you can see there's exposed ground surface right there.
Q. Well, that's the ground. That's not a pile.

A. No. But I'm saying the underlying material surrounding this pile was of the same composition as the pile.
Q. So you believed that the material underneath was a previous pile that had been, what, leveled out or something?
A. Yeah. Ron Bright had been, as they were dumping loads in here, Ron Bright was -- it was being committed to grade. That's why there's wheel loader tracks along the side here, like right there.
Q. All right. So basically then what we see in Exhibit 1 is all the piles that were visible on the site that day?
A. That day, yes.
Q. Okay.
A. At that time of the inspection. I mean, there could have been more piles that were dumped after my --
Q. No. No. On that day. It's on that date.
A. At that time on that day.
Q. Okay. Did you ever go back -- I know you went back on two subsequent occasions. Did you ever see piles again or are these the only three

piles you ever actually saw in the form of piles?
A. Do you have my photos from the 30th?
Q. I don't know. I'll look.
A. No, that's them. I believe --
Q. I've got a photo, sampling effort on the 30th.
A. These are the only piles that I had seen onsite. On my return trip when I collected the samples, all of the material had been committed to grade. You know, these three piles that I previously observed had been leveled out.
Q. Okay. Just to make things clearer then, on January 24th in Exhibit 1 when you were there that day, did you collect any samples that day?
A. On January 24th?
Q. Right.
A. No.
Q. You just took these photographs?
A. That's correct.
Q. Okay. So when you went back on January 30th, 2008 there were no piles?
A. That's correct.
Q. They had all been committed to grade?
A. Yes.

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Q. Okay. I'm going to hand you what's been marked as Thorp Exhibit 2, and ask you what the two photographs on that page depict?

A. The first photo is taken of Sample X-101 sealed with evidence tape. It also shows the sample location marked by the hand trowel, the stainless steel hand trowel on the right. Photograph Number 2 is taking of pictures of Samples 102 and 103 at the second location marked by the hand trowel on the right.

Q. Uh-huh.

A. X-103 is a duplicate sample of X-102.

Q. 103 and 102 are the same sample?

A. That's correct.

Q. Hang on a second. Did you just pick up a big scoop and put it into two sample jars? Is that what you did?

A. That's correct. I removed some of the surface material, maybe the top inch.

Q. Uh-huh.

A. And then I collected a volume sufficient to fill the jar.

Q. But you filled two jars, because you did --

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A. In the picture, in picture number 2, those two jars were filled from that same location.

Q. Where I see the trowel --

A. That's correct.

Q. -- poking out of the ground? It looks like you encountered a piece of brick.

A. There was a piece of brick on the ground surface. I did not remove that --

Q. Okay.

A. -- by digging.

Q. You didn't want to have pieces of brick in your sample? You can't very well sample a brick. You're trying to get the soil, right?

A. You can analyze bricks, but I didn't want bricks, and it wasn't even in, it was off to the side of where I was collecting the sample. I didn't remove it by collecting soil. It was just on the ground surface next to the sample location.

Q. Okay. You have indicated that there were, in your narratives that I've read, that there was pieces of brick and possibly slag or --

A. Cinders and slag.

Q. -- cinders that was intermixed in this material?

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A. Uh-huh.

Q. But, just so I'm perfectly clear, the trowel, where the handle of the trowel appears in both of these pictures, you're actually marking for us the spot from where you've collected the sample?

A. That is correct.

Q. And these were all the surface of the leveled out ground you were sampling? You weren't sampling a waste pile, were you?

A. Right.

Q. You never sampled a waste pile in this case, did you?

A. I collected no samples from a waste pile.

Q. Okay. Well, then we can ignore my line of questioning about your training in waste piles, because that's -- I'm glad you're here to straighten this out for me, because I assumed you had taken some samples from piles and you didn't.

Okay. Those three samples then were handled in the normal course of the way you did things. You pack them up, try and keep them at 4 degree centigrade and off to Prairie Analytical?

A. That is correct.

Q. Okay. Now, if I may turn your attention

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to what's been marked as Thorp Exhibit 3, can you just tell us about that, the date? You took it, right?

A. Is there a photograph one, or no?

Q. No. This is the one I'm asking about.

A. Okay. This one in particular.

Q. I'm just going with specific ones that mean something to me.

A. Okay.

MR. CALLERY: So Exhibit 3 is just photo 2, is that right?

MR. IMMEL: Yeah.

MR. CALLERY: Okay.

MR. IMMEL: Because the one on top wasn't very informative I didn't think. The one on bottom told me more.

MR. CALLERY: All right.

THE DEPONENT: Photograph 2 on Exhibit 3 taken on August 24th, 1:26 p.m., in the foreground it depicts the discarded miscellaneous fill material from the Pekin Altivity property or site, the source site. It has a distinct color to it, which contrasts the native material, the native resource in the quarry there in the background.

BY MR. IMMEL:

Q. That pile in the background is unmined material, right?

A. That is correct. It's tan in color, whereas, the discarded miscellaneous fill material is a darker color.

Q. You can keep calling it discarded if you wish. That's a point in dispute. But if you'd like to continue calling it miscellaneous material, it might be -- it might be, for our purposes here, if you don't mind, could we call it miscellaneous material? My understanding being that they were using this for a purpose.

And -- but what I was getting at is, this material that's been spread out, this is the same spread material in appearance and in the way it's been handled, this is -- how far was this from the area where you took your samples?

A. It is in the same area. The samples were collected -- do you have the map?

Q. No. I don't have it handy, but --

MR. CALLERY: I have it, Tom, if you want to make reference to it. It's up to you.

BY MR. IMMEL:

Q. Just -- just tell me, roughly how far away from your sampling site is the spread material we see in Exhibit 3?

A. They were very close. The samples were collected approximately in the center of this, the darker material here that's in the picture.

Q. Why don't you express it in terms of feet or yards? Just, again, this is approximate. Nobody is doing this with a tape or anything. I'm just trying to get a feel for where you were. Did you --

A. It's within -- it's within 50 feet.

Q. Okay. That's good enough. And the material in the background here, in the immediate background, that pile there is, it's not a pile. Actually it's an unmined area of the site, right?

A. That's correct.

Q. And as you go further into the background there's more unmined area of the site that's covered with vegetation, isn't that right?

A. Yes.

Q. Okay. Now, were you informed that the working portion of the site was getting ready to

extend into this area in the background, or did you ask about that?

A. Mr. Bright did not indicate that that's what it was being used for. He didn't really say why it was being put there. He just told me that it was being hauled in from Pekin.

Q. Okay. Did you inquire as to whether that area of the site in the background of this picture in Exhibit 3 was going to be worked and mined? If you didn't ask him, it's okay. You weren't supposed to. It's not like you had to.

A. I have no knowledge of that.

Q. Okay. You don't know about it. All right. Fair enough.

Calling your attention then to Exhibit Number 4, which is essentially more of the same but from a farther, from farther away, giving a bigger, a bigger view of the area.

MR. CALLERY: Can we just be clear for the record, Tom? Exhibit 4 is August 24th, ten pictures, 5 and 6, right?

MR. IMMEL: Uh-huh. I was going to get into it, have him identify it.

MR. CALLERY: I'm sorry.

MR. IMMEL: I mean, they're his pictures.

MR. CALLERY: They're his pictures.

BY MR. IMMEL:

Q. I'll let him identify them. This was taken the same day as the picture that's in Exhibit 3, correct?

A. That's correct.

Q. And this is in the same general area and the pile of unmined material we saw rather close up in the -- on Exhibit 3 is now seen from further away.

A. The same pile is located in photograph number 5.

Q. Yeah. And over to the left-hand side of the picture, right?

A. That's correct.

Q. And in photo number 5 on the top of Exhibit Number 4 we also see, to the right-hand side of the picture on the top, we see more of the area that's to be mined or unmined, is that correct?

A. I have no knowledge of where they're mining at that quarry.

Q. Okay. You never took a tour around the

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quarry and could see where they had been mining?

A. No. The complaint investigation was specific to where they were dumping material.

Q. Okay. Again, I'm not criticizing. I'm just trying to get a handle.

So you're assuming, as am I, that this material out here that's unmined is just unmined and you don't know what their plans are?

A. That is correct.

Q. Okay. But in the foreground of this picture we see the material you describe as having been spread out --

A. Uh-huh. Yes.

Q. -- the miscellaneous material?

And does this one help you show us where your sampling location was? Is your sampling location shown in this picture?

A. Yes.

Q. Can you tell me where I should look on the top photograph or the bottom one, whichever one does a better job of it?

A. One of the samples would have been collected within the frame of picture 5 in the top quarter of the picture.

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Q. Okay.

A. And then the other sample would have been collected within the frame of six, approximately right in the center.

Q. So how far away was -- can you tell us which sample was which in the pictures? One was --

A. X-101 would have been collected within photograph number 5. X-102 and 3 would have been collected in photograph number 6.

Q. Okay.

A. These two photos are a continuous. Number 6 photo would line up right along number 5. You can see the edge of the pile in the background --

Q. Yeah.

A. -- of that larger aggregate shows up on the left side of photo 6.

Q. All right. So, and sample 2 and 3, as we've already discussed, were basically pulled out of the same exact hole so to speak so they're right together?

A. Yes, two and three.

Q. And then one is all by itself?

A. Yes.

Q. How far -- what's the distance between one

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and two and three?

A. Well, the distance between two and three would be --

Q. No. No. They're together. I got that.

A. Okay.

Q. The distance between one and two and three?

A. Two and three together. I would say possibly within 30 feet of each other.

Q. Okay. But this picture truly and accurately describes, Number 4, truly and accurately describes what you observed and obviously photographed on August 24th, 2010, these two photos, right?

A. Yes.

Q. Okay. Now, why -- going back to when you collected your samples, did you have a particular reason for collecting three?

A. I was directed. After I revealed the findings, I returned -- let's go back. On January 24th I returned to the office. I revealed the findings of the complaint investigation to my manager, John Tripses. I was later directed to return to the site and collect a sample of the fill

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material, which I did on January 30th.

Q. Okay. Well, a sample implies one.

A. Right. So I did collect more than requested.

Q. You did?

A. The third sample was a quality control sample for the lab. It was a duplicate sample of 102.

Q. Uh-huh. Which yielded, they yielded different results, didn't they?

A. That is correct.

Q. Okay. So you collected three samples having been directed to collect one. You were just trying to be careful, is that right?

A. No. I just, at the time I thought it was a good idea.

Q. All right. And at that point in time your sampling effort is to try and characterize what's out there spread out, what this material is, right?

A. The intent on our sampling was to confirm, to confirm the violations observed on the 24th, the visual observations that the material did not meet the definition of CCDD, Clean Construction or Demolition Debris.

Q. All right. And that would be the case because you saw brick pieces and slag and cinders in the material, right?

A. Mostly because of the cinders and slag. Brick is included in the definition of CCDD.

Q. Uh-huh. And there were some pieces of brick, right?

A. Yes.

Q. Some more visible than others?

A. Yes.

Q. Some being bigger than others, is that right?

A. There was different sizes of fragments of bricks. I don't recall seeing any whole bricks, mostly just fragmented bricks.

Q. All right. Do you know of any reason why -- did you layout, did anybody layout a sampling grid on this area which appears to be almost an acre?

A. There was no grid. I do not believe it was more than an acre. It would be more like, a lot less than an acre.

Q. Half acre?

A. Less than half.

MR. CALLERY: I would note for the record that we do have the photos here with dimensions and markings. If you want to ask him without reference to those, that's fine, Tom.

MR. IMMEL: Okay.

MR. CALLERY: But obviously he's got the information. It's been provided for you.

MR. IMMEL: Well, actually I'm aware of that, Ray, and thank you.

THE DEPONENT: The area could be established by the -- those photographs.

Q. Why don't you -- why don't you look at your photographs, and tell me what you think the area of the --

MR. CALLERY: I don't know if you want to mark these, Tom.

MR. IMMEL: No, not yet.

Do you know the -- can you make a computation of the area of the spread out material?

THE DEPONENT: You can -- you can convert the lat and long into a usable number to determine that area.

Q. You want to -- do you want to do it now?

A. I don't have the conversions here with me.

Q. Okay. So you can't do it as we sit here?

A. No.

Q. So that these pictures don't provide us with any help in that regard.

A. The photo is to scale, so you could use the scale at the bottom of the map, and so it would be approximately 60 meters by 60 meters.

Q. And that being the case it would be, the area would be 60 x 60?

A. 60 x 60 meters.

Q. Okay. Which would come to 3,600 --

A. Six hundred.

Q. -- meters?

A. Meters squared.

Q. Well, we're in the United States of America here. So why don't you tell us what that would be in feet roughly? Again, I'm not asking --

A. That would be roughly approximately 3 feet per meter.

Q. Yeah.

A. So you'd just have to convert that.

Q. So we've got to take 3600 times three?

A. Uh-huh.

Q. Okay. So that takes us up to 10,200?

A. About 10,000.

Q. 10,200?

A. Uh-huh.

Q. And 10,200 square feet is -- how much is an acre?

A. It's approximately 52,000 square feet in an acre.

Q. All right.

A. So just divide it.

Q. So basically we're a little over a half acre?

A. 10,000 square feet. No. It would be less.

Q. I'm sorry. Fifty-two?

A. It would be like a fifth of an acre.

Q. Okay. Again, these are all approximations.

A. Right.

Q. And I'm only trying to get a working idea of what we're dealing with.

And you have done sampling for many years in various locations and for various purposes.

Have you ever had to layout a grid to

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help characterize an area before, a flat area like this, or an area that is now flat thanks to somebody grading this material?

A. I have been involved with grid sampling, but I, myself, haven't laid the grid out.

Q. You've collected the samples pursuant to somebody else's grid?

A. I'm just trying to recall the sites. I believe I have. I can't recall the exact sites.

Q. Have you ever had occasion to, other than this property, to take samples on an area 10,200 square feet, basically flat ground, in an attempt to characterize what was there and done so using essentially two samples?

A. Well, this site is different in that the material that we're speaking of was -- went through a lot of mixing. Typically when we do a site assessment, everything is in situ, or in place. This is a little bit different, in that it had -- it's fairly homogeneous in nature if you look at it, and it was mixed during the excavation on the site. At the source site it was mixed. If you can picture a Terex excavator digging it up.

Q. I can. I've run them.

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A. And then placing it in a truck, it was further mixed, and then at the disposal site it was dumped out of the truck, which caused further mixing, and then as it was committed to grade with the wheel loader, it was mixed even further, I mean, spread out. So it is a different type of a site than you would typically grid I believe.

Q. Okay. And the lab results that you achieved with the three samples, not you achieved, but that Prairie Analytical achieved with the three samples, each one was different.

A. Two and three were similar.

Q. Well, two and three were collected out of the same?

A. They were duplicate.

Q. Yeah.

A. So that's good that they were the same.

Q. Well, they're not the same. They were similar.

A. They were similar.

Q. And they were a ways off from number one, weren't they?

A. There was a difference between samples 1 and 2.

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Q. And I haven't got into this. I don't even know, it's here because I've got my whole file here, but I've got my little jar of stuff that Rapps people collected. I don't know, but it's kind of what's out there at the site, right? It looks like that in my jar.

A. Do you mind if I open it?

Q. Yeah. I don't know if anything is going to jump out at you, but --

MR. CALLERY: Are you telling us when this was collected?

MR. IMMEL: No. No. I'm not representing anything. He went and grabbed my jar. I never asked him a thing, and it's not been analyzed or anything.

MR. CALLERY: But you're saying it is from the site though, right?

MR. IMMEL: I'm not saying anything. I'm saying that I got it, and --

THE DEPONENT: I can't say that it's from the site, but there is maybe some similarities.

Q. Okay. Yeah. I'm not saying anything. I'm just -- it was given to me by Rapps. I don't know what it is, but --

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MR. CALLERY: It could be from Rapps' backyard.

MR. IMMEL: Or your backyard, because we know your address. I don't know Melanie's address.

MS. JARVIS: Thank God.

BY MR. IMMEL:

Q. Okay. So, anyway, we're dealing with approximately a fifth of an acre, and we're characterizing it as best we can using two sample locations, with a total of three samples taken --

A. Yes.

Q. -- from two locations?

Did you do a composite -- did you prepare a composite sample for submission to Prairie Analytical or did you have very discretely --

A. Those were grab samples.

Q. Grab samples.

Okay. One, two, and three are all grab samples?

A. That's correct.

Q. Two and three just happened to be grabbed from the same spot?

A. Same, uh-huh.

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Q. If you were to do a composite sample, how would you do that?
A. Typically when you collect a composite sample you'll collect subsamples with clean tools. They'll be placed in a clean container. It could be a stainless steel tray. It is mixed, and then from that you would collect one sample.
Q. From the aggregate --
A. From the tray.
Q. -- of samples? Yeah.
And it would get -- they would get mixed up, scrambled up to make sure that it was all commingled?
A. Right. It would be mixed thoroughly.
Q. And then from the commingled mass you would gather your sample?
A. Correct.
Q. Call it a composite sample, submit it to the lab for whatever parameters you want tested?
A. Yes.
Q. When you submitted your sample to the lab, do you know whatever happened to the sample you submitted? Did they give it back to you?
A. I did not receive it back.

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Q. Okay.
A. The sample itself?
Q. Yes. The actual sample you collected and submitted. They only used a smidgeon of that.
A. Right. That's correct.
MR. CALLERY: Tom, we have it if you want to refer to it. You can ask your questions the way you want.
BY MR. IMMEL:
Q. I'm trying to find out if they gave it back to you.
A. I did not receive it back.
Q. Okay. So as far as you know the lab still has it or --
A. As far as I know.
Q. If they kept it?
A. Yes.
Q. They aren't under any obligation to keep it forever?
A. That would be a question for the lab. I have no idea.
Q. Okay. Now, did you do any -- well, I think the answer is self-evident. Did you collect anymore samples on the site for background

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purposes?
A. No additional samples were collected.
Q. Okay. So -- so that would mean that there were no tests done to determine the attenuation capacity of the soil?
A. No.
Q. Okay. No well or borehole 10 or 12 inches in size was placed on the site to do a sampling well?
A. No.
Q. Okay.
A. That's not something we typically do for complaint investigations.
Q. Okay. What is Class I groundwater?
A. Is that a question?
Q. That's the question.
A. The Class I groundwater is, it can be found in Section 620 of our regulations. It's groundwater standards that are protective, you know, of human health and the environment.
Q. And you used the term Class I groundwater in various places within your affidavit, starting at I think paragraph 14, and then 16, 17, and 18, so it prompts me to ask you a couple of questions

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about Class I groundwater.
A. Class I groundwater is referenced within Section 742, the TACO Standards.
Q. Uh-huh. I know that.
A. Okay.
Q. So you can't, of yourself you can't tell me what Class I groundwater is? You'd prefer to just refer me to the regulations?
A. Well, that's where it's listed at, is in the regulations.
Q. Okay. When did the TACO standards become effective?
A. I'm not sure --
Q. Okay.
A. -- on what the date would be.
Q. In the 17 years you've been working at the agency, you've been called upon to characterize materials on sites. Have you used the TACO standards over the years to determine whether something was a waste?
A. Um, I, myself, have not. I wasn't the one making the determination if it's a waste. I have collected samples that have been compared to TACO.
Q. Okay. Have you ever -- are you aware of

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any cases that you worked on where something was characterized as a waste by using the TACO standards?

A. Not so much in the sense of being a waste, but more for standards for human health and environment standards, but not so much for a waste.

Q. Okay. What's the TACO standards being used for in this case as compared to any others you worked on?

A. Well, in this case it was -- it's common for the agency to use TACO to, you know, compare analytical results to. In this case it was basically to show that the material was not contaminated.

Q. Okay. So --

A. Because the TACO standards of soil, the remediation objectives are based on, they're health-based, health risk objectives.

Q. Uh-huh.

A. So there's that. There's that level, and then some are below that would be considered uncontaminated. Do you see what I mean?

Q. Yes.

A. So --

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Q. I mean, I see the thinking.

A. They were compared to the TACO standards to establish whether or not the material was clean.

Q. Okay. But that's -- that becomes a characterization issue then, whether something is clean or contaminated. Those are loaded words that have meaning. Clean is nice. Contaminated is a pejorative term, would suggest that this material is not nice or could be not nice. And so you're characterizing the material, and you're using TACO as a tool to reach that end, right?

A. Right. Yes, that's correct.

Q. And the agency has been doing that for some time?

A. Many years.

Q. Many years.

In this particular case, returning to the issue of Class I groundwater, do you know how far away the nearest drinking water well was to be found?

A. In proximity to the site, the disposal site?

Q. To the site of this spread out material.

A. I know there are residences nearby. I don't know the exact distance. I don't have a distance for the nearest residential well.

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Q. So you don't know that?

A. I do not know that.

Q. And since you don't know that, you also don't know, if there is a well out there, you don't know what its setback zone would be?

A. Because there are wells in the area. Whether or not it's in a setback zone, I do not know that.

Q. Okay. And if you don't know, the agency doesn't know it, because nobody else has gone out there to determine that, is that right, in this case?

A. In this case, that's correct.

Q. Has anybody, other than yourself in this case, have made any attempt, and including you, made any attempt to determine how far the groundwater and this site, under this site lies below the surface?

A. I would be -- I have not determined that.

Q. Okay.

A. But it would be relative to the -- there is a creek nearby. There was standing water that was frozen within the quarry, so it's -- I would --

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Q. There's also -- there also was snow.

A. There was snow.

Q. Yeah.

A. That's correct.

Q. And you're walking around on clay when you're in areas where it's been mined out, right? They mined it out down to the clay?

A. The area I was walking was where the fill material was at.

Q. All right. So you're on top of the clay?

A. That's possible. I don't know the horizons there.

Q. Do you know if the fill material had been spread out in an area that had been previously mined? Did you know that or not?

A. Given the elevation and the surrounding elevation, it appears that it had been mined.

Q. Okay. And you are familiar with the fact that the quarry operation here and elsewhere located in a clay environment mines the available gravels and sands down to the level of the clay and then ends? It's the end of the mining for sand and gravel, correct?

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A. I don't know the stratigraphy out there. I can't say for sure. I don't know if there's clay there or not. I mean, it could be possible that they excavated down to a point where there was too much water. They couldn't dewater it. It wasn't effective or productive to produce anymore resources. I don't know.

Q. Okay. But you didn't make a study of that, and you personally don't know how far below the area you were walking around on the groundwater exists, or is to be found?

A. I do not know the depth below the ground surface.

Q. Okay. And you don't know, I take it, whether the groundwater that is encountered below the site is purged in sandstone or flowing through sandstone?

A. I do not know.

Q. And you don't know whether it's flowing through or purged in fractured carbinite either?

A. No.

Q. Okay. And so there's no hydraulic conductivity of the soils been determined on that site? There's been no pump test? Nothing, is that

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right?

A. That is correct.

Q. Okay. This is getting a lot shorter than I thought it was, because --

MR. CALLERY: Sounds good.

MR. IMMEL: That sounds good to me, too, because -- off the record.

(Whereupon there was an off the record discussion.)

BY MR. IMMEL:

Q. Just to make it crystal clear in my mind, when you went to the site, you never walked the entire site and looked at previously mined out areas or areas where active mining was going on, you were focussed on getting to these dumped material, correct?

