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MAY 21 2015

STATE OF ILLINOIS
Pollution Control Board

ILLINOIS POLLUTION CONTROL BOARD

May 21, 2015

IN THE MATTER OF:)
)
PETITION OF THE CITY OF) AS 15-3
COLLINSVILLE FOR AN ADJUSTED) (Adjusted Standard - Water)
STANDARD FROM 35 ILL. ADM. CODE)
620.410 FOR CERTAIN CONSTITUENTS)



ORIGINAL

HEARING OFFICER ORDER

The Board has determined that a hearing would be advisable in this proceeding. Attached to this order are questions for the City of Collinsville (Collinsville) to answer in writing before hearing. Collinsville is directed to review the questions to determine how much time will be needed to file answers. A deadline for Collinsville's answers will be set at the first telephone status conference.

The Illinois Environmental Protection Agency (IEPA) is directed to respond to Collinsville's answers. A deadline for IEPA will be set at a later date.

The parties are directed to participate in a telephone status conference with the hearing officer at 10:00 a.m. on June 10, 2015. The status conference shall be initiated by Collinsville.

IT IS SO ORDERED.

Carol Webb

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Hearing Officer
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BOARD QUESTIONS FOR CITY OF COLLINSVILLE

35 Ill. Adm. Code 104.406(a)

1. The petition states, "Collinsville seeks this relief in order to obtain its certification of completion of post-closure care..." Pet. at 1-2. The petition further states, "The closed landfill...was in operation under the 807 regulations from the early 1970s through 1984..." Pet. at 6. Please clarify if Collinsville will be seeking a certification of completion of post-closure care pursuant to 35 Ill. Adm. Code 807.524(c).

2. The petition states, "Collinsville seeks relief from 35 Ill. Adm. Code 620.410(a), (b), (c), (e) and 620.440(c) as more fully set forth in Exhibit [8]." Pet. at 5.
 - (a) Section 620.410(c) lists the Class I groundwater quality standards for Explosive Constituents. Neither Exh. 8 nor paragraph 17 of the petition list any constituents from 35 Ill. Adm. Code 620.410(c).
 - (i) Please clarify for which constituent under 35 Ill. Adm. Code 620.410(c) Collinsville seeks an adjusted standard.
 - (ii) Please provide justification for any such constituents along with any alternate limits.

 - (b) Subsection 620.440(c), which sets forth standards for groundwater within a previously mined area that is classified as Class IV: Other Groundwater under Section 620.240(g), specifies for some constituents that the Class II standard applies and for others that "the standards are the existing concentrations." 35 Ill. Adm. Code 620.440(c). Collinsville states the landfill is subject to Class I groundwater quality standards. Pet. at 9. Paragraph 17 and Exh. 8 do not seem to specifically address an adjusted standard from subsection 620.440(c).
 - (i) Please clarify why the Collinsville landfill property is subject to Class I groundwater quality standards rather than Class IV for groundwater within a previously mined area.
 - (ii) Please address whether Collinsville intends to proceed under 35 Ill. Adm. Code 620.260 Reclassification of Groundwater by Adjusted Standard.
 - (iii) Please clarify what adjusted standard Collinsville is seeking from subsection 620.440(c).
 - (iv) If Collinsville is seeking an adjusted standard from subsection 620.440(c), please clarify if Collinsville is seeking to classify some or all of the groundwater at the site as Class IV: Other Groundwater. If so, please provide supporting information to demonstrate the groundwater in specific areas of the site meets the Class IV provisions of Section 620.240 rather than the Class I criteria under Section 620.210.

- (v) Please clarify if Collinsville is seeking adjusted standards for the following constituents as provided in 620.440(c) to be set at the Class II water quality standards or the existing concentrations:

Class II Water Quality Standards:

All constituents listed under Section 620.420 except the following.

Existing Concentrations

TDS

Chloride

Iron

Manganese

Sulfates

pH

1,3-dinitrobenzene

2,3-dinitrotoluene

2,6-dinitrotoluene

HMX (high melting explosive, octogen)

Nitrobenzene

RDS (royal demolition explosive, cyclonite)

1,3,5-trinitrobenzene

2,4,6-trinitrotoluene (TNT)