A. That's correct. The only -- the only areas of the quarry I may have seen is when I was seeking out somebody to talk to, which was a limited area. It didn't take very long to find Ron.

Q. Okay. But you didn't notice whether the mined out areas had, for lack of a better word, a floor of clay?

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A. No.

Q. You didn't --

A. It looked like the active area -- let's see. When I entered the quarry looking down to the right, which would have been the north end, it looked like they were actively working the north end.

Q. Right.

A. Just because of the conveyors and whatnot that were set up down there.

Q. Yes. But you didn't actively go down there and walk the whole place to see what the operation was?

A. I did not walk the whole entire quarry.

Q. And in the area where this material was being placed and spread out, you did not -- you were not aware whether the area that was being covered, it was a clay area?

A. I'm not aware what's underlying the --

Q. You don't know what's underlying?

A. No.

Q. Okay. Fair enough. You took no background samples. You've identified that the only samples you collected were the ones you have

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testified about.

A. That's correct.

Q. One, two, three?

A. Yes.

Q. And you or someone at the agency elected not to go back and take more samples?

A. I received no directive to return to collect more samples.

Q. Okay. The way your -- the agency works is, you would have to have received such a directive to do so, right?

A. Yeah. There would have -- there would have been some directive through the normal chain of command.

Q. Right. Because you're spending agency money when you're collecting samples and sending them to the lab?

A. That's correct.

Q. And you don't possess the independent authority to decide that you're just going to go start taking samples and spending agency money without checking with the chain of command, right?

A. That's correct.

Q. Okay. Fair enough. I mean, that makes

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sense. Did you -- in deciding what parameters you were going to ask the lab to test for, is that your decision or somebody else's?

A. In this situation I believe my manager requested the TCLP.

Q. Did you see the proposal that Rapps Engineering made to the agency to do a comprehensive testing of the material?

A. I don't believe I ever saw it in the entirety.

Q. Okay.

A. I don't believe I ever saw that.

Q. Okay. There was one particular part of it I was going to focus on. They had recommended in their proposal that, take not less than seven samples on a grid for purposes of testing the spread out material, and that's not the point of my question.

The point of my question is going to be that, they had suggested they were going to have it done by the SPLP method rather than the TCLP method. Were you aware of that?

A. I was not aware of that.

Q. Okay.

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A. I am aware of the SPLP method.

Q. Okay. Have you read the literature on the SPLP method?

A. I am aware. I'm aware of it. The TCLP and the SPLP methods are two different extraction methods. One's based on, basically on a scenario of the waste sitting in the landfill and leachability. That would be the TCLP method. The SPLP method is the extraction and method based on, essentially like acid rain. It's intended more so for in situ materials, something that hasn't been removed.

The TCLP method is the commonly used method for waste determinations, because that material would be bound for a landfill.

Q. All right. For the record, SPLP stands for Synthetic Precipitation Leaching Procedure, correct?

A. Yes.

Q. And it's published by USEPA in their publication, SW-846, as is the TCLP method, and they appear next to each other as consecutive test numbers, 1312, and 1311. 1312 being the SPLP. 1311 being the TCLP. Does that resonate with you as being true?

A. Yes.

Q. I have a section of the regs here that refers to it, but I wasn't going to make exhibits out of regs, but the test method numbers I've highlighted.

A. Right.

Q. And I got it right, didn't I?

A. SPLP and TCLP, they're incorporated as referenced by Section 742.

Q. Yeah.

A. Yeah. That's correct.

Q. And they're consecutive numbers in the methodology, 1311 and 1312?

A. Yes.

Q. Okay. You've seen that publication, have you not?

A. I have.

Q. I see in the literature that TCLP tests as described as expensive and time consuming. Would you agree with that characterization?

A. I am not aware of the exact -- I don't know the cost of the analysis. I don't receive that.

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Q. Okay. Do you -- you've never worked in a lab as such?

A. No.

Q. But you've been around them delivering, picking up samples, you've taken courses in chemistry, right?

A. I have been around labs, just in the sense of, well, in this case I hand-delivered the samples to the lab.

Q. Okay.

A. So I've been as far as the check-in, where they check them in.

Q. All right. But you've never actually gone in a lab and done lab work?

A. No.

Q. All right. But you did take college courses in chemistry?

A. Yes.

Q. Did you take Organic Chemistry?

A. No.

Q. That's usually the one that drives people out of that business. I flunked it the first time. I couldn't believe it. I never flunk anything. I flunked Organic Chemistry.

Are you aware of the -- that the SPLP test procedure was actually first promulgated by the USEPA through contractors that worked for them I'm sure?

A. Uh-huh. Yeah.

Q. Are you aware of that?

A. I believe I've read something. I can't say for sure.

Q. And the theory was that it better -- it better simulating leaching in the environment as opposed to in a landfill?

A. In the environment in which it's -- well, in this case that doesn't apply because the material was removed.

Q. It was?

A. Yes.

Q. I thought it was still out there.

A. SPLP would apply to, if you were to analyze the material in place as it sat in Pekin at the source site. But this material was excavated, generated, and the more appropriate extraction method would be TCLP. SPLP is commonly used for in situ materials, things that aren't disturbed.

Q. Well, I also thought it was used for

material which is out in the environment, not in a landfill?

A. It's not particularly used when you're doing a waste determination, because if you're doing a waste determination the material is going to be sent to landfill. You want to know the leachability of it in the landfill.

Q. All right. And a waste determination with the idea that something is going to go to a landfill starts with the assumption that it's a waste to begin with, doesn't it?

A. Well, you have to make that determination.

Q. And that determination was made by your agency, and thus the TCLP test?

A. That's correct.

Q. Okay. If the Department of Transportation was to use this material for fill to build a highway, then it wouldn't be going to a landfill, would it? It would be going to a highway.

A. They're pretty particular. I don't think they would use this material for any other jobs.

Q. Okay. Well, that's okay.

A. It wouldn't meet their specifications for road material.

Q. Are you aware of any roadways that are built on this material?

A. I'm not -- they built other roadways using this material from the source site?

Q. No. Did they build it on this material?

A. I'm not aware of the material being used at any other location. Is that what you're asking?

Q. No. I'm asking whether you're aware of whether or not any highways in this area have been built upon this material knowing it was there?

A. I'm not aware of any roads being built on industrial fill from Pekin.

Q. Did you read the Rapps report where they studied all of the boring logs and the well logs and did the profile of this material, the extent to which it was present on the riverfront and the area adjacent to the riverfront?

A. I believe it was discussed during a meeting.

Q. Yeah.

A. I did not read it in its entirety.

Q. All right. I don't want to have you speculate or talk about something you didn't read.

Let's go back to one more thing. The

agency made a determination that this was not clean fill.

A. Based on the definition, not clean fill, clean construction or demolition debris.

Q. Okay. Can you, this might be a question better addressed to Paul, but if you know, can you walk me through the agency's reasoning process, what factors it took into account and what and if TACO factored in making the determination that this was not material that could be characterized as clean construction debris?

A. Well, primarily during the inspection on January 24th, it visually did not meet the definition that's listed in the Section 3.160(B).

Q. And help me there a little bit more. What was the visual?

A. The cinders, the cinders and slag material are not included in the definition. What is included is broken concrete without rebar, contaminated soil, brick, stone, reclaimed asphalt, and then --

Q. Okay.

A. Then it goes on to say, if it is used as fill material within a quarry, a current or former

quarry, then it has to be used pursuant to the requirements of 2251, which are the CCDD rules in the Act.

Q. Okay. And are you referring to the new rules that the Pollution Control Board adopted?

A. No.

Q. You're referring to the former?

A. The enacting. It would have been the original version.

Q. Are you referring to a Pollution Control Board rule --

A. I don't have --

Q. -- or are you referring to the statute?

A. It's in the Act. It's in the Environmental Protection Act.

Q. Yes. Well, there's an Act and then there's the regulations.

A. It's in the Act.

Q. I just want to make sure I understand.

A. It states that in the Act in Section 3.160(B).

Q. And it's an interpretation of the Act that you're working with always before the Pollution Control Board finally adopted some regulations

earlier this year, is that right?

A. Right. Well, there was regulations prior to that, but they had adopted new ones.

Q. Okay. But --

A. There was a period of interim authorization for CCDD fill operations. And if you were within that period, you were notified to submit a permit application, because it is a permitted activity now. But then it required they'd have to be MR authorization, or during that time frame, notifications I think were going out to submit your permit, which it's listed in there, within the Act.

Q. Uh-huh. Now, all of that related, where quarries were concerned, related to filling quarries back up after they had been mined out?

A. Current or former quarries, yes.

Q. Right. And were you ever told that this material was being used -- was going to be used, was being used as road base at the Bright Quarry?

A. Not at the time of the complaint investigation. I think I became aware of that, it would have been -- it might have been the first enforcement meeting.

Q. At one of the meetings?

A. It was at one of the meetings after the complaint investigation.

Q. After the Notice of Violation went out, right?

A. Right. It was after the violation notice had been sent out.

Q. And a meeting was called?

A. Right.

Q. Requested?

A. Correct.

Q. And it was at one of those meetings? There were probably more than one as I recall --

A. There was more than one.

Q. -- where that subject came up.

A. That's when I first became aware of their, that they had claimed they were using it for road base.

Q. Okay. And in determining whether or not the material constituted clean construction debris or demolition debris, in this instance the agency also used laboratory tests for TACO standards to supplements its thinking, is that right?

A. It's -- it's common for the agency to

compare analytical results to TACO.

Q. Okay. And to assert, as it does in this case, that the TACO standards have not been achieved, isn't that right?

A. That's correct I believe. Yes.

Q. And that is not one of the parameters that's stated in the old statutory provision that was in effect when this investigation commenced in the year 2008?

A. Are you referring to the MAC tables, the new subpart F.

Q. Uh-huh.

A. Yes. That was -- that is a new. That's in the newer version that was recently adopted.

Q. Right.

A. In July/August time frame.

Q. Uh-huh. Board opinion dated June 7th subsequently then passed through JCAR?

A. I think it was held up for about a month through that process.

Q. Yeah.

A. Okay.

Q. Now, I just want to ask you a question. Your 17 years at the agency would have given you

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plenty of opportunity I take it to converse with your peers and your superiors about -- about the whole question deciding what's contamination and when does contamination occur as opposed to what's not contaminated, right?

A. Yes.

Q. In the course of these various context discussions, watercooler talks, whatever, did you ever hear the term God and the glaciers used? Does that ring a bell with you at all?

A. I have heard reference to it.

Q. Yeah. What does -- what did you understand that to be referring to in your 17 year history?

A. I don't know if I can really say for sure. I'm not really -- I don't know if I can say. I know the person you're referring to who has been heard saying that reference.

Q. Bill Child as far as I know.

A. But I don't really know what he -- I can't really say what he was thinking when he said that.

Q. I've heard it referred to as a method to determine whether or not something was contaminated or not as a negative test. If it was not put there

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by God or the glaciers, it's contamination. Does that resonate with you at all your memory?

A. No. I don't remember. I don't recall that.

MR. IMMEL: Okay. All right. Give me a second to go through a couple of notes. I think I'm finished.

(Whereupon there was a brief pause in the proceedings.)

BY MR. IMMEL:

Q. I have in my hand, and, again, these are the regulations, and this is why I wasn't going to mark it as an exhibit, but it's out of the Appendices, Appendix to TACO, and I'm sure you've seen this table, which gives values to be used for Class I, Class II, Construction Worker Ingestion versus Inhalation, Industrial and Commercial Ingestion/Inhalation, and it's a table where various values as they're permissible levels of items started with antimony and ending up with selenium. These are all the non-organics.

MR. CALLERY: That's a specific table, right? Do you know which one that is? What it's called? Because I know it's kind of hard to figure

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that out.

THE WITNESS: It's probably BB. It's probably Appendix B, Table B.

MR. IMMEL: Yeah. It's Appendix B and Table B, and you've seen that in your time.

I'm noting that, after some of these values there are like little footnotes and a recurring one in -- under Class I is m, a little m. Do you see that? Do you see those little m's? There's a whole bunch of them.

A. Okay. Yeah.

Q. Do you know what that refers to?

A. Are they on here?

Q. They're like footnotes.

A. Right. Listed in the footnote.

Q. Footnote m says that for these various constituents where that little m appears that the site owner has a choice of which test to use, either TCLP or SPLP.

A. Well --

Q. Are you seeing that?

A. Right.

Q. Yeah. That's all. I just wanted to know. You're aware that there was -- that the TCLP is not

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mandated, that's a choice?

A. Yeah, but it's not -- just to make it clear, you said the owner. It actually says the person conducting the remediation.

Q. Well, sometimes that's the owner and sometimes it's the agency. I acknowledge that.

A. Okay.

Q. But the person doing the remediation, if it is to be remediated, has a choice as to which one to use. And -- but in this instance, when you sent your lab work in, there wasn't a question of exercising a choice. You just told them to do TCLP.

A. That's correct.

Q. Okay.

MR. CALLERY: Was that your decision?

THE DEPONENT: What's that?

MR. CALLERY: Was that your decision?

THE DEPONENT: The TCLP? To request the TCLP?

MR. CALLERY: Yes.

THE DEPONENT: If I remember correctly, I believe that's what my manager, John Tripses, indicated to run, a TCLP analysis.

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BY MR. IMMEL:

Q. So, I mean, this wasn't your call? You were told what tests to request and you did it?

A. If I recall correctly, yes.

Q. Okay. So there wasn't -- and nobody went and talked to Ron Bright and said, well, Ron, there's a choice here as to which test we should use, what do you -- which would you prefer? He probably wouldn't have known what to say anyway, isn't that right? You have met Ron.

A. He would probably not be aware of --

Q. Yeah.

A. -- of any of the TACO regulations.

Q. Yeah.

A. But that also says conducting the remediation.

Q. There was no remediation being conducted at that time?

A. That's correct.

Q. Part of the relief that's being sought by your agency in this case is that that material that's there be removed and taken to a landfill. That would be remediation, would it not?

A. No. That would be a removal.

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Q. Removing the material does not remediate the condition you guys are asserting exists?

A. No. I would just consider that being a removal action and not a remediation.

Q. Why?

A. Because you're physically removing the material that was deposited there.

Q. But isn't material often removed in the course of remediating sites?

A. Well, yeah. But, I mean, I would just refer to it as a removal.

Q. Okay. That's just, you're speaking for yourself here?

A. Yeah.

Q. Okay. Not necessarily for the agency? You are aware, I'm sure in your 17 years experience you've been on sites that were being remediated?

A. Yes.

Q. And you certainly would have seen or heard that material, offending material was being removed in the course of the remediation and taken to a more suitable place, isn't that --

A. So you're just saying it's remediated through removal action?

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Q. Partly.

A. Okay.

Q. Isn't that true?

A. Yeah, but I'm just -- I would consider it just a removal.

Q. Okay.

A. It's remediated through removal.

Q. All right. Okay. I didn't want to -- that's a picky point, but I would personally have seen that referred to as a component of remediation in remediation plans to remove X, Y, and Z material.

A. Well, there's different forms of remediation.

Q. Sure there are.

A. It could be remediated through removal action or it could be remediated, you know, some sites have remediated contaminants in place. I mean --

Q. That's why I say, it can be a component of a remediation action. It doesn't have to be?

A. Yes.

Q. Okay. All right. In this instance it could be remediated by leaving it in place if it

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was not offensive in our case, isn't that true?

A. Are you talking about remediating it on place?

Q. Yeah.

A. How?

Q. By covering it up with some other material say.

A. But it still would be considered a waste.

Q. As you've said. I understand that.

A. That's not remediation. That's more an engineered control if you're just going to cover it.

Q. Yeah. Which is a form of remediation. It's an engineered --

A. An engineered barrier.

Q. Yeah.

A. But you're not physically remediating the contaminants. You're just protecting human health and the environment by using some type of an engineered barrier?

Q. To prevent the material in question --

A. To leach.

Q. -- from wandering off in someplace that you don't want it to go?

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A. **That's correct.**
Q. All right. I'm going to scan part of your affidavit one more time, and otherwise I think I'm finished.
(Whereupon there was a brief pause in the proceedings.)
BY MR. IMMEL:
Q. I think you've previously confirmed that you didn't find evidence of piles of asphalt at the site, but you did see this -- these other piles on your first visit, and that you subsequently did sampling, which you characterize as collecting soil samples.
You followed the methods for collecting a soil sample, correct?
A. **Where do you see that at?**
Q. Paragraph 4 of your affidavit.
A. **Paragraph 4. I don't see any reference to methodologies. It just says that I collected soil samples and prepared reports documenting --**
Q. By collecting a soil sample by, other than as distinguished from collecting water samples, collecting air samples?
A. **Right. I collected three soil samples.**

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Q. You followed the normal procedure for collecting a soil sample?
A. **Correct.**
Q. That's what we see in those pictures, right?
A. **Correct.**
Q. And, excuse me again for having asked you so many questions about your knowledge of the rest of the site, but in that same paragraph you did state that it included walking around the site, and I didn't -- I took that to mean more than you meant I think.
A. **I think just walking around to locate an able body or, you know, to talk to somebody.**
Q. Well, that's not in there. I just didn't know. I thought perhaps you walked the whole site to understand the site --
A. **No.**
Q. -- all of it.
A. **Well, it doesn't say that I walked around the entire site. It just says around the site. It's just summarized. I walked around the site enough to locate somebody to speak with.**
Q. Okay. Now, do you know how old that site is?
A. **No.**
Q. Do you know that some of the earliest portions of the excavations that were done out there have subsequently been returned to agricultural use? It's that old. Did you know that?
A. **I did not know that.**
MR. IMMEL: Okay. That's all I have.
MR. CALLERY: Okay. Great. We will reserve signature.

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State of IL vs. Altivity Packaging, Inc., et al No. PCB No. 12-21. Deposition taken on November 28, 2012. Attorneys Mr. Immel and Mr. Callery.

STATE OF ILLINOIS)
)
COUNTY OF)

I, JASON THORP, deponent herein, do hereby certify that I have read the foregoing deposition and that it is a true and accurate translation of the questions asked of me, and the answers given by me, with the following change(s):

PAGE 45, LINE 23
CHANGE DESIRED Terex to tracked
REASON FOR CHANGE inaccurate translation
PAGE 69, LINE 2
CHANGE DESIRED 2251 to 22.51
REASON FOR CHANGE missing decimal
PAGE 70, LINE 10 Point
CHANGE DESIRED MR to interim
REASON FOR CHANGE inaccurate translation

JASON THORP

Subscribe and sworn to before me this 18th day of December A.D., 2012. Grace H Collins

NOTARY PUBLIC

"OFFICIAL SEAL"
GRACE H. COLLINS
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 06/14/2016

1798095009 -- Tazewell County
Hopedale / Clouse Darrell
C-2008-009-P
FOS

DATE: 01/24/2008

TIME: 9:51 a.m.

PHOTOGRAPHED BY: Jason Thorp

DIRECTION: Photograph taken toward the southeast.

PHOTOGRAPH NUMBER: 1

PHOTOGRAPH FILE NAME:
1798095009-01242008-001.jpg

COMMENTS: Digital photograph depicts stockpiles of "miscellaneous fill material" generated from the Altivity Packaging, LLC, filter plant construction activities.

DATE: 01/24/2008

TIME: 10:07 a.m.

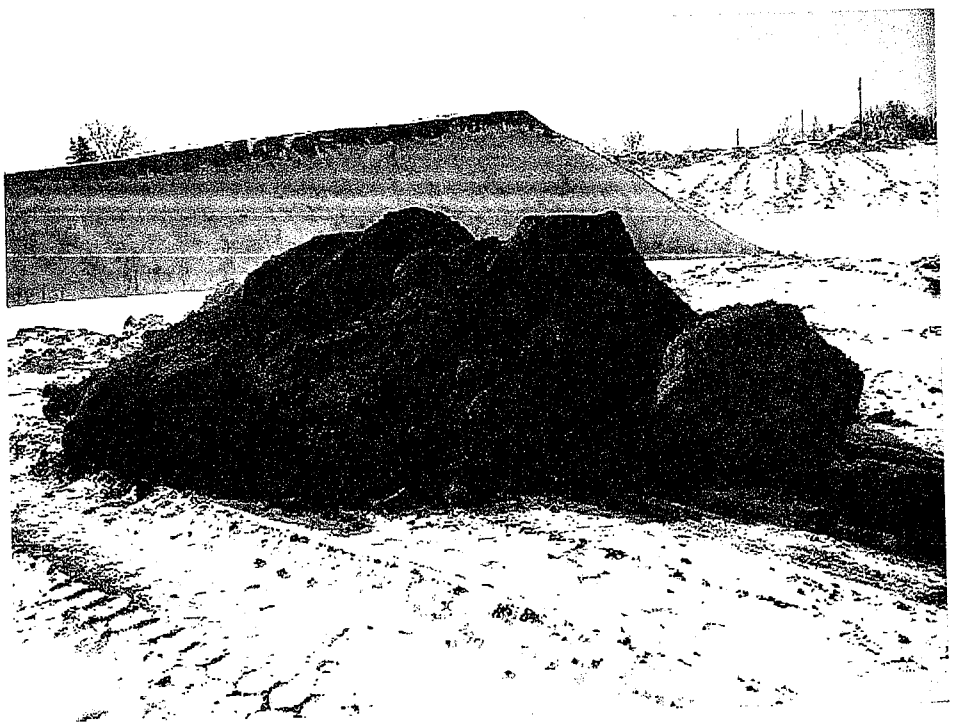
PHOTOGRAPHED BY: Jason Thorp

DIRECTION: Photograph taken toward the south.

PHOTOGRAPH NUMBER: 2

PHOTOGRAPH FILE NAME:
1798095009-01242008-002.jpg

COMMENTS: Digital photograph depicts stockpiles of "miscellaneous fill material" generated from the Altivity Packaging, LLC, filter plant construction activities.



DOCUMENT FILE NAME:
1798095009-01242008.doc

EXHIBIT
Thorp
1
tabbies

1798095009 -- Tazewell County
Hopedale / Clouse Darrell
C-2008-009-P
FOS

DATE: 01/30/2008

TIME: 9:39 a.m.

PHOTOGRAPHED BY: Jason Thorp

DIRECTION: Photograph taken toward the east.

PHOTOGRAPH NUMBER: 1

PHOTOGRAPH FILE NAME:
1798095009~01302008-001.jpg

COMMENTS: Digital photograph depicts soil sample X101 sealed with evidence tape.

DATE: 01/30/2008

TIME: 9:47 a.m.

PHOTOGRAPHED BY: Jason Thorp

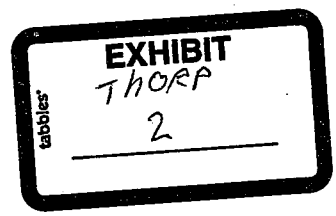
DIRECTION: Photograph taken toward the south.

PHOTOGRAPH NUMBER: 2

PHOTOGRAPH FILE NAME:
1798095009~01302008-002.jpg

COMMENTS: Digital photograph depicts soil samples X102 and X103 sealed with evidence tape.

DOCUMENT FILE NAME:
1798095009~01302008.doc



DATE: 08/24/2010

TIME: 1:26 p.m.

PHOTOGRAPHED BY: J. Thorp

DIRECTION: Photograph taken toward the south.

PHOTOGRAPH NUMBER: 2

PHOTOGRAPH FILE NAME: 1798095009~08242010-002.jpg

COMMENTS: The digital photograph was collected from the same location as digital photograph 1798095009~01242008-002. The stockpiles of "miscellaneous fill material" generated from the Altivity Packaging, LLC filter plant were previously observed at this location. It appears the stockpiles have been committed to grade in the immediate surrounding area. Note the contrast in color between the subject material and the stockpile of native quarry material in the background.

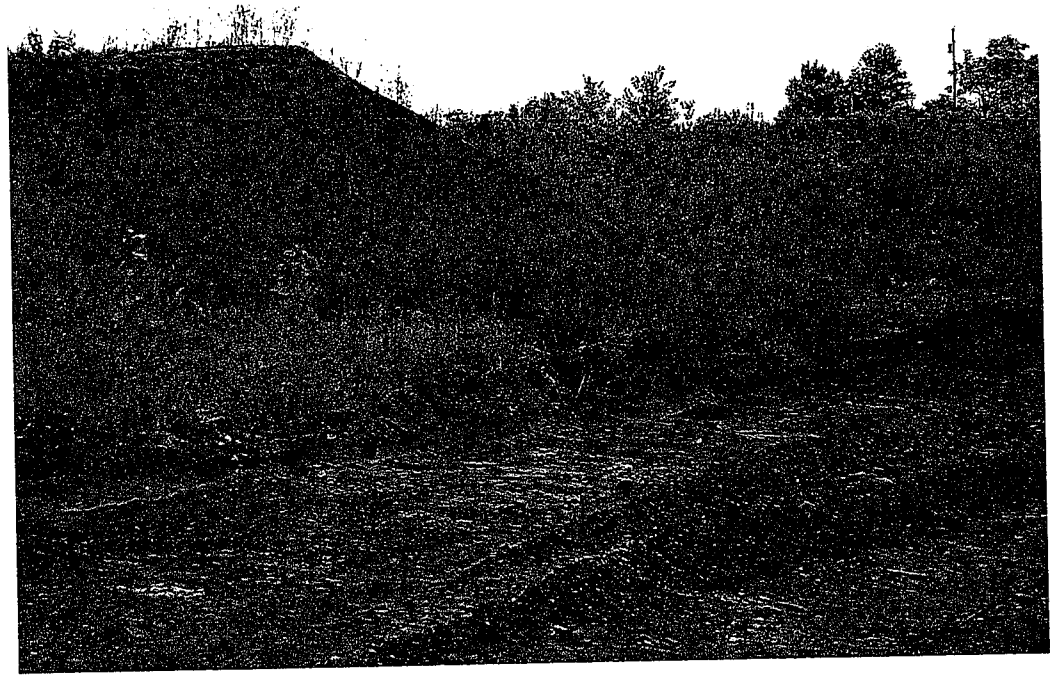


EXHIBIT
tabbies Thorp 3

DATE: 08/24/2010

TIME: 1:30 p.m.

PHOTOGRAPHED BY: J. Thorp

DIRECTION: Photograph taken toward the southwest.

PHOTOGRAPH NUMBER: 5

PHOTOGRAPH FILE NAME: 1798095009~08242010-005.jpg

COMMENTS: The digital photograph depicts the immediate surrounding area where the "miscellaneous fill material" has been committed to grade. The subject material is easily identified by its dark grey color and composition.

DATE: 08/24/2010

TIME: 1:30 p.m.

PHOTOGRAPHED BY: J. Thorp

DIRECTION: Photograph taken toward the west.

PHOTOGRAPH NUMBER: 6

PHOTOGRAPH FILE NAME: 1798095009~08242010-006.jpg

COMMENTS: The digital photograph depicts the immediate surrounding area where the "miscellaneous fill material" has been committed to grade. The subject material is easily identified by its dark grey color and composition.

EXHIBIT
THORP
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BEFORE THE ILLINOIS

POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS, Complainant,	)	
and	)	PCB No. 12-21 Enforcement-Land
ALTIVITY PACKAGING, LLC, a Delaware limited liability company, INTRA-PLANT MAINTENANCE CORPORATION, an Illinois corporation, IRONHUSTLER EXCAVATING, INC., an Illinois corporation, and RON BRIGHT, d/b/a Quarter Construction, Respondents.	)	

Discovery deposition of PAUL PURSEGLOVE, taken at the instance of the Respondents, on November 29, 2012, scheduled for the hour of 10:00 a.m., at 1307 South Seventh Street, Springfield, Illinois, before Donna M. Dodd, Certified Shorthand Reporter and Notary Public, pursuant to the attached stipulation.

DONNA M. DODD, CSR
donnadoddcsr@att.net
(217) 652-2474
(217) 487-7715

APPEARANCES:

THOMAS J. IMMEL
Feldman, Wasser, Draper & Cox
Attorneys at Law
P.O. Box 2418
1307 South Seventh Street
Springfield, Illinois 62705

Appeared on behalf of the Respondent, Ironhustler Excavating, Inc. & Ron Bright.

RAYMOND J. CALLERY
Assistant Attorney General
Attorney General's Office
500 South Second Street
Springfield, Illinois 62701

Appeared on behalf of the Complainant.

RESPONDENT'S EXHIBIT 10

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EXHIBITS

(Exhibit attached to original transcript.)

IT IS HEREBY STIPULATED AND AGREED by and between Counsel for the Complainant and Counsel for the Respondents that this deposition may be taken in shorthand by DONNA M. DODD, an Illinois Certified Shorthand Reporter and Notary Public, and afterwards transcribed into typewriting, and the signature of the Witness is reserved by agreement.

(The witness was sworn by the Reporter.)

PAUL PURSEGLOVE,

called as a witness herein, at the instance of the Respondents, having been duly sworn upon his oath, testified as follows:

DIRECT EXAMINATION

BY MR. IMMEL:

Q. Would you state your full name for the record and for the reporter, and spell your last name?

A. **Paul Martin, last name Purseglove, P-U-R-S-E-G-L-O-V-E.**

Q. And, Paul, where do you reside? Your street address is not important. City and state is all I want.

A. **I live in Sherman, Illinois.**

Q. Okay. And you are currently employed at

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the Environmental Protection Agency, is that right?

A. That's correct.

Q. And your office is over on North Grand?

A. Ninth and North Grand.

Q. Okay. Your current title?

A. I am the Manager of the Field Operations Section for the Bureau of Land.

Q. Okay. And working backwards, how long have you held that position?

A. I've worked for the agency for 32 years. I started in 1980. I have -- I've held a number of positions over the course of my career. I've worked for the Bureau of Air in their permits group, and in the Bureau of Land as an Assistant to the Manager of Field Operations, and then I ran the entire program for the Bureau of Land for a number of years, and for about the last, probably, geez, ten plus years I've been Manager of Field Operations.

Q. Okay. Just to wrap up the personal side of this, your educational background, you hold a degree, correct?

A. Right. I have a Bachelor's in Environmental Health from Illinois State University

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and a Minor in Chemistry.

Q. Okay. So you were trained in college in the Sciences and Environmental Sciences, and you continued that uninterrupted. Was the EPA your first job out of college?

A. Yes, it was.

Q. So you've been a career EPA person since the day you walked out of the University effectively, is that right?

A. That's correct.

Q. Okay. And what college was that?

A. Illinois State University.

Q. Up at Bloomington?

A. In Bloomington.

Q. Okay. And, as I recall, you're a born and bred Illinoisan, are you not?

A. I have lived in Illinois all of my life. I was born in Milwaukee.

Q. That doesn't count.

Okay. Paul, I want to fix a little information firmly in my mind that was not fully fixed by looking at a deposition you gave at an earlier date, and that's going to be the point of our discussion today.

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A. Okay.

Q. I want to do this. I'm going to hand this to the reporter, which will become Exhibit Number 1, and I'm going to hand to Paul for his use here a copy of a deposition that he gave which has been marked as Purseglove Exhibit Number 1, and get your cheaters out, because this is organized in the fashion of four pages to the page. That's what they call a mini PDF. You've seen these before maybe.

MR. CALLERY: Is that a question?

BY MR. IMMEL:

Q. You've seen this format before?

A. I have.

Q. Okay. Do you recall giving the deposition that's identified here, and this being a Chancery case in Cook County?

A. Yes.

Q. There were issues in that case being raised by the attorney or attorneys in this deposition about the definitions of waste and such. You recall that being a lot of the context?

A. Yes.

Q. Okay. Of course you note that there's

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four pages to the page, and so without hesitation let's jump forward within that document to the questions and answers that were posed to you, starting at page 60. You'll find that that's -- down at page 60 there was a definition discussion going on about definitions under the Act. Do you see that?

A. Yes.

Q. And the gentleman posing the questions, Mr. Meeder, was inquiring of you as to what the term discarded material meant under the Act. Do you recall that?

A. Yes.

Q. Okay. If you turn to the top of the next page where it starts at 61, you will see him asking you for your understanding of the term that he was using on the previous page, which was other discarded material. And I'm going to read here just for the record, you gave -- I'm asking for your understanding, and your answer was, it means, and then I think we're referring back to the term other discarded material, it means, some sort of material that's being discarded, no longer needed for use, a waste material. We can't use it. We've

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got to get rid of it. We've got to discard it. Do you recall saying that?

A. Yes.

Q. Okay. And here's what I wanted to ask you. The we they're referring to is the purported owner of the material shall we say. They didn't go any further into this, and I wanted to ask, would the owner of that material, rather than discarding it, have the -- have the right to -- to find a use for it and reuse it?

A. There are opportunities to reuse certain materials that are otherwise waste.

Q. Okay. And when you reuse them then they don't end up falling into the category of waste, because they end up not being discarded. They're just simply reused, is that right?

A. Yes. The agency has a program in place that we call it, or it's called the Beneficial Use Determination.

Q. Uh-huh.

A. And if a generator of waste wants to do something other than dispose of it at a permitted landfill, or take it to a treatment facility, if they can partner with somebody else who would have

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a use for that material, then there is a process where they can apply to us, information, this is what we have, this is how this other person is going to use it. We evaluate that, and if there would be no adverse environmental impacts, or it was truly a beneficial reuse, then we can -- we have authorized those sorts of things.

Q. Okay. Okay. So that -- that is to say then that, the fact that a particular owner doesn't have a present use and is thinking in terms of discarding it, if he chooses not to, he still has that option open if he's got a reuse for it?

A. Right.

Q. Okay. Now, can you tell me a little bit more about that program you're referring to, the beneficial reuse? Does it have a -- is it covered by a regulatory application process or is it informal?

A. No, it is not informal. There is a -- there's specific forms that are completed by the applicants and information that needs to be provided to the Permit Section --

Q. Uh-huh.

A. -- who reviews the technical aspects, the

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nature of the waste, and the -- how it's going to be reused beneficially.

Q. Uh-huh.

A. So it's a specified process.

Q. Okay. And --

A. If memory serves me, we have authority to do that, and I believe that that was legislative authority to do the Beneficial Use Program.

Q. Okay. That's not a program that falls under your particular area, because you do Field Operations, right?

A. Only to the extent that the Permits people would ask the Field to go out and verify that in fact, now that we've issued this authorization, are they doing it in the method intended or as represented.

Q. Okay. Now, I want to turn your attention if I can to the heart of what was on my mind, and that is, if you could look forward into this document and get yourself up to page 73.

A. Okay.

Q. You're seeing the context of the discussion that occurs on that set of pages?

A. Starting on page 73?

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Q. Starting on page 73. But if you look all the way through page 76, which appears on the same sheet, and then turn further to the next couple of pages are 77 and 78 and 79, you have the full conversation between you and the other attorney that I want to ask you about.

A. Okay. I've looked at 73 through 76. Continuing on, Tom?

Q. Pardon me?

A. Was it more than 73 through 76?

Q. I think that's it. If we go to the next two pages, 77 and 78, that's where they sort of buttoned up, and part of 79.

A. Okay.

Q. All right. I wanted to ask a few contextual questions about the discussion that occurred there. Let's go back to the time period, say, the 1990's and into 2001 when the issue in this case apparently came up, the issue, this case being this Chancery case you were in.

They were inquiring in there as to whether -- what the agency's policy was, and they were trying to tie it to regulations if they could in the year 2001. And you seem to have informed

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them that the agency was trying to come up with a definition of contamination. Is that a fair statement?

A. Well, the legislature had passed a law that addressed general construction demolition debris, and a newer term that was called clean construction demolition debris, and clean construction and demolition debris could be disposed of in a particular way if it was in fact met that definition of clean construction and demolition debris, and the key term there was uncontaminated.

Q. Uncontaminated?

A. Right. And they said, if you had uncontaminated dirt, bricks, rock, concrete, if you managed it in a particular way, it wouldn't be regulated as waste.

Q. Okay.

A. And so it begged to question then what is uncontaminated.

Q. All right. And that was not -- there was no helpful definition provided by the legislation, or by any other existing regulation, that aided you at that time, is that right?

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A. We were left with the plain meaning.

Q. Yeah.

A. Right.

Q. What's uncontaminated mean?

A. What does uncontaminated mean in the plainest sense.

Q. And so from a management standpoint, and in an effort to carryout your legislative charge to protect the environment, the agency was trying to come up with a working method to ascertain whether something was uncontaminated. Is that fair to say?

A. That's fair to say. And subsequent to that additional legislation was passed, and now we have Board regulations --

Q. Well --

A. -- that clearly define it.

Q. Yeah. And now you're carrying us into the present, but I want to stick with this time frame, because I'm trying to get I think a better explanation of what the process that was going on, and I think they didn't dig into it quite enough in this.

A. I understand.

Q. That's where I'm going here. And you

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indicate, and at that time Bill Child, in 2001 Bill Child was the Manager of the Bureau of Land?

A. Correct.

Q. And you worked under him at that time. You are now away from all the Air. You had been in Land for a while, correct?

A. Yes.

Q. In 2001, what was your position?

A. We -- we took a very straightforward position.

Q. No. No. I'm sorry. Your position employment wise.

A. Oh, Manager of -- I'm in the same position.

Q. Okay. So in '01 you were the Manager of Field Operations, as you are right now?

A. Correct.

Q. Okay. And you all were trying to make this determination, and Bill came up, Bill Child, came up with a definition that, if the material was in place as God or the glaciers had put it there, it was uncontaminated, is that right?

A. Correct.

Q. Atheists might struggle with that, but

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other than that, or people who think the world is 10,000 years old, but other than that, that was really all you had to work with, in situ as nature had put it there?

A. That's right.

Q. Okay. And you explain in this deposition, and tell me if I'm getting this right, that the agency, the agency personnel operating under Bill Child were told that that was the policy that we would follow in evaluating this term uncontaminated, and if a material had -- was in situ, as God and the glaciers had placed it there, it was uncontaminated?

A. Yes.

Q. And barring that, everything else would effectively, by reason, end up being contaminated, right? I mean, that was kind of the fall?

A. Yes.

Q. Okay. Now, you were asked, and I believe you answered, that the definition that Bill offered was never adopted as a formal regulation?

A. That's correct.

Q. It was never -- was it ever promulgated in writing by the agency to the outside world?

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A. **No.**
Q. This was an in-house operating term?
A. **Yes.**
Q. Did it even make its way into an internal memo of any kind that you can recall?
A. **Yes. I have seen it written on agency documents, specifically I think signed by people in the Permits group, probably Steve Nightingale.**
Q. Who's still there?
A. **Steve Nightingale is the Manager of the Permits Section for the Bureau of Land.**
Q. Can you -- this is testing your memory, and if you don't know, you don't know. Do you recall when Steve Nightingale might have promulgated something over his signature that said that?
A. **No.**
Q. Okay. Can you remember the last time you saw that document?
A. **Yeah. It's been in the recent past.**
Q. Is it readily available now do you think to you?
A. **It would -- not, certainly not readily available.**

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Q. When you said the recent past, can you fine-tune that for me and tell me?
A. **At least in the last six months.**
Q. Okay.
A. **I saw a document. It was dated. But where that particular God and the glaciers term was in writing in an agency document, it would have been prior to this current rulemaking on the CCDD stuff, and that has just become final in the last six months.**
Q. Would this document by any chance have been turned over in discovery in this Chancery case that you were testifying in?
A. **I don't know.**
Q. I saw no reference to it in the deposition, so I assumed the attorneys didn't have it, because otherwise they might have.
A. **They didn't ask these questions.**
MR. IMMEL: Okay. I'm going to make a request, Mr. Callery, Ray.
MR. CALLERY: Yes.
MR. IMMEL: That I be provided with a copy of that document. Presumably since it's been examined by Paul somewhat recently, it may still be

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retrievable. Could you -- could you?
MR. CALLERY: Yes. I will contact the agency and we'll see if we can locate it.
MR. IMMEL: And in contacting the agency you might very well be contacting Paul.
MR. CALLERY: Yes. I don't think it's actually in your possession though, right, Paul?
THE DEPONENT: I think we'll have to talk to Steve. He'll certainly recall it.
BY MR. IMMEL:
Q. Okay. What was the -- do you remember the circumstances under which you had occasion to look at it --
A. **Yes.**
Q. -- more recently?
A. **Well, it would have been associated with the whole CCDD efforts that the agency's involved in. We currently permit facilities to operate to accept clean construction demolition debris. We permit quarries to do that.**
Q. Fine-tuning that just a little bit, you made a couple of references to a rulemaking process that was ongoing in the last couple of years, and I'm looking at the Board's opinion and Order

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adopting our Rule R12-9, known as the CCDD rules, that they issued their opinion on June 7th, and several months later it went through the JCAR process and was approved. Is that what you were talking about?
A. **Yes.**
Q. You were all working on this effort --
A. **Well, I --**
Q. -- in that rulemaking?
A. **And even in advance of that, because this rulemaking has now clearly defined what uncontaminated means for the purposes of CCDD. Prior to this rulemaking it was, there was no bright numeric standard.**
Q. Yes.
A. **It was God and the glaciers.**
Q. Okay. So that when the new rule R12-9 officially became enforce, enforce after JCAR approved it, the date of which escapes me, I think it was August maybe?
A. **Yes.**
Q. As of then, God and glaciers is supplanted by what you were describing as a bright line rule?
A. **For the purposes of the operations of**

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these permitted disposal sites, yes.

Q. Well, and also for the purposes of determining what's contaminated and uncontaminated, they now have -- their bright line now defines contamination as things that violate, among others, the TACO standards.

A. **It's important to note that that determination of uncontaminated is applicable only in the sites that are permitted to operate or accept CCDD.**

Q. But they're applicable in determining what material can go where, correct? I mean, if a person is sitting with a material and trying to determine, where does this go, this set of rules provides the analytical bright line to make that determination, does it not?

A. **For the purposes of a site that's permitted, not necessarily wholesale. This is only applicable, Tom, to sites that have a license to operate as a Clean Construction Demolition Debris disposal site.**

Q. I'm clear on that. But a person has to first decide whether he's got a material that is even eligible to go to such a site.

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A. **Right.**

Q. And this set of rules sets the -- sets the groundwork for how you make that determination?

A. **It does.**

Q. So it does get ahead of the actual disposal process. It goes into the qualification process to even meet the right to dispose, correct?

A. **Yes.**

Q. And -- and in that sense it supplants God and glaciers with --

A. **Yes.**

Q. -- a bright line, numeric roadmap, which is the TACO standards? They use the TACO standards?

A. **Yes.**

Q. Okay. That's what I -- that's what I felt that these fellows hadn't dug into quite enough. Now, let's jump ahead.

In the year 2008, which is when the case that I'm talking, I'm -- we're taking this deposition about surfaces, the God and glaciers scenario was still the standard, the policy that the agency was following, correct?

A. **Correct.**

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Q. Okay. And the TACO regulations, while out there in the world and being used for other purposes, had not been applied officially to the process of waste determination shall we say or definition? They hadn't officially happened, because we all agree, that only starts in August of this -- of this 2012 year, correct?

A. **Yes. Yes.**

Q. Okay. But is it true to say that the agency was using TACO informally in helping to make its God and glaciers determination back in 2001, 2008?

A. **No.**

Q. Let me give you a hypothetical. In the year 2008, if a field inspector operating in -- under your jurisdiction in one of your field offices encounters a material in the field that has been placed there. It's clearly -- it didn't originate there. It's been placed there. He encounters this material and he needs to decide, or at least try to determine whether this material is clean, or, whether this material is uncontaminated, and at that time he's operating under the God and glaciers policy, are you aware of any circumstances

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where the agency and this inspector would follow a procedure of collecting a sample, running it through a laboratory to see how the sample performed in terms of TACO standards --

A. **Yes.**

Q. -- to help him --

A. **Yes.**

Q. -- to help him determine whether or not he would say -- so you are aware of that?

A. **Well, what we would do is collect a sample and send it to the laboratory for analysis.**

Q. Okay.

A. **And then, depending upon that analysis, we would look at the results of those analysis and, you know, we would be measuring, is this material that has been contaminated or is it native, just God and the glaciers sort of thing.**

Q. Okay. Now, if the laboratory said in their test result there's -- there's certain TACO listed and enumerated materials that we've tested and we find there to be excursions above a TACO limit, would that then lead to the conclusion that the material was contaminated under the God and glaciers policy?

A. Probably.

Q. Okay. So TACO, even though not formally applicable, was considered an informal methodology to identify and make a decision as to whether something was uncontaminated?

A. Not by itself. Certainly not by itself. Even internally amongst senior staff there is -- there is controversy over taking a TACO standard, which is developed and designed for a program that is dealing with the remediation of a contaminated site, widespread contamination, how much of this contaminated soil do we remove. So it's how clean do you clean up a site that we know is contaminated.

Q. Okay.

A. It's all -- and the controversy is, it's all together different to say, all right, this is good enough to clean it up, is this the same level that we should let people contaminate to, and there is a divergence of opinion and thought about that.

Q. And that divergence in opinion and thought would continue even after this new rule is applied, because this doesn't go to cleaning up an old leaky gas station, for example? That's covered in

another program.

A. Right.

Q. And TACO, as you know, I've got some years in this, dealing with these issues myself, that's how we first came to know each other, was that I was on the outside looking in and you were on the inside looking out, but we had many interactions over the years.

A. Yes.

Q. I remember TACO having particular importance, and thought to be beneficial assistance in the LUST program, the Leaking Underground Storage Tank program, where we were digging up old gas station underground tanks and finding contaminated soil and struggling with the determination of how much dirt to haul away.

A. Right. And that's what the TACO rules provide is, when you're cleaning up a contaminated property, when can you stop digging, and that, when you stop digging depends on a number of things, whether that property is going to be used for a daycare center as opposed to, well, we're going to put another factory here.

Q. Or a parking lot on top of it?

A. Or a parking lot, right. So there are numerous considerations in TACO. I am not a TACO expert. I certainly have worked long enough at the agency to understand the basics of TACO.

Q. Okay. TACO did -- was never originally utilized as a waste determination tool in its inception?

A. Right.

Q. It was used as a clean up and remediation tool?

A. That's correct.

Q. A guidance?

A. And it still is.

Q. And you may recall, we had a very local example of the need for such a thing when they started digging up the old County building's gasoline tank that serviced the Sheriff's Department cars that was in the parking lot, and as the hole got larger and larger and larger, and the parking, existing parking lot was being consumed, somebody from the City started screaming, we've got to stop somewhere. Do you remember that?

A. No, but I -- that scenario has played itself out many times over the years.

Q. Okay. So the specific example that I was suggesting you may not have remembered, but the general --

A. Right.

Q. -- problem that it raised you do?

A. Absolutely.

Q. TACO was adopted approximately when, if you can recall?

A. I don't know.

Q. If I said it was probably about 20 years old as a program done in conjunction with remediation sites, would that sound about right?

A. I was thinking 15, but yeah.

Q. Fifteen. I'll say 15. I might have been too generous in saying 20. And -- but your -- you do agree with me that TACO at its inception was not used as a waste determination rule?

A. Correct.

Q. Okay. And it was not -- it was, at its inception, not intended to be dispositive of a God and glaciers policy?

A. I don't quite understand that.

Q. Okay. TACO and God and glaciers, God and glaciers is a policy extent since at least 2001 or

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before and promulgated internally by Bill Child?
A. Yes.
Q. TACO comes along later. But at its inception, TACO was not intended to resolve the God and glaciers issue, it was intended for a very specific remediation standard program. Is that -- is that fair to say?
A. Well, I think that you said TACO came after God and the glaciers, but I think TACO is way before God and the glaciers. Bill Child talked about that in 2001 and I think we thought that TACO was 15 to 20 years old.
Q. We talked about 2001. But this case here in Cook County, which involved a 2001 evidence start date, this deposition you gave was about a case that is a 2001 incident, but the God and glaciers would have been well in place for a while before that. Bill Child didn't think it up for purposes of this case, did he?
A. I don't -- I don't think so.
Q. It had been around for a while? Yes? We'd have to --
A. The old God and the glaciers --
Q. Yeah.

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A. -- is really not that old of a concept. It was -- it was Mike Nechvatal and myself and other section managers trying to sort through what uncontaminated meant relative to the CCDD rule. So it's -- TACO was in place way before God and the glaciers became a term of art.
Q. Because I remember God and the glaciers, hearing about that in the late nineties and that's when I heard about it.
A. I don't know.
Q. Okay. Mike is retired now, is he not, from the agency?
A. Correct.
Q. At one time he ran the entire program, didn't he?
A. No.
Q. Or he was in hazardous waste or something like that?
A. Most of the -- for most of the part more in the subtitle D side of things.
Q. Yeah.
A. Solid waste side.
Q. Solid waste, landfills --
A. Uh-huh.

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Q. -- and Title D footprints?
Okay. We're not here to reminisce. We're here to do a deposition. Let's get back to it.
You say you're not that familiar with TACO's specific application, but you do understand its overarching and general purpose?
A. I do.
Q. And you know, I think, or I'll ask you this. To your knowledge are the TACO numbers that are derived and used as the bright line, those are taken from a -- the mean of a range of values, isn't that right?
A. I don't have really the background in the numeric standards --
Q. Okay.
A. -- for TACO. They are risk-based numbers, and so the toxicologists of the world have come up with, based on toxicology sorts of studies, a risk-based number that is generally accepted as more than zero risk, but at a level that is, you know, acceptable to the public.
Q. Not dangerous?
A. Just an additional acceptable amount of

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risk when compared to other risks that we encounter in living on this earth.
Q. Okay. You indicated in here that Bill Child had retired from the agency. Do you know what year he did so?
A. Oh, wow. It's probably been maybe -- maybe five years now.
Q. And you indicated that he now resides somewhere out in the country around Petersburg?
A. He has always lived in the country, yeah. Still, as far as I know, living in Petersburg, near Petersburg, Menard County.
Q. And I remember the place in the country and I remember riding Harley's with him. Is he still riding a Hog as far as you know?
A. No.
Q. He's not?
A. Bicycle.
Q. Bicycle. Oh, my God, what a step down. You said in here you knew how to reach him. I don't. Do you know how to reach him?
A. Sure.
Q. Do you have a phone number you can provide to me off the record --

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A. **Yes.**
Q. -- before you leave?
A. **Uh-huh.**
Q. I'd like to give him a call. It's been a long time since I've seen Bill.

Now, would you agree that the TACO standards that have been in place for a long time would have no direct application to the definition of uncontaminated in 2008?

A. **Yes.**

MR. IMMEL: I believe we have finished, Mr. Callery. Do you have anything?

MR. CALLERY: No, I do not.

MR. IMMEL: And we're reserving signature, right?

MR. CALLERY: Yes, correct.

(Whereupon there was an off the record discussion.)

BY MR. IMMEL:

Q. The case that we're in, which is People of the State versus Altivity Packaging, etc., including my client, Ironhustler and -- Ironhustler and the quarry owner, Mr. Bright, do you know anything about our case?

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A. **Yes.**
Q. What is your knowledge? I know you've had to have signed off on an enforcement proceeding, because that had to have crossed your desk?
A. **Yes.**
Q. But a lot of those cross your desk. What do you understand to have occurred in our case as best you can recall?
A. **Well, they were doing some pre-construction work at, or construction work at Altivity's property. Upon, you know, prior testing and then during construction they had to excavate and remove some fill material that had been placed on that property, God only knows when, but it was not obviously virgin soil. It was -- is contaminated fill.**
Q. Okay. Do you recall why they had to remove it?
A. **They removed it because the engineer said it was unstable for the purposes of the foundations necessary for the building.**
Q. It wouldn't pass a compaction test, does that resonate with you?
A. **That was what the, you know, from a civil**

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engineering perspective, yeah. This stuff is not -- we can't put a building on here unless we sink a piling down to native soil.
Q. Okay. And so continue.
A. **So they ran into this fill, which is, you know, a problematic kind of material all over the state. What are we going to do with this stuff. It was maybe placed here early 1900's. I don't know when it was placed there, but it's not -- it's, by today's standards, waste.**

And so once your client or Altivity dug into that, they should have realized that we have to manage this material in a particular way. It's regulated as waste in Illinois and it's going to have to go either to a permitted landfill for disposal or perhaps, if there's enough of it, and we didn't want to pay the freight to take it to a landfill, we might explore opportunities to beneficially reuse it. They did neither of those things. They took it out to a quarry and deposited waste in a quarry. You know, we have regulations that are -- that are in place now and then that require quarries that accept materials to have a permit from us.

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This site doesn't have a permit, and even if we had given them a permit, this material is in no stretch of the imagination clean construction demolition debris, because it's contaminated. A very simple sample and analysis, quick analysis of it showed that it had lead, cadmium, mercury, some selenium in it. It certainly wouldn't pass any test.
Q. Well, the only test objected to was the TACO test, isn't that right --
A. **No.**
Q. -- from the lab?
A. **No. No. No. We took it to a lab and ran total analysis on it. We ran solubles, metals on it.**
Q. Right. But you used the -- they used the TACO rules to determine what was high and what was low?
A. **Well, they compared it to TACO as a means to say, well, if you want to, what do these numbers mean. They're higher than TACO. They're lower than TACO. The fact is, it's contaminated. It's not virgin material. It is not soil. It's fill. It's --**

Q. Okay. You're not suggesting that lead is not found in nature, in the ground, are you?

A. It certainly is found at varying levels, at varying places. Some of it's naturally occurring.

Q. Likewise, selenium, magnesium, all of those things are found in the earth?

A. Yes.

Q. Okay. So their presence to me wouldn't mean anything. I went and dug in an ancient place and I found, of all things, there was manganese. That wouldn't strike me as being odd. That's where you go dig to get that stuff if you're trying to find it, if you need some, right? I mean, you can't make manganese on your kitchen stove. You have to go --

A. Right. You have to get ore excavated out of the ground.

Q. Right. Out of one of God's -- never mind.

A. But this is not God's deposits, right. This is urban fill that had been pushed in at some point to bring up low-lying ground. By today's standard we believe that to be waste.

Q. Okay. To determine whether or not -- your

agency didn't know if there was manganese already in the ground out at the place where this was received. Nobody tested for that. They were just testing this material, right?

A. Right. We tested the material that was taken to the quarry.

Q. And this is all your understanding, because you didn't do any of this work yourself? You're just telling us what your -- the agency thought was the case and fine.

And then so your understanding was that the material had been utilized out there and that you didn't believe that that was done in a way that met the requirements of the law?

A. I don't believe it. I know it to be true, right. They took waste out to a site that was not permitted for waste disposal.

Q. Okay. Well, the characterization of it as waste is a legal conclusion here, and so we don't -- I'm not inviting you to make any legal conclusions --

A. I understand.

Q. -- because there's people who are going to have to resolve that that aren't in this room.

MR. CALLERY: You did ask a very open-ended question, Tom.

MR. IMMEL: My question is, his understanding of the case. He was the fellow. He didn't, you know -- I understand you are the manager of the section. You don't run the day-to-day field work. It happens under your auspices, and then they show you things, and I just wanted to know what his understanding was of what had happened.

THE DEPONENT: Uh-huh.

MR. IMMEL: So, but I didn't seek his opinion on any value judgment, just what was his understanding of what had happened, and I've got that, and I think -- oh, yes. One more thing.

Your process, just I wanted to get on the record, your internal process at the agency in your section, we've described -- I think I've stated and you've agreed that the final determination as to whether something goes to enforcement ultimately crosses your desk?

A. Yes.

Q. And then goes someplace else?

A. Yes.

Q. Okay. Before it gets to your desk, and who's the next person under you who wrangles everything together to put on your desk?

A. John Tripses.

Q. Okay. And that's because it was in his region?

A. That's correct.

Q. And so had it been another region it would have been a different regional manager?

A. Yes.

Q. Is Dave Jansen still the guy in Springfield?

A. Yes.

Q. So John's region covered the physical location of this site, and so it was his responsibility to put everything together to put on your desk?

A. That's correct.

Q. Okay. Does a meeting then occur at your office or is it all done in writing or do human beings sit and talk about this at your office and you have, like, a conference before you decide to sign off on it or is it a written process?

A. There is a file prepared. There are

certainly conversations about cases, but there is an official agency record, copies of which are all in the Bureau file.

Q. Okay.

A. So FOIA purposes you can see copies of the inspection report, letters of correspondence, any sort of data that the agency's gathered for it.

Q. And you review all of that personally?

A. For this matter I did.

Q. Well, generally speaking, if you're going to sign off on an enforcement case, you're probably going to want to look at the underlying file?

A. Yes.

Q. I assume you do that as a matter of routine, correct?

A. That's correct.

Q. But it comes to you as a written package, and unless you have some specific questions or something, you just rely on the package, is that right?

A. Yes.

Q. Okay. And then if the package raises some question, you might contact Mr. Tripses or whoever he suggests, and you might have a conversation, but

in the absence of that, you've got a record to rely on?

A. Yes.

Q. And in this case do you recall whether or not you had to make follow-up, raise follow-up questions or whether or not this was a purely written move? Do you recall?

A. I know that we had conversations, but because, in my view, this case is so cut and dry, there wasn't really much controversy internally or debate about the extent or nature of the violation. It was straightforward to me, waste, unpermitted, violation, remove it.

Q. Okay. When -- going back to your general process, not necessarily applicable to this case only, but just the general way you do it, when you sign off on proceeding with an enforcement matter, what is the -- where does it go then?

A. Well, ultimately the Director.

Q. No. No. No. The very next. I'm trying to get to the very next step in the chain. I know ultimately the Director.

A. Uh-huh.

Q. But after you sign off on it, does anybody

else get involved?

A. Yeah. Once -- once a month the senior staff in Bureau of Land meets to review the cases that are pending for the month.

Q. And by your signing off on it then it bumps into the pending cases for the month, right?

A. Right.

Q. Okay. Without your sign off it doesn't ever get on the agenda for that discussion?

A. Correct.

Q. Okay. Tell us about the once a month senior staff process. Is that a group?

A. Yes.

Q. Does it consist of the same people every month?

A. Yes.

Q. Can you tell us who they are?

A. Sure.

Q. Okay. Go ahead.

A. They are the section managers from the Bureau of Land, a couple of attorneys from the Division of Legal Counsel, the Division Manager for Bureau of Land, the Bureau Chief occasionally attends the meetings as well.

Q. Okay. Bureau Chief not necessarily all the time?

A. We have a new Bureau Chief for about the last year, and Scott Phillips attendance is much more regular.

Q. Knowing Scott, I'm not surprised to hear that.

Is it always the same attorneys from the Bureau of Land who attend?

A. Generally.

Q. And who would they be?

A. Usually the Senior Land Attorney, who is currently Greg Richardson. During the pendency of this matter would have been Bill Ingersoll.

Q. Okay. And who would be the other attorney?

A. They would -- they vary a little bit. Traditionally it's been Michelle Ryan.

Q. Okay. And then does -- how do you -- how do you -- how does this group decide? Is like a vote taken?

A. Yes.

Q. And is it 51 percent rule or how does that work? You have to -- do you require unanimity?

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How do you --

A. I think that we don't have always 100 percent concurrence on cases, but the majority seems to rule when it comes to whether this matter would be kicked up to the next level from a violation notice to then a referal for prosecution.

Q. Hypothetically, what if everybody in the meeting, with the exception of the two attorneys, votes to send it on, do the attorneys have veto power in these meetings?

A. No.

Q. So have you had occasions where the attorneys didn't agree that it should go forward?

A. Yes.

Q. But it went anyway?

A. Yes.

Q. Does that happen often?

A. No.

Q. Did it happen in this case?

MR. CALLERY: Well, I think when you start to ask what the attorneys did on a particular case --

MR. IMMEL: I'm not asking for what they advised. I'm just asking if they --

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MR. CALLERY: Which way they voted.

MR. IMMEL: Yes.

MR. CALLERY: I think that gets into attorney/client privilege.

MR. IMMEL: Well, the attorney for the agency by law is you. The internal guys are just workers.

MR. CALLERY: Well, but they are counsel, too.

MR. IMMEL: Well, they might be licensed attorneys, but they don't have any standing as to confidentiality or anything else that I know of.

MR. CALLERY: I don't really think it's appropriate to ask him which way the attorneys voted on a case.

MR. IMMEL: Okay. We're in a deposition. Your objection is noted. You can answer the question.

MR. CALLERY: Go ahead.

THE DEPONENT: I -- I -- we meet monthly and we have probably on average 12 cases a month, so I don't recall specifically on this one how the attorneys voted. I would be amazed, given the facts in this matter --

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BY MR. IMMEL:

Q. I didn't ask you to speculate. You either know or you don't know if they did.

A. I don't know.

Q. And I don't want to go --

A. My -- if I could be allowed to speculate.

Q. I don't want you to speculate, Paul, because that's not fair to either you or me. I want to just know what you know.

A. I don't. I don't know. I certainly can't recall from the date and the month what -- whether there was nonconcurrence or not.

Q. Okay. But you've had that, again, I was trying to, in the larger picture, get a picture of the process --

A. Uh-huh.

Q. -- and you've told me that.

So, anyway, it doesn't take a unanimous concurrence, but these things move forward following a review by this group on a monthly basis. And the next step then is, let's say the group has decided to move something further down the road for prosecution, what is the next step?

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A. By statute we're required to issue a Notice of Intent to pursue legal action to the defendants and that was done.

Q. Well, yes, it was in this case.

The question is, how does -- how does the committee's decision to move forward translate into that action? Is someone then given a directive to issue the Notice of Violation?

A. Yes. Yes.

Q. Who gives the directive?

A. Senior Land Attorney.

Q. Okay. So, and the Senior Land Attorney knows -- is informed of the decision to move forward by the committee?

A. The Senior Land attorney is there during the meeting and is briefed on the case.

Q. Okay. And he -- and following, following the decision reached by the committee, he then, if so directed to go forward by the committee, he then directs someone under him to issue the Notice of Intent to Pursue Legal Action?

A. That's exactly correct.

Q. That's otherwise known as a NIPLA, and so that issues. Then what is the next step?

A. Assuming that the defendant chooses to meet, we meet with them, if they present any new information on the case. But it's basically a requirement of us to meet a last time in advance of involving the Attorney General or the State's Attorney or the USEPA.

Q. Or at least afford the potential defendant --

A. Right.

Q. -- the right to have a meeting?

A. Right.

Q. They don't always ask for it?

A. That's correct.

Q. Okay. But there's a time deadline, and they have an opportunity to request a meeting, and if they don't, then you assume we're ready to go?

A. We have satisfied our obligations and may refer the case.

Q. And at that point then the next step is the referal to the Office of the Attorney General?

A. Correct.

Q. Okay. Now, the sign off by the Director of the agency, is that where that happens, the Director?

A. Yes. The Director ultimately has to sign the referal to Lisa Madigan.

Q. And does that come in the form of a letter?

A. Yes.

Q. Okay. He doesn't send some form over there. He writes a letter to it. Well, it might be the same letter over and over, but --

A. A cover letter attached to a referal that's been prepared by --

Q. By staff?

A. Right.

MR. CALLERY: And I think I basically did a privilege log where I said we had that letter, but I didn't produce it.

MR. IMMEL: And I don't -- I didn't ask. I didn't question. Again, I'm trying to understand the process. I'm not challenging it.

MR. CALLERY: Right.

MR. IMMEL: I'm wanting to get a record as to how it works.

THE DEPONENT: Right.

Q. That was not done by these guys in this case here either. The Attorney General then

chooses A, whether to proceed or B, whether or not to proceed? Yes?

A. Yes.

Q. And the Attorney General then makes the decision whether to file before the Pollution Control Board or to file before a court of law? That's their call, right?

A. Correct.

Q. Okay.

A. We will often recommend --

Q. Yes.

A. -- a path, but they're not bound by that.

Q. Yes. Because it's a completely attorney/client thing at that point, and they make the call. The attorney makes the call as to where they're going to file it, right?

A. Yes.

MR. IMMEL: All right. Now I'm finished. Did you have any questions in light of that, Ray?

MR. CALLERY: No, I don't, and we're still reserving signature.

State of IL vs. Altivity Packaging, LLC, et al No. PCB 12-21. Deposition taken on November 29, 2012. Attorneys Mr. Immel and Mr. Callery.

STATE OF ILLINOIS)
)
COUNTY OF SANGAMON)

I, PAUL PURSEGLOVE, deponent herein, do hereby certify that I have read the foregoing deposition and that it is a true and accurate translation of the questions asked of me, and the answers given by me, with the following change(s):

PAGE 5, LINE 16
CHANGE DESIRED entire should be Tire
REASON FOR CHANGE _____

PAGE 34, LINE 15
CHANGE DESIRED not obviously should be
REASON FOR CHANGE obviously not

PAGE 35, LINE 9-10
CHANGE DESIRED there, but by today's standard
REASON FOR CHANGE it is waste

*

PAUL PURSEGLOVE

Subscribe and sworn to before me this 17TH day of December A.D., 2012.

NOTARY PUBLIC

OFFICIAL SEAL
SHERRIE A. ELZINGA
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 12-23-2015

* page 48, Line 8 should read Notice of Intent to to Pursue Legal Action.

AFFIDAVIT OF RON BRIGHT

1. I am Ron Bright, d/b/a Quarter Construction, in Tremont, Hopedale Township, Illinois. I operate a sand and gravel quarry at that location that has been commonly referred to in the past as the "Clouse Quarry". It is a very old quarry operated by others before my time there.

2. The quarry produces fine grained sands and gravels which are mined down to the heavy clay layer beneath the excavated deposits.

3. Parts of the quarry previously mined have been backfilled with the removed and stored topsoil, and then returned to crop production. Eventually that is what will happen with the entire site

4. My processing equipment, truck traffic, and truck loading areas sit on or travel over the clay "floor" of the quarry's mined out areas not yet reclaimed for crop production. Also, finished product for off-site delivery is stockpiled on this floor at several locations within the quarry.

5. During periods of wet weather, the clay floor becomes very slippery and muddy and causes truck traffic to become almost impossible in certain areas, particularly for loaded trucks trying to move around. When that happens my work has to be restricted until dry weather returns and my business suffers.

6. To address the wet weather traffic problem in parts of the site, I seek out heavy aggregates to place on the floor as road base to make the area passable for trucks and to slightly elevate the floor above the muck and mire for drainage purposes. The aggregates I require are not generally available on site, and the materials that I mine at the quarry are not durable enough to meet my road base needs.

7. At a date I cannot recall in late 2007, I was contacted by Ironhustler Excavating to purchase from me material to be used for compacted foundation support on a project in Pekin at the Altivity Packaging plant. I learned that excavated soils from the construction site had to be removed because they contained too much aggregate material to pass a compaction test and was asked if I wanted this material for road base. Because this was the kind of material that I needed, as described in Paragraph 6 above, I said I would take it and gave Ironhustler a favorable price for the material they wished to buy because they would deliver the aggregate to me free of charge.

8. All of this then happened over various dates before I received a visit from an Illinois EPA inspector. The material delivered by Ironhustler was perfect for my road base use. It was delivered and unloaded in piles in a problem driving area I identified in about January, 2008. I started spreading it out with my own equipment, but stopped without finishing my work when the EPA inspector showed up and told me there might be a problem. Since being so informed I have left the material alone and not finished constructing the loading pad and road I had planned for the purpose of reaching part of my stockpiled finished product.

9. I have since been shown pictures taken by the EPA inspector of the partially spread material, my unfinished project.

10. The material received from the Altivity site in Pekin and delivered by Ironhustler appears to be a mixture of dirt, clay, rock, pebbles, brick chips, and aggregates. I am not a geologist and cannot describe it any better than that. I do know what slag and broken concrete looks like and have seen none of that in the material.

11. I acknowledge writing a letter to EPA in March, 2008 after I received a violation letter from them about the material. I tried to explain what I was doing with the material and may not have done a thorough job of it because I am not a letter writer; but, I did the best I could at the time and was just trying to explain that I intended to do nothing wrong.

This affidavit was typed up in my attorney's office and reviewed by me before I signed it. It correctly states the facts as I know them and I understand I am signing it under oath.

Ron Bright

Ron Bright

Subscribed and Sworn to
before me this 16th day of
August, 2013

Notary Public

OFFICIAL SEAL
LORI A. FILIPIAK
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 11-21-2016

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS, Complainant, v. INTRA-PLANT MAINTENANCE CORPORATION, an Illinois corporation, IRONHUSTLER EXCAVATING, INC., an Illinois corporation, and RON BRIGHT, d/b/a Quarter Construction, Respondents.	)	PCB No. 12-21 (Enforcement - -Land)

AFFIDAVIT OF MICHAEL W. RAPPS, P.E.

Michael W. Rapps, being first duly sworn, deposes and states as follows:

1. I am a Registered Professional Engineer and the President of Rapps Engineering and Applied Science, Inc., an Illinois Corporation, formed in 1983 and based in Springfield, Illinois.
2. A true and correct copy of my resume is attached to this Affidavit.
3. I serve as a Consulting Engineer to Ironhustler Excavating, Inc. in connection with the above captioned matter.
4. I personally prepared the letter report and attachments dated April 22, 2008 and directed to Thomas J. Immel, the attorney for Ironhustler Excavating, Inc. and Ron Bright, d/b/a/ Quarter Construction in the captioned case. I am aware that said letter report was supplied to the IEPA and the office of the Attorney General during the pendency of this matter and attended meetings with those agencies where the report was discussed in my presence by those in attendance. The report was utilized by all of the Respondents in this case (as originally filed) during the pendency of this matter.

RESPONDENT'S EXHIBIT 12

5. I have personally visited the quarry site operated by Ron Bright (aka, the Clouse Pit), spoken with him, and toured the facility – with particular attention directed to the area containing the soil materials delivered to the site by Ironhustler. I have walked that area, examined the material, and my staff has mapped out the area (estimated at about 1 acre) in preparing the Sampling and Analysis plan which was attached to my letter report of April 22, 2008.

6. The reported 3 grab samples gathered by IEPA (actually 2 because it was later disclosed that a duplicate sample had been produced from a single grab sample location) are insufficient in number to accurately characterize the material in question. The fact that chemical analyses of the split sample, i.e., X-102 and X-103, show significantly different contents speaks to the heterogeneity of the material in question. Simply put, three (or two) grab samples are insufficient for characterizing multiple truck-loads of heterogeneous material. Numerous USEPA guidelines exist that identify acceptable methods for accurately characterizing heterogeneous materials. These methods would require a greater sampling effort. Guidance documents commonly relied upon for sampling strategies include:

- Preparation of Soil Sampling Protocols: Sampling Techniques and Strategies, USEPA, EPA/600/R-92/128, July 1992
- RCRA Waste Sampling Draft Technical Guidance SW-846 Chapter Nine, Planning, Implementation and Assessment, USEPA, EPA 530-R-99-015 and EPA530-D-02-002
- Guidance on Choosing a Sampling Design for Environmental Data Collection, USEPA, EPA/240/R-02/005
- Preparation of Soil Sampling Protocols: Sampling Techniques and Strategies, USEPA, EPA/600/R-92/128
- Superfund Program, Representative Sampling Guidance, USEPA, EPA 540/R-95/141

The grab samples taken in this case do not comport with the methods set forth in these standard guidance documents. Grab samples have value only in establishing an "exceedance" violation. With respect to the matter in question, grab samples could be useful in TCLP tests which have a bright line demarcation for determining whether a waste is characteristically hazardous due to toxicity. The TCLP test applies only to wastes but is

irrelevant in this case under any circumstance because the two (or three) samples all fall below the TCLP's bright line. The grab samples tested for total metals are of no value in this matter because they cannot and do not accurately characterize the heterogeneous Pekin fill material and because even if they did accurately characterize the material, there did not exist a bright line test in 2008 to which they might be compared.

7. The soil excavated from the Altivity Packaging plant in Pekin Illinois, is part of a larger deposit of historic fill. It is a heterogeneous mix variously described in area water well logs as "fill", "cinders black soil", "parking lot gravel and fill", "coarse s & g w/buff colored clay layers", "bricks and fill", etc. Placement of the Pekin fill parallels the Illinois River and resides beneath countless buildings, homes, factories, and notably, Illinois state highway Route 29, to depths that exceed twenty feet in some places. The estimated volume of this historic fill, considering only the area studied near the Altivity plant, is no less than 4,255,000 cubic yards (in place). The full vertical and lateral extent of fill, beyond that mapped in the study area, is unknown. The fill in the study area overlies at least 11 water wells, none of which are the source of any known complaints or problems. Further, water from the Altivity plant well has been shown to meet food grade standards. A United States Geological Survey (USGS) topographic map from the year 1905 shows that topography in the area of the Altivity plant is essentially unchanged since that time. It also shows the presence of a paved roadway (now Illinois Route 29) and adjacent railroad tracks. These features are unchanged since at least 1905. The precise age of the fill is unknown except that it predates Illinois Route 29, as well as the many homes and buildings in the Pekin area that sit atop this material. Similar filling operations have occurred throughout the state's river systems and along Lake Michigan since the settlers first arrived. The total amount of fill soils involved would be virtually impossible to calculate, but it must be astronomical in volume. Parenthetically, earthen fill has proven useful throughout the history of Illinois. This author has purchased potting soil packaged in Sauget Illinois, a Mississippi River town, that resembles the fill I observed at the Clouse Pit, e.g., silty sand with traces of cinders. It is now home to an assortment of flowering annuals on my deck.

8. In June, 1992 IEPA's Office of Chemical Safety produced a technical report "Background Inorganic Soil Survey" that summarized the Agency's available data for inorganic chemicals in Illinois soils. It is included herein as Rapps Attachment No. 1. The soil samples described in the report were selected so as to be representative of contemporary background conditions. Apropos to the instant matter, the report summarizes statewide results for the test parameters cadmium, lead, mercury, and selenium as follows (from Table 2):

State-wide Background Concentrations of Select Inorganic Chemicals in Illinois Soils

Per IEPA Office of Chemical Safety (June, 1992)

Test Parameter	No. of Samples	Min. Conc. mg/l	Max. Conc. mg/l	Mean Conc. mg/l
Cadmium	153	0.1	8.2	a.
Lead	163	4.7	346	a.
Mercury	140	0.1	0.99	a.
Selenium	142	0.05	2.6	0.53

a. **Data were not normally distributed, therefore statistics were not calculated.**

The mean concentrations of the three IEPA analyses (i.e., X-101, X102 and X-103) for cadmium, lead, mercury, and selenium are 6.47 mg/l, 90.1 mg/l, 0.0577 mg/l, and 0.45 mg/l, respectively. All of these values are within the range of background concentrations reported by IEPA in the 1992 report. The mean concentration of selenium in the IEPA's Clouse Pit samples is less than the average background concentration reported in the 1992 report.

9. In August 1994 IEPA's Office of Chemical Safety reprised its 1992 report in issuing an updated report on Illinois background soil chemistry that included additional samples. The updated report is included herein as Rapps Attachment No. 2. As pertains to the IEPA soil samples from the Clouse Pit, the conclusions drawn from comparison to the 1992 background data remain the same. The average concentrations of cadmium, lead, mercury

and selenium in IEPA samples X-101, X-102 and X-103 are within the range of background data reported by the Office of Chemical Safety in its 1994 summary. This is summarized in the following table:

State-wide Background Concentrations of Select Inorganic Chemicals in Illinois Soils Per IEPA Office of Chemical Safety (August, 1994)

Test Parameter	No. of Samples	Min. Conc. mg/l	Max. Conc. mg/l	Mean Conc. mg/l
Cadmium	254	ND	8.2	0.97
Lead	267	4.7	647	49.2
Mercury	200	ND	1.67	0.11
Selenium	200	ND	2.6	0.50

ND – Less than reporting limits

10. In an effort to properly characterize the Altivity soil that had been placed at the Clouse Pit, Rapps Engineering staff proposed a Sampling and Analysis Plan that relied on composite sampling from pre-determined locations established in a grid within the approximate one-acre area of fill placement. This Plan was included with my April 22, 2008 letter report as Attachment 5. Composite sampling was selected in order to better characterize the heterogeneous fill material. Because composite sampling uses multiple aliquots to form a sample that is ultimately analyzed in the laboratory, it reduces the risk of biasing the lab result with aberrant artifacts that are unrepresentative of the larger matrix of material. Our Plan proposed the use of 10 composite samples. At a May 6, 2008 meeting I attended with representatives of all the Respondents and IEPA, my April 22nd letter report was discussed and the implementation of the Sampling and Analysis Plan, at Respondents' cost, was urged. IEPA declined to accept this proposal.

11. I have been provided with a copy of an Affidavit executed by Ron Bright on August 16, 2013 and reviewed same. In that connection, I agree that the nature of the site and quarrying operation he describes comports with what I observed during my site visit. I was present on the site when it was drying out from an earlier rainfall and it was clear to me

why supplemental aggregate materials would be needed to aid operations during wet conditions. Such materials are not generally available within the quarry's in-situ resources.

12. Mr. Bright's general description of the material delivered by Ironhustler is accurate as far as it goes. I also noted the presence of some cinders in the material. I did not observe the presence of slag or broken concrete in the material delivered to Bright although either would have useful for traction control.

13. I have also visited the location from which Ironhustler excavated the aggregate material it delivered to Mr. Bright's quarry, it being the Altivity Packaging plant located on the banks of the Illinois River in Pekin, Illinois. I observed the new treatment plant which had been erected on the property. The foundation for the building was the fine grained materials supplied to the project by Bright. That material replaced the in situ soil that had failed the strength tests that would have otherwise permitted its use as foundation material for the treatment plant.

14. I particularly noted that the reported material beneath the new treatment plant foundation is very permeable alluvial sand and gravel associated with the Illinois River flood plain. By contrast, the material (what Bright calls his quarry "floor") residing beneath the material that was backhauled from the Altivity plant to the Clouse Pit is low-permeability glacial till.

15. The water well producing the process water for the Altivity packaging plant, which requires food grade water to manufacture packaging for human foodstuffs, is drilled directly through a layer of fill material that would be no different in character to that which Ironhustler excavated and delivered to Mr. Bright. Water samples are regularly collected from the Altivity well and analyzed to assure that the water meets food grade standards. I reviewed a PDC Laboratories report of such a sampling event dated May 13, 2008 that demonstrated the well water to be compliant with required standards. That report was shared with the Illinois EPA and discussed in my presence at meetings I attended regarding this matter.

Further Affiant Sayeth Not.

Michael W. Rapps, P.E.

Subscribed and Sworn to
before me this 23rd day of
August, 2013.

Notary Public

OFFICIAL SEAL
JUDITH HOPKINS
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 7-22-2014

MICHAEL W. RAPPS, P.E.

Rapps Engineering & Applied Science
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Springfield, Illinois 62704
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Web: rapps.net

EDUCATION:

B.S. General Engineering, University of Illinois at Champaign-Urbana, Illinois, 1972.

Graduate Study- Operations Research/Systems Analysis, 1973-75, Sangamon State University, Springfield, Illinois.

REGISTRATION:

Professional Engineer - Illinois No. 62-35299

ORGANIZATIONS:

Illinois Environmental Review Commission (since 1999)
Capitol Area Development Association, Board of Directors (since 1999)
Nature of Illinois Foundation Board (since 1997)
Low-Level Radioactive Waste Task Group (since 1996)
Illinois Petroleum Marketers Association (since 1992)
American Society for Testing Materials (since 1978)
Association of Groundwater Scientists and Engineers (since 1977)
National Solid Wastes Management Association, Chemical Waste Committee (1977-1979)
Illinois Electroplating Waste Task Force – Co-founder (1975-1978)
Chicago Industrial Water, Waste and Sewage Group (1974-1978)

PROFESSIONAL POSITIONS:

August, 1978 - Present: President, Rapps Engineering, Springfield, Illinois.

December, 1999 – Present: Appointed to the Illinois Environmental Regulatory Review Commission. Responsibilities include recommendations to legislature for improving and streamlining statutes and regulations.

December, 1998 – Present: Appointed to state government transition team, responsibilities include implementation of environment and natural resource policies.

August, 1998 - 2002: Commissioner, Central Midwest Interstate Low-Level Radioactive Waste Commission.

August, 1996 - Present: Voting member of Illinois Low-Level Radioactive Waste Task Group; Senate appointee.

November - December, 1980: Special consultant to the World Health Organization, Pan American Division, Rio de Janerio, Brazil.

September 1977 - August, 1978: Technical Director, Chemical Waste Management, Inc., Division of Waste Management, Inc., Oak Brook, Illinois.

November 1977: Special consultant to the World Health Organization, Pan American Division, Sao Paulo, Brazil.

September 1975 - September 1977: Manager Hazardous Waste Unit, Division of Land Pollution Control, Illinois EPA, Springfield, Illinois.

October 1975: Special consultant to U.S. EPA on industrial/hazardous waste, Nashville, Tennessee.

September 1973 - September 1975: Staff engineer, Permit Section, Division of Land Pollution Control, Illinois EPA, Springfield, Illinois.

September 1972 - September 1973: Staff engineer, Field Operations Section, Division of Land Pollution Control, Illinois EPA, Springfield, Illinois.

June, 1972 - September 1972: Staff engineer, Field Operation Section, Division of Public Water Supply, Illinois EPA, Springfield, Illinois.

EXPERIENCE:

Illinois Low-Level Radioactive Waste Task Group (1996 to present)

Illinois State **Senate** appointee to this seven member group charged with developing criteria to be used in selecting a low level nuclear waste disposal site for the Illinois-Kentucky Nuclear Waste Compact. Group is also charged with the responsibility for providing oversight of the Illinois Department of Nuclear Safety and its contractors during the site selection process.

Rapps Engineering and Applied Science (1978 to present)

Founded Rapps Engineering & Applied Science (RAPPS) in 1978, a thirty-plus member consulting firm with annual sales at approximately $2M. Firm deals with all manners of environmental engineering problems, including civil, chemical, and geo-technical components. Specialties include solid waste (i.e., landfill design, investigation, monitoring, etc.) hydrogeology, regulatory affairs (i.e., permitting, etc.), site investigations and remediation and related matters. Clientele include commercial solid and industrial waste management companies, mining companies, manufacturers, state, county, and municipal agencies, lending institutions, real estate and developers, and other engineering or legal consultants.

Personal specialties include the subject of waste management, hydrology, and hydrogeology; as well as performance and supervision of subsurface investigations, groundwater modeling exercises, and other such studies related to Comprehensive Emergency Response & Compensation Liability Act (CERCLA), Resource Conservation & Recovery Act (RCRA), Leaking Underground Storage Tank (LUST), and solid/hazardous waste projects. Project areas include the Midwest, Northeastern U.S. and abroad with extensive experience in the State of Illinois, including the following Illinois counties:

Adams	Alexander	Brown	Bureau	Carroll	Cass
Coles	Clark	Cook	Douglas	Fulton	Greene
Henry	Jasper	Jefferson	Jersey	Jo Daviess	Kane
Kendall	Knox	Lake	LaSalle	Lawrence	Lee
Logan	Macon	Macoupin	Madison	Marion	Massac

McLean	Mercer	Morgan	Montgomery	Ogle	Peoria
Perry	Randolph	Richland	Saline	Rock Island	Sangamon
Schuyler	Shelby	St. Clair	Tazewell	Vermillion	Wayne
Whiteside	Williamson	Winnebago			

Pan American Health Organization (November 1977)

Special consultant to FEEMA, an environmental regulatory authority equivalent to the US EPA, for the State of Rio de Janeiro, Brazil. Worked with and lectured FEEMA staff concerning industrial waste problems in Rio State. The mission's purpose was to foster an understanding of the subject that would allow FEEMA staff to develop plans and regulations to control industrial waste disposal. A report with recommendations was issued subsequent to the mission.

Surveyed industrial waste problem for the State of Sao Paulo, Brazil. Prepared a comprehensive industrial waste regulatory plan for CETESB a Sao Paulo EPA equivalent. Lectured and instructed CETESB staff.

Chemical Waste Management, Inc. (1977-78)

Technical director with responsibility for design, development, and operational plans for company's chemical waste facilities in North America. Made recommendations to corporate officials relative to prospective acquisitions. Represented the company on National Solid Waste Management Association's Chemical Waste Committee concerning RCRA rulemaking. Served as company spokesman at various public hearings concerning special or hazardous rulemaking at the Federal level and for various states throughout the U.S. Also worked on the development of Chemical Waste Process Systems, acquisitions, permits, etc. in approximately 20 states.

Illinois Environmental Protection Agency (IEPA),Hazardous Waste Manager (1975-77)

Authored most of "Illinois Special Waste Hauling Regulations".
Defined term "Special Waste".
Reviewed all data resultant from the Illinois EPA groundwater monitoring program for landfills; keyed follow-up investigations.
Emergency Action Coordinator for chemical spills, pipeline breaks, etc.
Reviewed all permit applications for special or hazardous waste disposal.
Served as IEPA representative in Washington D.C. on a working group charged with development of RCRA regulations.
Refined Illinois Supplemental Permit System for special waste disposal.
Developed Illinois database concerning land based industrial waste disposal.
Co-Founder of an Illinois task force on the matter of electroplating waste.
Originated development of an IEPA "standard leaching test"; a modified form for the test was later incorporated into RCRA rules by the U.S. EPA.
Spearheaded an IEPA policy to assist in creating sufficient disposal capacity to service State industry.

Special Consultant to U.S. EPA ("Advisor on loan") (1975)

Visited State offices in Nashville, Tennessee, with a US EPA staff member to investigate industrial waste disposal problems in the State as part of pre-RCRA efforts to cause passage of the RCRA.

IEPA, Staff Engineer, DLPC Permit Section (1973-77)

Reviewed approximately one hundred facility permit applications for solid waste disposal sites.

Examined engineering, geologic, and hydrogeologic aspects of several hundred land disposal sites. Served as an IEPA witness in Illinois Pollution Control Board proceedings relative to permit appeals and enforcement actions.

IEPA, Staff Engineer, DLPC Field Operations Section (1972-73)

Assistant to the Section Manager responsible for supervision of approximately twenty field investigators. Conducted site visits with staff for purposes of improving performance. Also served as Division data processing coordinator responsible for data gathering and the generation of data summaries.

IEPA Staff Engineer, DPWS Field Operations Section (1972)

Inspected public water supplies and issued follow-up reports relative to facility features and compliance with applicable regulations.

Representative Projects:

Designed groundwater monitoring systems for numerous landfills and waste storage sites throughout Illinois.

Designed, sited, and permitted a major regional landfill in southern Illinois. Site is equipped with a dual liner (clay-geomembrane); a 99.9% efficient leachate collection system with dual lined leachate storage. Site has dozens of groundwater monitoring wells and gas monitoring ports.

Investigated groundwater contamination at a landfill site in southwestern Illinois (American Bottoms) situated in an aluminum by-product (red mud) waste pile.

Investigated groundwater contamination from large surface impoundments at an insecticide manufacturing facility in East-Central Illinois.

Prepared three RCRA permit applications (groundwater portions) for two hazardous waste landfills in Illinois and one in Iowa.

Investigated regional groundwater conditions in the area of a proposed surface mine (coal) in Central Illinois. Issued an expert opinion report (affidavit) for a public agency hearing officer, December, 2012..

Investigated possible groundwater contamination at numerous Illinois landfills.

Investigated possible groundwater contamination at several "Superfund" sites in Northern Illinois.

Investigated contamination of groundwater by organic chemicals near a waste oil storage and refining facility in Northern Illinois.

Technical advisor to the Illinois Petroleum Marketers Association (IPMA). Devised LUST cleanup standards for the organization in 1994 that were adopted as an interim rule by the Illinois Pollution Control Board. The interim regulation was the predecessor of permanent risk-based soil and groundwater cleanup standards (i.e., TACO).

Represented the IPMA on the Illinois LUST advisory group, the Illinois Brownfields task force, and the IEPA Risk-Based Corrective Action (RBCA) advisory panel.

Performed groundwater flow and/or transport models for RCRA permits, RI/FS investigations, IEPA landfill permits, IEPA LUST investigations, and for Brownfields.

Testified on behalf of the Illinois Pork Producers Association with respect to proposed regulations regarding groundwater monitoring at wastewater lagoons associated with hog farms.

Investigated groundwater contamination from coarse and fine coal waste impoundments at a central Illinois coal mine. Characterized a complex sub-surface consisting of multiple glacial units set atop a deep bedrock valley. Modeled the site with flow and transport models in order to test the viability of groundwater withdrawal wells.

Investigated mine related contamination at a coal mine in southeastern Illinois.

Testified on behalf of the Illinois Pork Producers Association relative to a proposal for groundwater monitoring at waste water lagoons associated with hog farms.

Characterized the regional hydrogeology in the vicinity of a proposed surface mine (coal) in central Illinois. Re: Rapps, M.W., Ghosh, D. and Ray, M., "Geo-Hydrogology of the Banner Area, Fulton County, Illinois, September, 2009. This was prepared in connection with a Section 404 permit; it was presented to the U.S. Corps of Engineers, Rock Island District.

Issued an expert opinion report in the Matter of U.S. v Gerald Lippold, et. al., in the U.S. District Court for the Central District of Illinois (Criminal Number 06-30002). Subject areas included the U.S. Clean Water Act, NPDES permits, boron, flyash, Rapanos, August, 2007.

Prepared a report of the Investigation of Reported Impairment, Canton Lake, Fulton County, Illinois, September, 2008.

Testified on behalf of central Illinois coal company in a permit appeal of a surface mining permit for a mine located in North Canton, in Fulton County, Illinois. The appeal was brought by the Sierra Club and the Prairie Rivers Alliance on issues involving groundwater and surface water discharge, September, 2011.

Prepared an expert opinion report concerning an enforcement suit brought by the Illinois Office of the Attorney General regarding the deposition of earthen fill in a ten-acre plot in Harvey, Cook County, Illinois. Gave a deposition in August, 2012.

Worked *pro bono* with the American Institute of Architect's (AIA) Regional and Urban Design Assistance Team (R/UDAT) in its work with the city of Springfield Illinois from 2002 through 2012.

Investigated groundwater contamination at a sanitary landfill in northern Illinois that was the subject of a CERCLA cost recovery suit in federal district court. Was able to differentiate and map named glacial till units in order to identify a discrete source of the contamination. The source, and its resulting contaminant plume, were verified with the use of a three-dimensional groundwater flow and transport model, i.e., USGS Mod Flow w/ MT3D. Testified on behalf of a defendant in federal court which resulted in a multi-million dollar savings for the client's insurer.

PRESENTATIONS, PUBLICATIONS AND SPECIAL PROJECTS:

Sustainability Recommendations for the City of Fort Worth, Texas. Pro bono team member with the American Institute of Architects (AIA) Sustainability Design Assistance Team (SDAT) November, 2008. Team members were Jane Jenkins (Boulder, Co.), Prescott Gaylord (Baltimore, Md.), Kathryn Schiedemayer (Madison, Wi.), James Sherrel, AIA (Chattanooga, Tn.), Sabrina Carr (Hampton, Va.) and Darren Smith (Washington, D.C.). Report was issued May,

2009.

Rapps, Michael W., October 2002, Reported Bird Strikes at Down State Illinois Airports, presented to the attendees of Bird Strike Committee USA – Canada Conference, Sacramento, California.

Rapps, Michael, Ghosh, Dipanjan, and Mantha, Rasmi, Groundwater Protection in the Illinoios Coal Region, Grant No. 04-48318, Illinois Department of Commerce and Economic Opportunity, December, 2005.

Rapps, Michael W., Environmental Forensics at a Landfill in Northern Illinois, March 27, 2002, presented to the Central Great Lakes Geologic Mapping Coalition, Peoria Forum, Peoria, Illinois.

Rapps, Michael W., 1996, Environmental Issues Survey, The Illinois Manufacturer, survey of 200 Illinois manufacturers.

Rapps, Michael W., and Ronald R. Dye, CPG, 1996, LUST – Brownfields Update, Illinois Municipal Review, Trade Journal of the Illinois Municipal League.

Rapps, Michael W. and Larry Eastep, (IEPA), H. Walton (IL Power) and J. Van der Kloot (Chicago Dept. of Environment) et al., 1996, Changes to the Illinois Pre-Notice Program, February 7, 1996 panel discussion in Oak Brook, IL, at 1996 Air & Waste Management Conference by the Lake Michigan States Section of the Air & Waste Management Association.

Rapps, Michael W., 1995, Landfilling in the 1900's, The Illinois Manufacturer, trade journal of the Illinois Manufacturers Association.

Rapps, Michael W., 1995, Illinois Storage Tank Update, The Oil Can, trade journal of the IPMA.

Rapps, Michael W., 1994, RBCA at LUST Sites, seminar on IPCB LUST rulemaking held in Springfield, Mt. Vernon, and Rosemont Illinois.

Rapps, Michael W., 1994, Risk-based Cleanup Standard for Illinois LUST sites, designed a risk-based method to calculate soil cleanup standards for petroleum leaks for the IPMA; presented at a public hearing held by the Illinois Pollution Control Board (IPCB). The method was adopted by the IPCB as an interim regulation in September 1994.

Rapps, Michael W., 1990, CERCLA, Phase I's and Investments, presented to the Sangamon Valley Estates Council in Springfield, IL.

Rapps, Michael W. and J. Jacoby, P.E., 1987, Regulatory Impediments to the USE of Coal Wastes, for the Illinois Department of Energy and Natural Resources.

Rapps, Michael W., 1980, Special Waste Management, lecture given to environmental regulatory staff of FEEMA (EPA equivalent) in Rio de Janeiro, Brazil.

Rapps, Michael W., 1979, Surface Impoundments for Industrial Wastes, University of Wisconsin – Madison, Instructor for Engineering Extension Course in "Hazardous Waste Management Practices".

Rapps, Michael W., May 4, 1978, E.P.A.'s Hazardous Waste Regulatory Program and State Regulatory. Policy for Implementation of Federal Hazardous Wastes, panel discussion presented at the International Waste Equipment and Technology Exposition, Miami Beach, Florida.

Rapps, Michael W., 1978, Special Waste, presented at George Williams College, Oak Brook, Illinois, to engineers attending a course sponsored by the publication Pollution Engineering.

Rapps, Michael W., 1978, Special Waste Problems: Sludge – Hazardous and Toxic, presented to the Chicago Industrial Water, Waste and Sewage Group.

Rapps, Michael W., 1977, Earthline – Case Study, panel discussion given at the Sixth National Conference on Waste Management Technology and Resource and Energy Recovery

Rapps, Michael W., 1977, What is a Hazardous Waste?, presented at the Sixth National Conference on Waste Management Technology and Resource and Energy Recovery, Washington, D.C.

Rapps, Michael W., 1977, Special Waste Management in Illinois, thirty minute live radio interview on station WVEM, Springfield, Illinois.

May, 1977, Waste Age, exclusive interview with Michael W. Rapps, Manager, Hazardous Waste Sub-Unit, Illinois E.P.A.

Rapps, Michael W., 1977, Implementation of a Disposal Permit System in Illinois, presented at the University of Wisconsin Extension's "Hazardous Waste Management II Conference".

Rapps, Michael W., 1977, Industrial Wastes and Political Contaminants, presented at the Investment Recovery Conference, Travenol Laboratories, Deerfield, Illinois.

Rapps, Michael W., 1977, P.C.B. Disposal at Wilsonville, Illinois, public statement and press release given in Wilsonville, Illinois.

Rapps, Michael W., 1977, Industrial Waste in Illinois, presented at the University of Minnesota's 23rd Annual Wastes Engineering Conference.

Rapps, Michael W., 1976, Solid and Semi-Solid Waste Disposal, presented to the Chicago Industrial Water, Waste and Sewage Group.

Illinois Environmental Protection Agency · P.O. Box 19276, Springfield, IL 62794-9276

TECHNICAL REPORT
BACKGROUND INORGANIC SOIL SURVEY
CONDUCTED BY
OFFICE OF CHEMICAL SAFETY
ILLINOIS EPA
JUNE, 1992

Introduction

The Office of Chemical Safety has completed the first phase of a survey of background soil concentrations for inorganic constituents present in the State of Illinois. The main objectives of the survey were as follows:

(1) to ascertain a reasonable indication of statewide background concentrations of inorganics in soil;

(2) to support the Agency's efforts in determining the presence of lead-based paint contamination by determining the levels of lead present in background soils across the state; and

(3) to utilize, to the extent possible, existing site-specific studies and background data which represents a major data resource already existing within Agency files.

Survey Approach

Background samples were obtained for the sites surveyed in areas, judged by the field staff taking the samples, to be undisturbed and unimpacted by site-related activities. No efforts were made to investigate these results relative to the potential for past sources of atmospheric deposition (e.g., smelters, leaded gasoline, etc.) or previous site activities at the background sample location. Certain areas of the state have been impacted by diffuse anthropogenic sources and therefore

represent regional conditions which vary from naturally occurring background but still are representative of contemporary background conditions.

Sample results were obtained from Preliminary Assessment/Site Investigations performed since 1986 plus sample results from State Superfund and Federal Superfund site investigations in Illinois. A total of 174 sample results were included in this first phase of the survey. Sample results were located for a total of 52 out of the 102 counties in Illinois. Since some of these sites required varying degrees of investigation, certain samples did not include the complete list of analytical parameters. As a result, each inorganic may have a different number of data points.

The inorganic parameters listed below were found to have normal distributions. The minimum concentrations, maximum concentrations, average concentrations, and standard deviations were calculated for each of the following inorganic parameters:

Aluminum	Cobalt	Manganese	Sulfate
Antimony	Copper	Nickel	Sulfide
Arsenic	Cyanide	Potassium	Thallium
Chromium	Iron	Selenium	Vanadium
			Zinc

The statewide survey data for the following inorganic constituents were found not to follow a normal distribution:

Barium	Calcium	Mercury
Beryllium	Lead	Silver
Cadmium	Magnesium	Sodium

The statistics used to describe these nonnormal distributions were limited to minimum concentration, maximum concentration, and median.

Values which were reported as less than the detection limit were included in the statistical analysis by using one-half of the detection limit. If upon analysis of these data, it could be concluded that the background sample had been impacted by site-related activities then the sample was not used in the survey. The ASTM Standard Practice for Dealing With Outlying Observations was used to test the significance of certain results which appeared to deviate markedly from the remainder of the data set.

It should be noted that uncertainties inherent in the survey include those due to variation in sampling procedures, variation in sampling depth, the use of one-half the detection limit for non-detects, and differences in analytical techniques between laboratories.

Survey Results

Figure 1 shows the survey locations across the state. Table 1 is an overall summary of the means and medians calculated for the inorganic parameters which appear in Tables 2 through 8. Table 2 includes the statewide statistics and in Tables 3 through 8, the inorganic results are organized into metropolitan statistical areas (MSAs) which are geographic areas consisting of a large population nucleus - a census-defined "urbanized area" - together with adjacent communities that have a high degree of economic and social integration with that nucleus. In MSAs with a population of one million or more, primary metropolitan statistical areas (PMSAs) may be identified. When PMSAs are defined, the MSA of which they are component parts is redesignated a consolidated metropolitan statistical area (CMSA).

Figure 2 shows the MSAs, PMSAs, and CMSA for Illinois. Appendix A presents the survey results organized by each inorganic parameter.

The results obtained from the survey compare reasonably well with other summary data having been compiled and published for the entire United States (see Appendix B). However, the following discussion will address certain exceptions.

Those locations in the state where there is the greatest diversion from published background levels for cadmium were in the counties of St. Clair, Lake, and Cook. In St. Clair county, the levels of cadmium detected were highest in Sauget and Fairmont City where the levels detected were 7.3 mg/kg and 8.2 mg/kg, respectively. In Lake county, the highest levels of cadmium were 7.2 mg/kg and 7.4 mg/kg which were obtained from a background site in Waukegan. In Cook County, the highest level of cadmium detected was 6.1 mg/kg in Lemont, Illinois.

The highest levels of total lead identified during the survey were found in the counties of Cook, Peoria, Madison, St. Clair, and Jo Daviess. Three of the eight highest detections for lead were in Chicago where the concentrations reported were 346 mg/kg, 281 mg/kg, and 192.60 mg/kg. The highest value for lead reported in Peoria County was 199 mg/kg which was from a background sample taken in the City of Peoria. In Madison County, the highest lead values were found in Granite City where the value was 299 mg/kg. In St. Clair County, the highest values reported for lead were in the cities of Sauget and Fairmont with reported values of 190 mg/kg and 186 mg/kg, respectively. In

addition, one of the eight highest values for lead identified during the survey was 211 mg/kg detected near the city of Stockton in Jo Daviess County.

Survey Uses

These data can be used by programs in the Agency to evaluate the validity of any site-specific background data collected for various cleanup sites across the state. For example, if background data are submitted to the Agency by a consultant or contractor, individual project managers can quickly do a comparative review of these background samples versus the survey results for relative consistency. These survey data, however, are not meant to replace the collection of site-specific background data.

A second use for these data is as a general screening check for determining the potential presence of inorganic contamination at a site. These survey data appear to present a reasonable indication of background conditions in Illinois and can be used in comparison to site data to identify which, if any, inorganic contaminants are present in concentrations above what could be viewed as the "normal".

The data base and survey report will be periodically updated as additional background inorganic data become available. The Office of Chemical Safety can be contacted at (217)785-0830 for more information or assistance.

CAS/GEN/002/psf

FIGURE 1

Background Inorganic Survey Locations

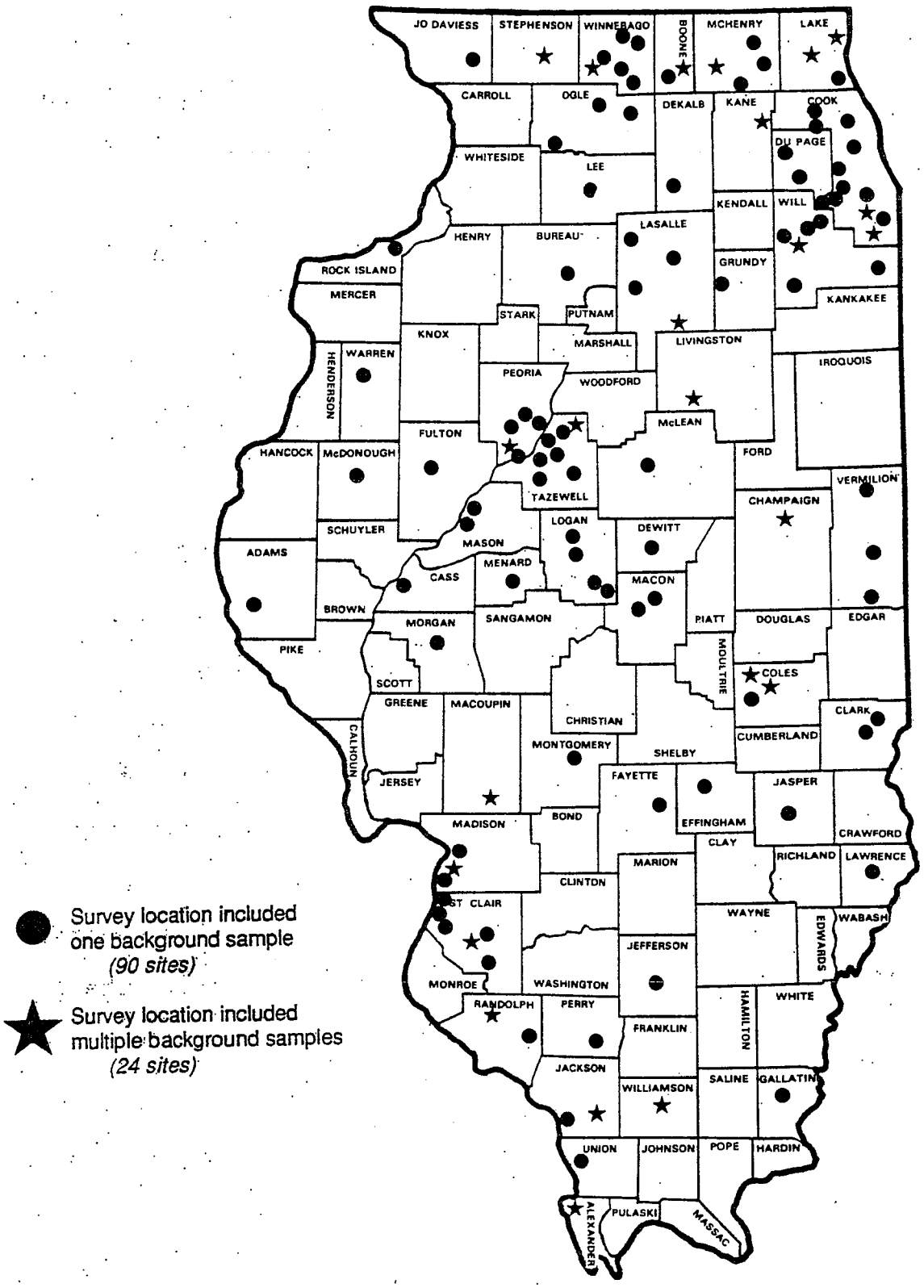


Table 1.

Summary Statistics for Background Inorganic Soil Survey
(all values in mg/kg)

	Statewide		Chicago CMSA		St. Louis MSA		Other MSAs (1)		Other Counties	
Parameter	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Aluminum	10170.16	---	10977.34	---	11079.09	---	7902.00	---	10548.21	---
Antimony	4.16	---	5.16	---	3.37	---	4.30	---	3.82	---
Arsenic	7.10	---	8.47	---	6.63	---	5.86	---	6.85	---
Barium	---	116.00	---	103.00	177.10	---	96.40	---	131.70	---
Beryllium	---	0.56	0.57	---	1.01	---	---	0.48	---	0.65
Cadmium	---	0.65	---	1.00	---	0.55	---	0.55	0.93	---
Calcium	---	7240.00	---	13500.00	---	5600.00	10954.00	---	---	6495.00
Chromium	19.48	---	---	19.00	15.40	---	17.27	---	16.44	---
Cobalt	8.30	---	9.54	---	8.14	---	6.61	---	8.33	---
Copper	22.09	---	29.81	---	---	18.90	19.59	---	16.38	---
Cyanide	0.59	---	0.73	---	0.48	---	0.56	---	0.55	---
Iron	17181.28	---	18874.98	---	16179.00	---	16906.00	---	16454.35	---
Lead	---	25.10	---	30.10	104.04	---	42.18	---	33.35	---
Magnesium	---	4000.00	---	8610.00	---	2463.00	5354.67	---	---	4050.00

	Statewide		Chicago CMSA		St. Louis MSA		Other MSAs (1)		Other Counties	
Parameter	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Manganese	707.00	---	837.46	---	672.55	---	559.40	---	698.90	---
Mercury	---	0.06	---	0.06	0.09	---	0.12	---	---	0.06
Nickel	18.92	---	23.79	---	---	16.00	14.46	---	16.60	---
Potassium	1468.49	---	1780.61	---	1708.64	---	907.97	---	1490.35	---
Selenium	0.53	---	0.72	---	---	0.46	0.37	---	0.47	---
Silver	---	0.60	1.30	---	0.49	---	---	0.38	---	0.60
Sodium	---	125.00	333.68	---	126.96	---	138.84	---	---	112.50
Sulfate	97.04	---	102.71	---	50.50	---	61.53	---	114.16	---
Sulfide	4.07	---	3.00	---	8.30	---	3.83	---	3.55	---
Thallium	0.73	---	0.84	---	0.44	---	---	0.26	0.60	---
Vanadium	24.73	---	27.23	---	27.41	---	18.03	---	25.75	---
Zinc	114.33	---	122.10	---	---	159.90	99.88	---	95.23	---

(1) Includes data from Rockford MSA, Peoria MSA, and Decatur MSA.

Table 2.

Statewide Survey Results
(all values in mg/kg)

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Aluminum	148	2530.00	37200.00	10170.16	5283.37	---
Antimony	119	0.10	13.50	4.16	2.40	---
Arsenic	167	0.35	24.00	7.10	4.13	---
Barium	156	2.50	1720.00	(a)	(a)	116.00
Beryllium	150	0.01	9.90	(a)	(a)	0.56
Cadmium	153	0.10	8.20	(a)	(a)	0.65
Calcium	148	630.00	184000.00	(a)	(a)	7240.00
Chromium	165	1.07	151.00	19.48	18.04	---
Cobalt	149	0.90	32.00	8.30	3.93	---
Copper	159	1.46	156.00	22.09	19.85	---
Cyanide	118	0.03	2.70	0.59	0.49	---
Iron	151	3620.00	80000.00	17181.28	7946.71	---
Lead	163	4.70	346.00	(a)	(a)	25.10
Magnesium	149	476.00	74500.00	(a)	(a)	4000.00

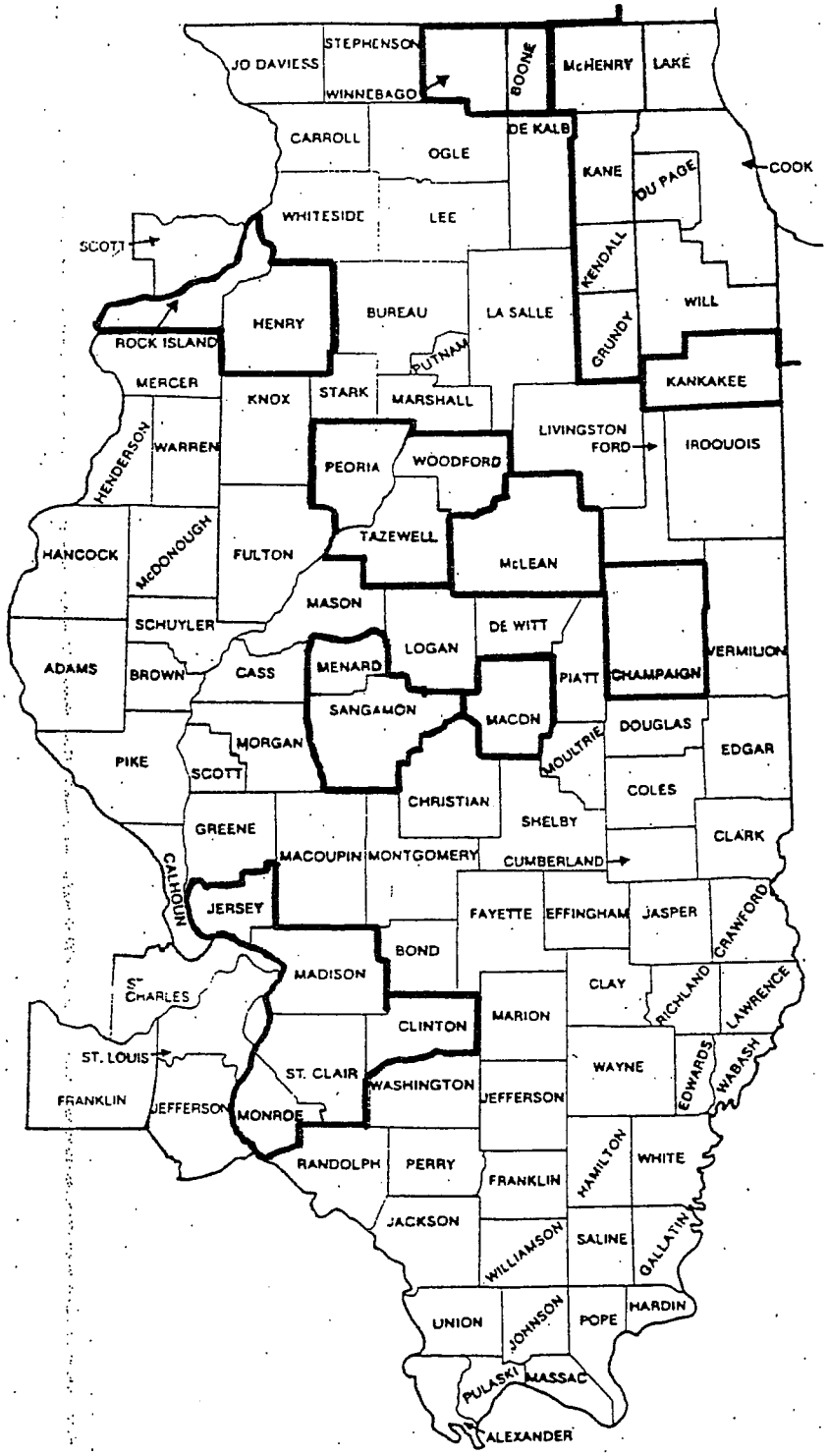
Table 2 - Continued

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Manganese	149	35.00	5590.00	707.00	575.14	---
Mercury	140	0.01	0.99	(a)	(a)	0.06
Nickel	157	3.52	135.00	18.92	13.91	---
Potassium	145	155.00	5600.00	1468.49	1061.49	---
Selenium	142	0.05	2.60	0.53	0.43	---
Silver	141	0.14	5.90	(a)	(a)	0.60
Sodium	142	11.50	1660.00	(a)	(a)	125.00
Sulfate	20	5.00	260.00	97.04	80.86	---
Sulfide	14	0.50	10.10	4.07	2.55	---
Thallium	142	0.02	2.80	0.73	0.73	---
Vanadium	149	1.25	80.00	24.73	10.56	---
Zinc	152	2.75	798.00	114.33	114.16	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

FIGURE 2

Illinois Consolidated Metropolitan Statistical Areas, Primary Metropolitan Statistical Areas, Metropolitan Statistical Areas, and Counties



Aurora-Elgin, IL PMSA
Kane & Kendall Counties, IL
Bloomington-Normal, IL MSA
McLean County, IL
Champaign-Urbana-Rantoul, IL MSA
Champaign County, IL
Chicago, IL PMSA
Cook, DuPage, & McHenry Counties, IL
Chicago-Gary-Lake Cnty, IL-IN-WI CMSA
Aurora-Elgin, IL PMSA
Chicago, IL PMSA
Gary-Hammond, IN PMSA (Lake & Porter Cntys., IN)
Joliet, IL PMSA
Kenosha, WI PMSA (Kenosha Cnty., WI)
Lake County, IL PMSA
Davenport-Rock Island-Moline, IA-IL MSA
Henry & Rock Island Counties, IL (Scott Cnty, IA)
Decatur, IL MSA
Macon County, IL
Joliet, IL PMSA
Grundy & Will Counties, IL
Kankakee, IL MSA
Kankakee County, IL
Lake County, IL PMSA
Lake County, IL
Peoria, IL MSA
Peoria, Tazewell, & Woodford Counties, IL
Rockford, IL MSA
Boone & Winnebago Counties, IL
St. Louis, MO-IL MSA
Clinton, Jersey, Madison, Monroe, & St. Clair Counties, IL
Franklin, Jefferson, St. Charles, & St. Louis Cntys., MO;
St. Louis City, MO)
Springfield, IL MSA
Menard & Sangamon Counties, IL

Source: Illinois Statistical Abstract. 1991.

Table 3.

Survey Results for
Chicago Consolidated Metropolitan Statistical Area
(all values in mg/kg)

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Aluminum	41	2530.00	23900.00	10977.34	4711.74	---
Antimony	24	0.48	13.50	5.16	2.90	---
Arsenic	47	2.60	24.00	8.47	4.12	---
Barium	41	2.50	1720.00	(a)	(a)	103.00
Beryllium	40	0.03	1.50	0.57	0.33	---
Cadmium	35	0.12	7.40	(a)	(a)	1.00
Calcium	41	1510.00	130000.00	(a)	(a)	13500.00
Chromium	41	4.40	151.00	(a)	(a)	19.00
Cobalt	41	4.50	14.30	9.54	2.67	---
Copper	41	4.06	113.00	29.81	21.37	---
Cyanide	27	0.04	2.00	0.73	0.56	---
Iron	41	10200.00	34300.00	18874.98	5708.21	---
Lead	40	8.00	346.00	(a)	(a)	30.10

Table 3 - Continued

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Magnesium	41	1510.00	74500.00	(a)	(a)	8610.00
Manganese	41	255.00	5590.00	837.46	809.76	---
Mercury	32	0.02	0.89	(a)	(a)	0.06
Nickel	41	7.90	91.60	23.79	15.30	---
Potassium	41	462.00	5100.00	1780.61	1220.27	---
Selenium	34	0.12	1.75	0.72	0.46	---
Silver	31	0.38	3.60	1.30	0.78	---
Sodium	37	53.00	1290.00	333.68	309.73	---
Sulfate	5	28.20	240.00	102.71	77.13	---
Sulfide	5	2.65	3.35	3.00	0.25	---
Thallium	33	0.23	2.75	0.84	0.62	---
Vanadium	41	11.00	50.00	27.23	9.15	---
Zinc	41	28.10	614.00	122.10	110.25	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Table 4.

Survey Results for
Rockford Metropolitan Statistical Area
(all values in mg/kg)

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Aluminum	8	2920.00	18800.00	8042.50	4862.65	---
Antimony	6	1.85	6.50	3.16	1.65	---
Arsenic	12	1.50	17.00	4.86	4.01	---
Barium	12	62.20	175.00	114.96	30.04	---
Beryllium	6	0.05	0.52	0.23	0.15	---
Cadmium	11	0.50	4.90	2.20	1.71	---
Calcium	8	2060.00	16000.00	6942.50	5018.82	---
Chromium	12	5.09	46.80	19.22	10.70	---
Cobalt	8	2.10	8.00	4.75	1.98	---
Copper	8	4.57	24.30	13.83	6.73	---
Cyanide	9	0.25	2.70	(a)	(a)	0.55
Iron	8	5830.00	21700.00	11412.50	4733.24	---
Lead	12	4.70	43.40	21.41	9.95	---

Table 4 - Continued

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Magnesium	8	1080.00	9770.00	3868.75	2825.66	---
Manganese	8	163.00	671.00	506.63	193.97	---
Mercury	5	0.06	0.26	0.12	0.08	---
Nickel	8	3.52	18.00	10.53	4.90	---
Potassium	8	270.00	1110.00	661.63	313.21	---
Selenium	6	0.22	0.55	0.32	0.13	---
Silver	8	0.34	3.41	1.14	1.00	---
Sodium	8	20.20	367.00	107.13	102.40	---
Sulfate	1	47.00	47.00	47.00	---	---
Sulfide	0	---	---	---	---	---
Thallium	8	0.02	0.90	0.27	0.27	---
Vanadium	8	7.67	35.00	20.23	9.03	---
Zinc	8	33.30	159.00	65.79	37.05	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Table 5.

Survey Results for
St. Louis Metropolitan Statistical Area
(all values in mg/kg)

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Aluminum	11	2620.00	37200.00	11079.09	9423.21	---
Antimony	10	0.33	7.50	3.37	2.26	---
Arsenic	11	1.25	11.00	6.63	2.75	---
Barium	11	43.10	321.00	177.10	79.99	---
Beryllium	11	0.08	2.80	1.01	0.76	---
Cadmium	11	0.26	8.20	(a)	(a)	0.55
Calcium	11	813.00	115000.00	(a)	(a)	5600.00
Chromium	11	3.93	31.00	15.40	7.94	---
Cobalt	11	1.46	17.00	8.14	4.36	---
Copper	11	1.46	156.00	(a)	(a)	18.90
Cyanide	10	0.30	0.75	0.48	0.17	---
Iron	11	5000.00	37900.00	16179.00	8206.60	---
Lead	11	6.22	299.00	104.04	87.24	---

Table 5 - Continued

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Magnesium	11	541.00	20400.00	(a)	(a)	2463.00
Manganese	11	155.00	1250.00	672.55	299.36	---
Mercury	11	0.02	0.28	0.09	0.08	---
Nickel	11	4.10	135.00	(a)	(a)	16.00
Potassium	11	225.00	5240.00	1708.64	1504.07	---
Selenium	10	0.10	2.60	(a)	(a)	0.46
Silver	10	0.16	1.25	0.49	0.36	---
Sodium	9	31.40	330.00	126.96	90.34	---
Sulfate	2	25.00	76.00	50.50	25.50	---
Sulfide	2	6.50	10.10	8.30	1.80	---
Thallium	10	0.16	1.30	0.44	0.32	---
Vanadium	11	7.47	80.00	27.41	17.61	---
Zinc	11	23.00	798.00	(a)	(a)	159.90

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Table 6.

Survey Results for
Peoria Metropolitan Statistical Area
(all values in mg/kg)

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Aluminum	20	3500.00	17200.00	7810.50	3268.54	---
Antimony	19	0.89	7.50	4.60	1.42	---
Arsenic	19	3.00	12.00	6.73	2.21	---
Barium	20	22.00	149.00	87.77	33.89	---
Beryllium	20	0.12	9.90	(a)	(a)	0.52
Cadmium	22	0.19	2.20	0.71	0.60	---
Calcium	20	2160.00	45000.00	13506.00	9860.02	---
Chromium	20	1.07	79.00	16.75	15.31	---
Cobalt	20	3.80	12.50	7.33	2.62	---
Copper	22	7.10	70.00	22.16	15.69	---
Cyanide	8	0.04	0.62	0.35	0.16	---
Iron	20	9700.00	80000.00	19665.00	14992.91	---
Lead	19	14.00	199.00	56.82	47.10	---

Table 6 - Continued

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Magnesium	20	1400.00	22000.00	6323.00	4758.33	---
Manganese	20	210.00	1160.00	578.80	223.08	---
Mercury	20	0.03	0.32	0.12	0.08	---
Nickel	20	9.20	27.00	16.31	5.43	---
Potassium	20	340.00	1620.00	1006.15	347.50	---
Selenium	19	0.09	1.45	0.38	0.33	---
Silver	19	0.17	1.60	0.43	0.36	---
Sodium	20	22.50	470.00	157.27	98.35	---
Sulfate	2	17.60	120.00	68.80	51.20	---
Sulfide	2	2.65	5.00	3.83	1.18	---
Thallium	19	0.06	2.50	1.43	1.13	---
Vanadium	20	1.25	39.10	17.16	8.62	---
Zinc	20	44.00	348.00	118.79	82.79	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Table 7.

Survey Results for
Decatur Metropolitan Statistical Area
(all values in mg/kg)

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Aluminum	2	5610.00	10900.00	8255.00	2645.00	---
Antimony	2	2.65	7.05	4.85	2.20	---
Arsenic	2	1.60	5.50	3.55	1.95	---
Barium	2	70.30	72.30	71.30	1.00	---
Beryllium	2	0.47	1.10	0.79	0.32	---
Cadmium	2	0.35	0.65	0.50	0.15	---
Calcium	2	1220.00	1740.00	1480.00	260.00	---
Chromium	2	8.60	12.80	10.70	2.10	---
Cobalt	2	3.70	10.10	6.90	3.20	---
Copper	2	11.20	17.60	14.40	3.20	---
Cyanide	2	0.46	1.10	0.78	0.32	---
Iron	2	6980.00	15600.00	11290.00	4310.00	---
Lead	2	23.80	31.50	27.65	3.85	---

Table 7 - Continued

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Magnesium	2	1180.00	2050.00	1615.00	435.00	---
Manganese	2	557.00	596.00	576.50	19.50	---
Mercury	2	0.05	0.06	0.06	0.01	---
Nickel	2	8.00	15.40	11.70	3.70	---
Potassium	2	613.00	1210.00	911.50	298.50	---
Selenium	2	0.24	0.59	0.42	0.18	---
Silver	2	0.38	0.70	0.54	0.16	---
Sodium	2	48.90	114.00	81.45	32.55	---
Sulfate	0	---	---	---	---	---
Sulfide	0	---	---	---	---	---
Thallium	2	0.24	0.26	0.25	0.01	---
Vanadium	2	14.30	21.70	18.00	3.70	---
Zinc	2	42.20	52.10	47.15	4.95	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Table 8.

Survey Results for
Counties not Included in Tables 2-6
(all values in mg/kg)

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Aluminum	66	2640.00	23000.00	10548.21	4965.51	---
Antimony	58	0.10	9.00	3.82	2.34	---
Arsenic	76	0.35	22.40	6.85	4.44	---
Barium	70	22.40	253.00	131.70	53.41	---
Beryllium	71	0.01	8.80	(a)	(a)	0.65
Cadmium	72	0.10	5.20	0.93	0.92	---
Calcium	66	630.00	184000.00	(a)	(a)	6495.00
Chromium	79	4.10	37.00	16.44	6.86	---
Cobalt	67	0.90	32.00	8.33	4.61	---
Copper	75	1.75	42.00	16.38	8.54	---
Cyanide	62	0.03	2.50	0.55	0.45	---
Iron	69	3620.00	29100.00	16454.35	5546.42	---
Lead	79	7.10	211.00	33.35	31.25	---

Table 8 - Continued

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Magnesium	79	476.00	33700.00	(a)	(a)	4050.00
Manganese	67	35.00	3710.00	698.90	528.61	---
Mercury	70	0.01	0.99	(a)	(a)	0.06
Nickel	75	4.70	34.60	16.60	6.69	---
Potassium	63	155.00	5600.00	1490.35	970.23	---
Selenium	71	0.05	1.70	0.47	0.36	---
Silver	71	0.14	5.90	(a)	(a)	0.60
Sodium	66	11.50	1660.00	(a)	(a)	112.50
Sulfate	10	5.00	260.00	114.16	91.07	---
Sulfide	5	0.50	8.80	3.55	2.78	---
Thallium	70	0.04	2.80	0.60	0.58	---
Vanadium	67	6.00	47.00	25.75	9.31	---
Zinc	70	2.75	400.00	95.23	70.04	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

APPENDIX A

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Aluminum

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	148	2530.00	37200.00	10170.16	5283.37	---
Chicago CMSA	41	2530.00	23900.00	10977.34	4711.74	---
Rockford MSA	8	2920.00	18800.00	8042.50	4862.65	---
St. Louis MSA	11	2620.00	37200.00	11079.09	9423.21	---
Peoria MSA	20	3500.00	17200.00	7810.50	3268.54	---
Decatur MSA	2	5610.00	10900.00	8255.00	2645.00	---
Counties Outside CMSA & MSAs	66	2640.00	23000.00	10548.21	4965.51	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Antimony

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	119	0.10	13.50	4.16	2.40	---
Chicago CMSA	24	0.48	13.50	5.16	2.90	---
Rockford MSA	6	1.85	6.50	3.16	1.65	---
St. Louis MSA	10	0.33	7.50	3.37	2.26	---
Peoria MSA	19	0.89	7.50	4.60	1.42	---
Decatur MSA	2	2.65	7.05	4.85	2.20	---
Counties Outside CMSA & MSAs	58	0.10	9.00	3.82	2.34	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Arsenic

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	167	0.35	24.00	7.10	4.13	---
Chicago CMSA	24	2.60	24.00	8.47	4.12	---
Rockford MSA	12	1.50	17.00	4.86	4.01	---
St. Louis MSA	11	1.25	11.00	6.63	2.75	---
Peoria MSA	19	3.00	12.00	6.73	2.21	---
Decatur MSA	2	1.60	5.50	3.55	1.95	---
Counties Outside CMSA & MSAs	76	0.35	22.40	6.85	4.44	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Barium

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	156	2.50	1720.00	(a)	(a)	116.00
Chicago CMSA	41	2.50	1720.00	(a)	(a)	103.00
Rockford MSA	12	62.20	175.00	114.96	30.04	---
St. Louis MSA	11	43.10	321.00	177.10	79.99	---
Peoria MSA	20	22.00	149.00	87.77	33.89	---
Decatur MSA	2	70.30	72.30	71.30	1.00	---
Counties Outside CMSA & MSAs	70	22.40	253.00	131.70	53.41	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Beryllium

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	150	0.01	9.90	(a)	(a)	0.56
Chicago CMSA	40	0.03	1.50	0.57	0.33	---
Rockford MSA	6	0.05	0.52	0.23	0.15	---
St. Louis MSA	11	0.08	2.80	1.01	0.76	---
Peoria MSA	20	0.12	9.90	(a)	(a)	0.52
Decatur MSA	2	0.47	1.10	0.79	0.32	---
Counties Outside CMSA & MSAs	71	0.01	8.80	(a)	(a)	0.65

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Cadmium

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	153	0.10	8.20	(a)	(a)	0.65
Chicago CMSA	35	0.12	7.40	(a)	(a)	1.00
Rockford MSA	11	0.50	4.90	2.20	1.71	---
St. Louis MSA	11	0.26	8.20	(a)	(a)	0.55
Peoria MSA	22	0.19	2.20	0.71	0.60	---
Decatur MSA	2	0.35	0.65	0.50	0.15	---
Counties Outside CMSA & MSAs	72	0.10	5.20	0.93	0.92	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Calcium

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	148	630.00	184000.00	(a)	(a)	7240.00
Chicago CMSA	41	1510.00	130000.00	(a)	(a)	13500.00
Rockford MSA	8	2060.00	16000.00	6942.50	5018.82	---
St. Louis MSA	11	813.00	115000.00	(a)	(a)	5600.00
Peoria MSA	20	2160.00	45000.00	13506.00	9860.02	---
Decatur MSA	2	1220.00	1740.00	1480.00	260.00	---
Counties Outside CMSA & MSAs	66	630.00	184000.00	(a)	(a)	6495.00

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Chromium

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	165	1.07	151.00	19.48	18.04	---
Chicago CMSA	41	4.40	151.00	(a)	(a)	19.00
Rockford MSA	12	5.09	46.80	19.22	10.70	---
St. Louis MSA	11	3.93	31.00	15.40	7.94	---
Peoria MSA	20	1.07	79.00	16.75	15.31	---
Decatur MSA	2	8.60	12.80	10.70	2.10	---
Counties Outside CMSA & MSAs	79	4.10	37.00	16.44	6.86	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Cobalt

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	149	0.90	32.00	8.30	3.93	---
Chicago CMSA	41	4.50	14.30	9.54	2.67	---
Rockford MSA	8	2.10	8.00	4.75	1.98	---
St. Louis MSA	11	1.46	17.00	8.14	4.36	---
Peoria MSA	20	3.80	12.50	7.33	2.62	---
Decatur MSA	2	3.70	10.10	6.90	3.20	---
Counties Outside CMSA & MSAs	67	0.90	32.00	8.33	4.61	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Copper

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	159	1.46	156.00	22.09	19.85	---
Chicago CMSA	41	4.06	113.00	29.81	21.37	---
Rockford MSA	8	4.57	24.30	13.83	6.73	---
St. Louis MSA	11	1.46	156.00	(a)	(a)	18.90
Peoria MSA	22	7.10	70.00	22.16	15.69	---
Decatur MSA	2	11.20	17.60	14.40	3.20	---
Counties Outside CMSA & MSAs	75	1.75	42.00	16.38	8.54	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Cyanide

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	118	0.03	2.70	0.59	0.49	---
Chicago CMSA	27	0.04	2.00	0.73	0.56	---
Rockford MSA	9	0.25	2.70	(a)	(a)	0.55
St. Louis MSA	10	0.30	0.75	0.48	0.17	---
Peoria MSA	8	0.04	0.62	0.35	0.16	---
Decatur MSA	2	0.46	1.10	0.78	0.32	---
Counties Outside CMSA & MSAs	62	0.03	2.50	0.55	0.45	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Iron

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	151	3620.00	80000.00	17181.28	7946.71	---
Chicago CMSA	41	10200.00	34300.00	18874.98	5708.21	---
Rockford MSA	8	5830.00	21700.00	11412.50	4733.24	---
St. Louis MSA	11	5000.00	37900.00	16179.00	8206.60	---
Peoria MSA	20	9700.00	80000.00	19665.00	14992.91	---
Decatur MSA	2	6980.00	15600.00	11290.00	4310.00	---
Counties Outside CMSA & MSAs	69	3620.00	29100.00	16454.35	5546.42	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Lead

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	163	4.70	346.00	(a)	(a)	25.10
Chicago CMSA	40	8.00	346.00	(a)	(a)	30.10
Rockford MSA	12	4.70	43.40	21.41	9.95	---
St. Louis MSA	11	6.22	299.00	104.04	87.24	---
Peoria MSA	19	14.00	199.00	56.82	47.10	---
Decatur MSA	2	23.80	31.50	27.65	3.85	---
Counties Outside CMSA & MSAs	79	7.10	211.00	33.35	31.25	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Magnesium

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	149	476.00	74500.00	(a)	(a)	4000.00
Chicago CMSA	41	1510.00	74500.00	(a)	(a)	8610.00
Rockford MSA	8	1080.00	9770.00	3868.75	2825.66	---
St. Louis MSA	11	541.00	20400.00	(a)	(a)	2463.00
Peoria MSA	20	1400.00	22000.00	6323.00	4758.33	---
Decatur MSA	2	1180.00	2050.00	1615.00	435.00	---
Counties Outside CMSA & MSAs	79	476.00	33700.00	(a)	(a)	4050.00

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Manganese

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	149	35.00	5590.00	707.00	575.14	---
Chicago CMSA	41	255.00	5590.00	837.46	809.76	---
Rockford MSA	8	163.00	671.00	506.63	193.97	---
St. Louis MSA	11	155.00	1250.00	672.55	299.36	---
Peoria MSA	20	210.00	1160.00	578.80	223.08	---
Decatur MSA	2	557.00	596.00	576.50	19.50	---
Counties Outside CMSA & MSAs	67	35.00	3710.00	698.90	528.61	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Mercury

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	140	0.01	0.99	(a)	(a)	0.06
Chicago CMSA	32	0.02	0.89	(a)	(a)	0.06
Rockford MSA	5	0.06	0.26	0.12	0.08	---
St. Louis MSA	11	0.02	0.28	0.09	0.08	---
Peoria MSA	20	0.03	0.32	0.12	0.08	---
Decatur MSA	2	0.05	0.06	0.06	0.01	---
Counties Outside CMSA & MSAs	70	0.01	0.99	(a)	(a)	0.06

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Nickel

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	157	3.52	135.00	18.92	13.91	---
Chicago CMSA	41	7.90	91.60	23.79	15.30	---
Rockford MSA	8	3.52	18.00	10.53	4.90	---
St. Louis MSA	11	4.10	135.00	(a)	(a)	16.00
Peoria MSA	20	9.20	27.00	16.31	5.43	---
Decatur MSA	2	8.00	15.40	11.70	3.70	---
Counties Outside CMSA & MSAs	75	4.70	34.60	16.60	6.69	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Potassium

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	145	155.00	5600.00	1468.49	1061.49	---
Chicago CMSA	41	462.00	5100.00	1780.61	1220.27	---
Rockford MSA	8	270.00	1110.00	661.63	313.21	---
St. Louis MSA	11	225.00	5240.00	1708.64	1504.07	---
Peoria MSA	20	340.00	1620.00	1006.15	347.50	---
Decatur MSA	2	613.00	1210.00	911.50	298.50	---
Counties Outside CMSA & MSAs	63	155.00	5600.00	1490.35	970.23	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Selenium

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	142	0.05	2.60	0.53	0.43	---
Chicago CMSA	34	0.12	1.75	0.72	0.46	---
Rockford MSA	6	0.22	0.55	0.32	0.13	---
St. Louis MSA	10	0.10	2.60	(a)	(a)	0.46
Peoria MSA	19	0.09	1.45	0.38	0.33	---
Decatur MSA	2	0.24	0.59	0.42	0.18	---
Counties Outside CMSA & MSAs	71	0.05	1.70	0.47	0.36	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Silver

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	141	0.14	5.90	(a)	(a)	0.60
Chicago CMSA	31	0.38	3.60	1.30	0.78	---
Rockford MSA	8	0.34	3.41	1.14	1.00	---
St. Louis MSA	10	0.16	1.25	0.49	0.36	---
Peoria MSA	19	0.17	1.60	0.43	0.36	---
Decatur MSA	2	0.38	0.70	0.54	0.16	---
Counties Outside CMSA & MSAs	71	0.14	5.90	(a)	(a)	0.60

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Sodium

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	142	11.50	1660.00	(a)	(a)	125.00
Chicago CMSA	37	53.00	1290.00	333.68	309.73	---
Rockford MSA	8	20.20	367.00	107.13	102.40	---
St. Louis MSA	9	31.40	330.00	126.96	90.34	---
Peoria MSA	20	22.50	470.00	157.27	98.35	---
Decatur MSA	2	48.90	114.00	81.45	32.55	---
Counties Outside CMSA & MSAs	66	11.50	1660.00	(a)	(a)	112.50

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Sulfate

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	20	5.00	260.00	97.04	80.86	---
Chicago CMSA	5	28.20	240.00	102.71	77.13	---
Rockford MSA	1	47.00	47.00	47.00	---	---
St. Louis MSA	2	25.00	76.00	50.50	25.50	---
Peoria MSA	2	17.60	120.00	68.80	51.20	---
Decatur MSA	--	---	---	---	---	---
Counties Outside CMSA & MSAs	10	5.00	260.00	114.16	91.07	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Sulfide

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	14	0.50	10.10	4.07	2.55	---
Chicago CMSA	5	2.65	3.35	3.00	0.25	---
Rockford MSA	--	---	---	---	---	---
St. Louis MSA	2	6.50	10.10	8.30	1.80	---
Peoria MSA	2	2.65	5.00	3.83	1.18	---
Decatur MSA	--	---	---	---	---	---
Counties Outside CMSA & MSAs	5	0.50	8.80	3.55	2.78	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Thallium

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	142	0.02	2.80	0.73	0.73	---
Chicago CMSA	33	0.23	2.75	0.84	0.62	---
Rockford MSA	8	0.02	0.90	0.27	0.27	---
St. Louis MSA	10	0.16	1.30	0.44	0.32	---
Peoria MSA	19	0.06	2.50	1.43	1.13	---
Decatur MSA	2	0.24	0.26	0.25	0.01	---
Counties Outside CMSA & MSAs	70	0.04	2.80	0.60	0.58	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Vanadium

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	149	1.25	80.00	24.73	10.56	---
Chicago CMSA	41	11.00	50.00	27.23	9.15	---
Rockford MSA	8	7.67	35.00	20.23	9.03	---
St. Louis MSA	11	7.47	80.00	27.41	17.61	---
Peoria MSA	20	1.25	39.10	17.16	8.62	---
Decatur MSA	2	14.30	21.70	18.00	3.70	---
Counties Outside CMSA & MSAs	70	6.00	47.00	25.75	9.31	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

Appendix A

Summary of Survey Results
By Inorganic Constituent
(all values in mg/kg)

Zinc

Parameter	Number of Data Points	Minimum Conc.	Maximum Conc.	Arithmetic Mean	Standard Deviation	Median
Statewide	152	2.75	798.00	114.33	114.16	---
Chicago CMSA	41	28.10	614.00	122.10	110.25	---
Rockford MSA	8	33.30	159.00	65.79	37.05	---
St. Louis MSA	11	23.00	798.00	(a)	(a)	159.90
Peoria MSA	20	44.00	348.00	118.79	82.79	---
Decatur MSA	2	42.20	52.10	47.15	4.95	---
Counties Outside CMSA & MSAs	70	2.75	400.00	95.23	70.04	---

(a) Data were not normally distributed; therefore inappropriate to calculate mean and standard deviation.

APPENDIX B

Normal Ranges for Inorganics in Soil as Reported in Four Literature Sources

Parameter	Dragun, 1988. Range (mg/kg)	Lindsay, 1979. Range (mg/kg)	Parr, 1983. Range (mg/kg)	Alloway, 1990. Range (mg/kg)
Aluminum (Al)	10,000 - 300,000	10,000 - 300,000	10,000 - 300,000	10,000 - 300,000
Antimony (Sb)	0.6 - 10	---	---	0.2 - 10
Arsenic (As)	1.0 - 40	1 - 50	1 - 50	0.1 - 40
Barium (Ba)	100 - 3,500	100 - 3,000	---	100 - 3,000
Beryllium (Be)	0.1 - 40	0.1 - 40	0.2 - 10	0.2 - 10
Cadmium (Cd)	0.01 - 7.0	0.01 - 0.7	0.01 - 7	0.01 - 2
Calcium (Ca)	100 - 400,000	7,000 - 500,000	7,000 - 500,000	7,000 - 500,000
Chromium (Cr)	5.0 - 3,000	1 - 1,000	5 - 1,000	5 - 1,500
Cobalt (Co)	1.0 - 40	1 - 40	1 - 40	0.5 - 65
Copper (Cu)	2.0 - 100	2 - 100	2 - 100	2 - 250
Cyanide (CN)	---	---	---	---
Iron (Fe)	7,000 - 550,000	7,000 - 550,000	7,000 - 550,000	7,000 - 550,000
Lead (Pb)	2.0 - 200	2 - 200	2 - 200	2 - 300
Magnesium (Mg)	600 - 6,000	600 - 6,000	600 - 60,000	600 - 60,000
Manganese (Mn)	100 - 4,000	20 - 3,000	100 - 4,000	20 - 10,000

Parameter	Dragun, 1988. Range (mg/kg)	Lindsay, 1979. Range (mg/kg)	Parr, 1983. Range (mg/kg)	Alloway, 1990. Range (mg/kg)
Mercury (Hg)	0.01 - 0.08	0.01 - 0.3	0.02 - 0.2	0.01 - 0.5
Nickel (Ni)	5.0 - 1,000	5 - 500	10 - 1,000	2 - 750
Potassium (K)	400 - 30,000	400 - 30,000	400 - 30,000	400 - 30,000
Selenium (Se)	0.1 - 2.0	0.01 - 2.0	0.1 - 2.0	0.1 - 5.0
Silver (Ag)	0.1 - 5.0	0.01 - 5.0	---	0.01 - 8.0
Sodium (Na)	750 - 7,500	750 - 7,500	700 - 7,000	700 - 70,000
Sulfate	---	---	---	---
Sulfide	---	---	---	---
Thallium (Tl)	---	---	---	0.1 - 0.8
Vanadium (V)	20 - 500	20 - 500	---	20 - 250
Zinc (Zn)	10 - 300	10 - 300	10 - 300	1 - 900

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TECHNICAL REPORT

A SUMMARY OF SELECTED BACKGROUND CONDITIONS FOR INORGANICS IN SOIL

Office of Chemical Safety
Illinois Environmental Protection Agency
August 1994

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Introduction

The Office of Chemical Safety has completed a summary of selected background conditions for inorganic chemicals in surface soils in Illinois. The objectives of this project were as follows:

(1) to ascertain a reasonable indication of statewide background concentrations in soil of selected inorganic chemicals of public health and ecological interest;

(2) to support the Agency's efforts in determining the presence of elevated levels of lead in soil by determining the levels of lead present in selected background soils across the state; and

(3) to utilize, to the extent possible, existing site-specific studies and background data which represents a major data resource already existing within Agency files.

Technical Approach

The first step of this project involved the review of existing Agency files in order to obtain data on background concentrations in soil. The results were obtained from samples taken in areas, judged by the field staff taking the samples, to be undisturbed and unimpacted by site-related activities. No efforts were made to investigate these results relative to the potential for past sources of atmospheric deposition (e.g., smelter, leaded gasoline, etc.) or previous site activities at the background sample location. Certain areas of the state have likely been impacted by anthropogenic sources and therefore represent conditions

that may vary from naturally occurring levels. Sample results were obtained from Preliminary Assessment/Site Investigations performed since 1986 plus sample results from State and Federal Superfund site investigations in Illinois.

The second step in the process of generating this technical report involved the collection of additional samples. Surface soil samples were obtained by Agency staff from those counties in the State for which data were lacking. These samples were specifically taken from areas expected to represent naturally occurring background.

The current database includes 275 data points from sample locations in all 102 counties in Illinois. Since some of these sites required varying degrees of investigation, certain samples do not include the complete list of analytical parameters. As a result, each inorganic may have a different number of data points. The minimum concentrations, maximum concentrations, mean concentrations, and median concentrations were calculated for each of the inorganic parameters. Values which were reported as less than the detection limit were included in the summary statistics by using one-half of the detection limit. If upon analysis of these data, it could be concluded that the background sample had been impacted by site-related activities then the sample was not used in the summary data.

Data used in this report are laboratory analytical values for total metals determined by USEPA SW-846 methods. These methods convert all of each metal tested to a soluble ion that can be detected. Since the original ionic speciation of the metals are not known, conclusions regarding mobility, exposure, assimilations, and toxicity cannot be directly inferred.

It should be noted that uncertainties inherent in a report of this type include those due to variation in sampling procedures, variation in sampling depth, the use of one-half the detection limit for non-detects, differences in

analytical techniques between laboratories, and the impact of anthropogenic sources on the concentrations existing at the sample location. Furthermore, we wish to emphasize that the samples were not collected randomly nor in accordance with an a priori experimental design. Due to resource constraints, the majority of data used pre-existed this study. Consequently, this study is not and should not be characterized as having a totally unbiased scientific basis.

Results

Figure 1 shows the survey locations across the State. Table 1, 2, and 3 include an overall summary of the ranges, means, and medians calculated for the inorganic parameters. This overall data set includes samples from urban and rural locations.

Statewide Data -- Table 1 includes a summary of data obtained for the entire state. It should be noted that the statewide summary statistics should be used in conjunction with Tables 2 and 3. These breakouts of urban vs. rural counties indicate that certain inorganic parameters such as lead, zinc, and cadmium are generally higher in the urban environment.

Urban Data -- Table 2 includes data for counties within metropolitan statistical areas (MSAs) and Table 3 includes data for counties outside MSAs. MSAs are geographic areas consisting of a large population nucleus - a census-defined "urbanized area" - together with adjacent communities that have a high degree of economic and social integration with that nucleus. In MSAs with a population of one million or more, primary metropolitan statistical areas (PMSAs) may be identified. When PMSAs are defined, the MSA of which they are component part is redesignated a consolidated metropolitan statistical area (CMSA). Figure 2 shows the MSAs, PMSAs, and CMSA for Illinois.

The following inorganic constituents were detected in certain locations in the state at levels above the ranges for natural soils from the scientific literature: cadmium, lead, barium, mercury, thallium, and zinc.

Cadmium -- Those locations in the state where there is the greatest diversion from background levels published in the scientific literature for cadmium were in the counties of St. Clair and Lake. In St. Clair County, the levels of cadmium detected were highest in Sauget and Fairmont City where the levels detected were 7.3 mg/kg and 8.2 mg/kg, respectively. In Lake County, the highest level of cadmium was 7.4 mg/kg which was obtained from a background site in Waukegan.

Lead -- The highest levels of total lead identified during the survey were found in the counties of Cook and Lake. Two of the three highest detections for lead were in Chicago where the concentrations reported were 346 mg/kg and 647 mg/kg. The second highest concentration of lead detected was 384 mg/kg and was obtained in the City of Waukegan in Lake County.

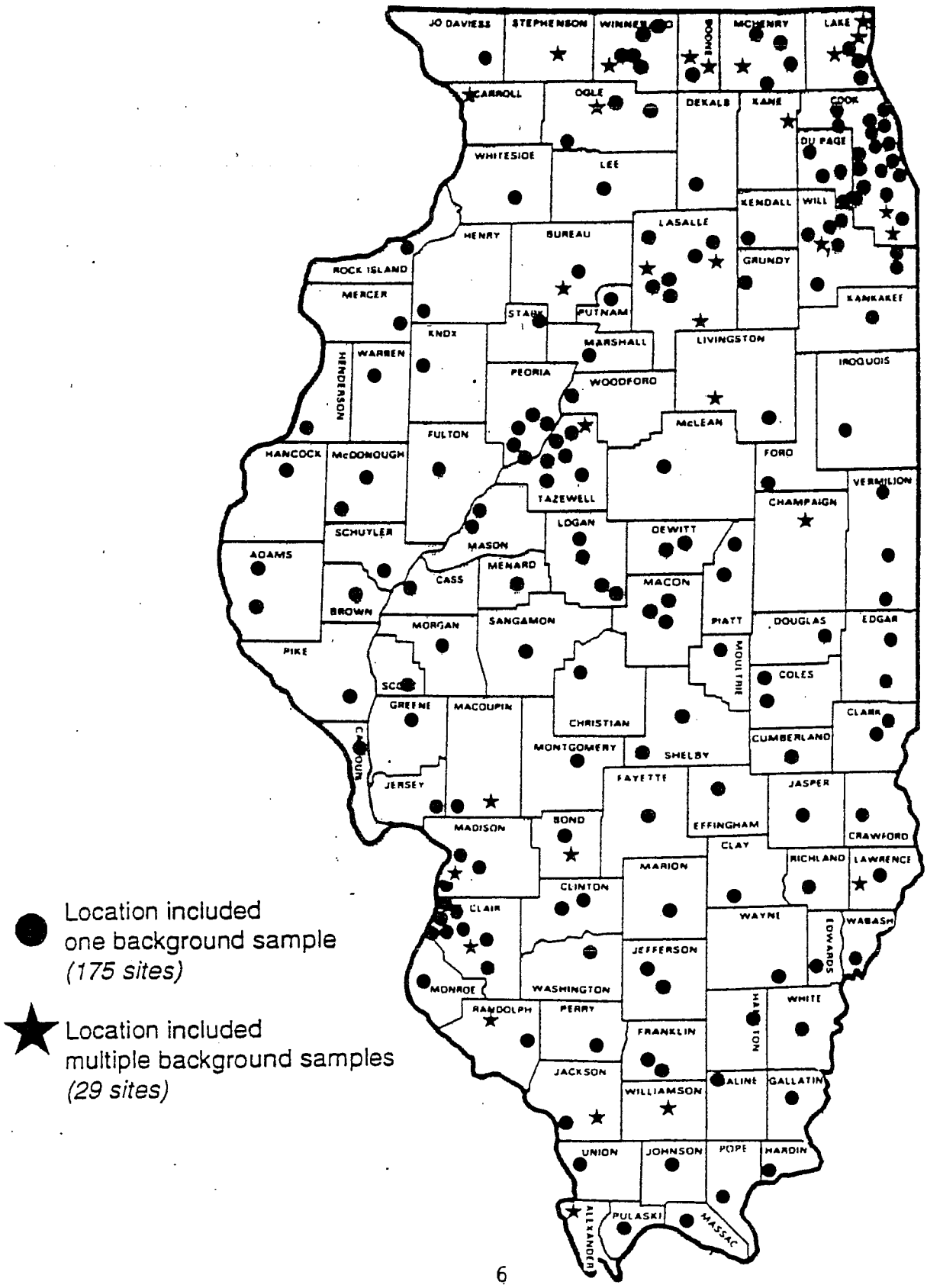
Data Utilization

These data can be used by programs in the Agency to evaluate the plausible validity of any site-specific background data collected for various cleanup sites across the state. These data, however, are not meant to replace the collection of site-specific background data for sites.

A second use for these data is as a general screening check for determining the potential presence of inorganic contamination at a site. These data appear to present a reasonable indication of background conditions in Illinois and can be used to compare with site data. Doing so could identify any inorganic

contaminants which may be present in concentrations above what could be viewed as the "normal" range.

Sample Locations for Selected Background Samples for Inorganics in Soil

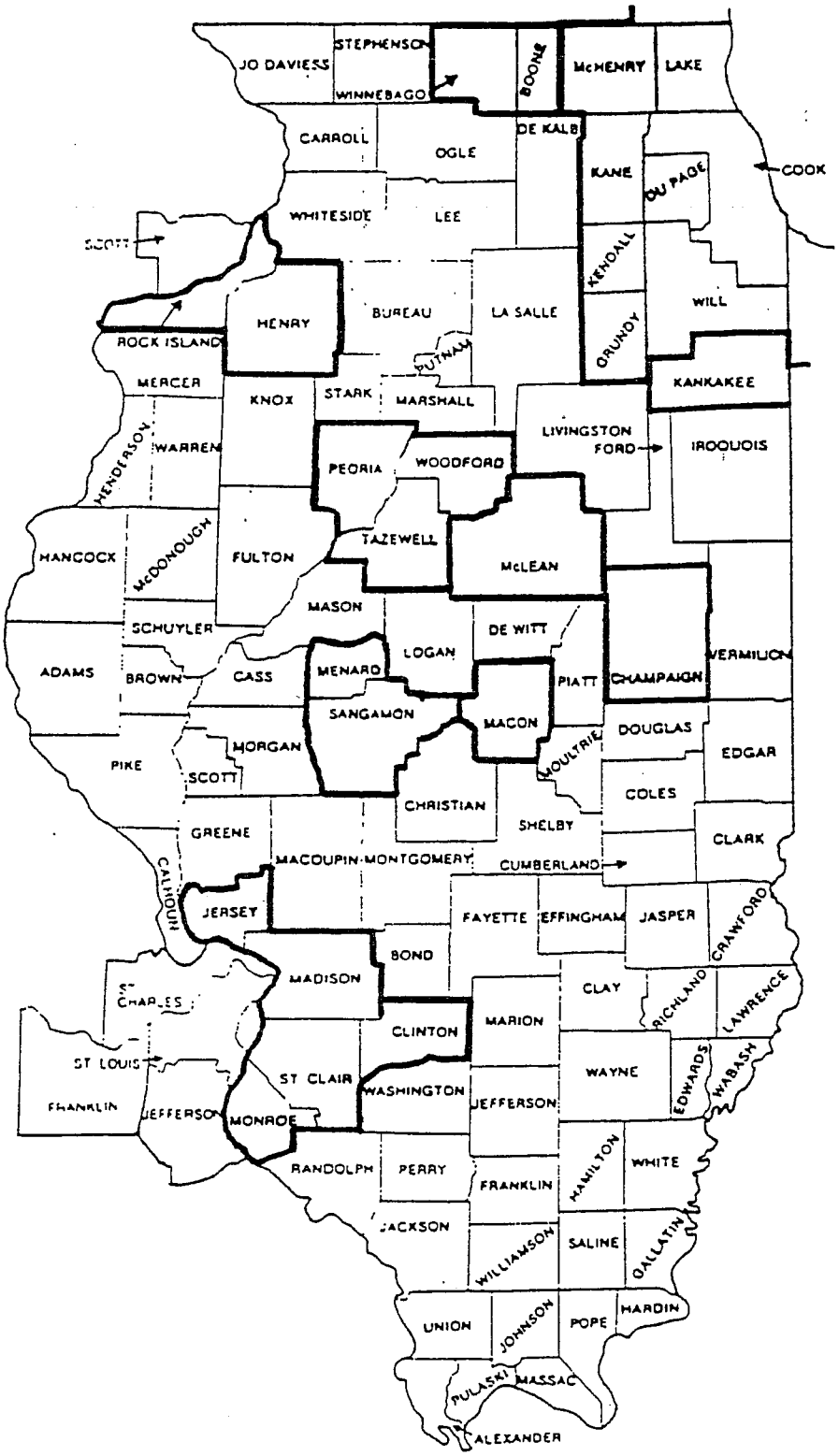


● Location included one background sample *(175 sites)*

★ Location included multiple background samples *(29 sites)*

FIGURE 2

Illinois Consolidated Metropolitan Statistical Areas, Primary Metropolitan Statistical Areas, Metropolitan Statistical Areas, and Counties



Aurora-Elgin, IL PMSA
Kane & Kendall Counties, IL
Bloomington-Normal, IL MSA
McLean County, IL
Champaign-Urbana-Rantoul, IL MSA
Champaign County, IL
Chicago, IL PMSA
Cook, DuPage, & McHenry Counties, IL
Chicago-Gary-Lake Cnty, IL-IN-WI CMSA
Aurora-Elgin, IL PMSA
Chicago, IL PMSA
Gary-Hammond, IN PMSA (Lake & Porter Cntys., IN)
Joliet, IL PMSA
Kenosha, WI PMSA (Kenosha Cnty., WI)
Lake County, IL PMSA
Davenport-Rock Island-Moline, IA-IL MSA
Henry & Rock Island Counties, IL (Scott Cnty, IA)
Decatur, IL MSA
Macon County, IL
Joliet, IL PMSA
Grundy & Will Counties, IL
Kankakee, IL MSA
Kankakee County, IL
Lake County, IL PMSA
Lake County, IL
Peoria, IL MSA
Peoria, Tazewell, & Woodford Counties, IL
Rockford, IL MSA
Boone & Winnebago Counties, IL
St. Louis, MO-IL MSA
Clinton, Jersey, Madison, Monroe, & St. Clair Counties, IL
Franklin, Jefferson, St. Charles, & St. Louis Cntys., MO;
St. Louis City, MO)
Springfield, IL MSA
Menard & Sangamon Counties, IL

Source: Illinois Statistical Abstract. 1991.

TABLE 1.

Summary Information for Total Concentrations of
Inorganic Chemicals in Background Soils in Illinois (mg/kg)

STATEWIDE DATA

Parameter	Number of Data Points	Range	Mean	Median
Aluminum	213	1388 - 37200	10126	9270
Antimony	142	0.18 - 8.6	3.7	3.6
Arsenic	234	0.35 - 24	6.7	5.9
Barium	251	ND (<5) - 1720	130	119
Beryllium	213	ND (<0.02) - 9.9	0.69	0.58
Cadmium	243	ND (<0.2) - 8.2	0.97	0.5
Calcium	213	630 - 184000	16443	6340
Chromium	261	ND (<2.14) - 151	17.3	14.0
Cobalt	214	0.9 - 32	8.9	8.8
Copper	254	1.0 - 156	19.7	14.0
Cyanide*	163	ND (<0.06) - 2.7	0.58	0.5
Iron	246	3200 - 80000	16190	15200
Lead	267	4.7 - 647	49.2	25.0
Magnesium	214	476 - 74500	7231	3410

TABLE 1. - CONTINUED

Parameter	Number of Data Points	Range	Mean	Median
Manganese	244	61.5 - 5590	767	631
Mercury	200	ND (<0.01) - 1.67	0.11	0.06
Nickel	252	ND (<3.1) - 135	16.8	14.1
Potassium	240	270 - 5820	1363	1120
Selenium	200	ND (<0.1) - 2.6	0.50	0.39
Silver	233	ND (<0.06) - 5.9	0.84	0.50
Sodium	205	14.1 - 7600	216	130
Sulfate	28	10 - 260	93.8	88.9
Sulfide	18	ND (<1.00) - 10.1	3.7	3.0
Thallium*	191	0.02 - 2.8	0.57	0.39
Vanadium	214	ND (<2.5) - 80	25.0	25.0
Zinc	246	ND (<5.5) - 798	102.9	67.4

* The total number of data points for cyanide (163) and thallium (191) are higher for the statewide data vs. the combined total from Tables 2 and 3 (158 and 183 respectively). This difference is due to the omission of certain data points in the MSA vs. non-MSA breakouts due to elevated detection limits (1/2 detection limit was higher than the highest detected concentration).

TABLE 2.

Summary Information for Total Concentrations of
Inorganic Chemicals in Background Soils in Illinois (mg/kg)

Counties **WITHIN** Metropolitan Statistical Areas

Parameter	Number of Data Points	Range	Mean	Median
Aluminum	103	1388 - 37200	10148	9500
Antimony	67	0.24 - 8	4.2	4.0
Arsenic	114	1.1 - 24	7.4	7.2
Barium	109	ND (<5) - 1720	133	110
Beryllium	99	0.05 - 9.9	0.73	0.59
Cadmium	104	ND (<2.5) - 8.2	1.3	0.6
Calcium	103	813 - 130000	20783	9300
Chromium	114	ND (<2.14) - 151	21.2	16.2
Cobalt	103	2.1 - 23	8.8	8.9
Copper	107	ND (<2.93) - 156	28.9	19.6
Cyanide	81	ND (<0.07) - 2.7	0.64	0.51
Iron	105	5000 - 80000	17607	15900
Lead	119	4.7 - 647	71.1	36.0
Magnesium	103	541 - 74500	10872	4820

TABLE 2. - CONTINUED

Parameter	Number of Data Points	Range	Mean	Median
Manganese	105	155 - 5590	742	636
Mercury	87	0.02 - 0.99	0.12	0.06
Nickel	105	ND (<3.1) - 135	20.9	18.0
Potassium	105	270 - 5820	1560	1268
Selenium	85	ND (<0.12) - 2.6	0.58	0.48
Silver	91	ND (<0.32) - 5.6	0.97	0.55
Sodium	97	20.2 - 1290	208	130
Sulfate	15	17.6 - 240	85.8	85.5
Sulfide	11	ND (<1.00) - 10.1	3.9	3.1
Thallium	78	0.02 - 1.6	0.46	0.32
Vanadium	103	ND (<2.5) - 80	25.0	25.2
Zinc	106	23 - 798	137.9	95.0

TABLE 3.

Summary Information for Total Concentrations of
Inorganic Chemicals in Background Soils in Illinois (mg/kg)

Counties **OUTSIDE** Metropolitan Statistical Areas

Parameter	Number of Data Points	Range	Mean	Median
Aluminum	110	2640 - 23300	10105	9200
Antimony	75	0.18 - 8.6	3.2	3.3
Arsenic	120	0.35 - 22.4	5.9	5.2
Barium	142	22.4 - 253	127	122
Beryllium	114	ND (<0.02) - 8.8	0.65	0.56
Cadmium	139	ND (<0.2) - 5.2	0.73	0.50
Calcium	110	630 - 184000	12379	5525
Chromium	147	4.3 - 37	14.3	13.0
Cobalt	111	0.9 - 32	8.9	8.4
Copper	147	1 - 42	13.0	12.0
Cyanide	77	ND (<0.06) - 1.2	0.46	0.50
Iron	141	3200 - 29100	15134	15000
Lead	148	ND (<7.44) - 270	31.5	20.9
Magnesium	111	476 - 24100	3853	2700

TABLE 3. - CONTINUED

Parameter	Number of Data Points	Range	Mean	Median
Manganese	139	61.5 - 3710	784	630
Mercury	113	ND (<0.01) - 1.67	0.10	0.05
Nickel	147	ND (<5) - 34.6	13.9	13.0
Potassium	135	280 - 5600	1210	1100
Selenium	115	ND (<0.1) - 1.7	0.44	0.37
Silver	142	ND (<0.06) - 5.9	0.76	0.50
Sodium	108	14.1 - 7600	222.8	130.0
Sulfate	13	10 - 260	103	110
Sulfide	7	ND (<1) - 8.8	3.4	2.9
Thallium	105	0.05 - 2.8	0.50	0.42
Vanadium	111	6 - 47	25.0	25.0
Zinc	140	ND (<5.5) - 400	76.3	60.2