3. The petition states that Subsection “620.420(a)(2) addresses pesticide chemicals”. Pet. at 6.
- (a) Please clarify if Collinsville intended this reference to be Subsection 620.420(b)(2) which addresses standards for pesticide chemical constituents.
- (b) Subsection 620.420(b)(2) provides that the Class II standards for pesticide chemical constituents “do not apply to groundwater within 10 feet of the land surface...” 35 Ill. Adm. Code 620.420(b)(2). Please clarify if Collinsville is requesting an adjusted standard for Picloram, p-Dioxane, and MCPP such that neither the Class I, Class II, nor requested numeric adjusted standards would apply to “groundwater within 10 feet of the land surface, provided that the concentrations of such constituents result from the application of pesticides in a manner consistent with the requirements of the Federal Insecticide, Fungicide and Rodenticide Act) 7 USC 136 et seq.) and the Illinois Pesticide Act [415 ILCS 60].” See Ill. Adm. Code 620.420(b)(2).
4. The petition states, “Collinsville seeks relief *from* 35 Ill. Adm. Code ... 620.440(c) as more fully set forth in Exhibit [8].” Pet. at 5, emphasis added. The petition states, “The City of Collinsville closed landfill is currently subjected to Class I Groundwater standards...” Pet. at 9. The petition also states, “Collinsville hereby requests an adjusted

standard, consistent with Exhibit [8], which confirms that certain constituents, as outlined below, be evaluated against the Class II Standards, 620.420, *in accordance with* 620.440(c) as modified by this Adjusted Standard Petition.” Pet. at 9, emphasis added. Subsection 620.440(c) provides for the Class IV groundwater quality standards within a previously mined area.

- (a) Please clarify if the area of Collinsville landfill property for which the adjusted standard is sought is subject to Class IV: Other Groundwater standards.
- (b) Please clarify if Collinsville is requesting an adjusted standard *from* Section 620.440(c) or if Collinsville simply referenced Section 620.440(c) as a point of comparison for constituents the Board has already recognized for Class IV groundwater within a previously mined area.
- (b) For the following constituents listed in Exhibit 8, 35 Ill. Adm. Code 620.440(c) provides that the Class IV groundwater quality standards within a previously mined area are the existing concentrations:
 - TDS
 - Chloride
 - Iron
 - Manganese
 - Sulfates
 - pH

Please clarify if Collinsville is requesting an adjusted standard from the existing concentrations for these constituents such that the adjusted standard would be the concentrations provided in Exh. 8.

5. Exh. 3 refers to a Violation Notice M-1998-00195, issued by IEPA on October 6, 1998 as a result of an IEPA inspection of the landfill completed on April 22, 1998. Exh. 3 at iv. Exh. 3 states, “IEPA’s inspection of the landfill completed on April 22, 1998...identified levels of chloride and Total Dissolved Solids (TDS) in monitoring well MW-1 had exceeded the Class I Groundwater Standards of 200 mg/L and 1,200 mg/L, respectively (35 IAC 620.420(a), except as provided in Section 620.450 or subsection [620.420](a)(3) or (d)).” Exh. 3 at iv.

Although the statement from Exh. 3 above refers to the Class I Groundwater Standards, it cites to the Class II Groundwater Standards at 35 Ill. Adm. Code 620.420(a). Please clarify if Exh. 3 meant to cite to the Class I groundwater quality standards at Section 620.410(a) for inorganic chemical constituents. If not, please clarify the applicability of Section 620.420 as stated in Exh. 3.

35 Ill. Adm. Code 104.406(d)

6. The petition explains that a leachate collection system was installed to collect leachate in three subsurface interceptor trenches and that collected leachate is transported and

discharged to the Collinsville Waste Water Treatment Plant. The petition states, “[A] fourth interceptor trench was installed to address creek erosion adjacent to the landfill and the presence of seeps on the northern perimeter of the landfill.” Pet. at 6.

Collinsville states, “[T]he erosion protection will preserve the integrity of the creek bank and prevent the creek from cutting into the landfill. The new leachate collection system was activated in January 2014 and leachate samples will be collected annually for two years and results will be evaluated against previous leachate results to assess the need for additional leachate sampling.” Pet. at 7.

- (a) If IEPA issues a certification of completion of post-closure care, please explain what maintenance Collinsville will perform to address any continued seeps on the northern perimeter and the leachate collected in the interceptor trenches.
 - (b) Please explain what mechanism, such as an institutional control, Collinsville will use to ensure maintenance of the erosion protection of the creek bank.
7. The petition states, “The mine covered the entire project site [Collinsville Landfill] and was known as Canteen Mine Number 2...The mine shafts...were located northwest of the project site...” Exh. 1 at 1. Please clarify if the Canteen Mine was a subsurface or surface mine.
 8. The petition explains that the principal activity at the landfill is periodic monitoring along with the collection and transportation of leachate to the Collinsville Wastewater Treatment Plant. Pet. at 6. Please address the number of employees at the facility, indicating whether they are contractors or city employees, and the frequency of their visits to the landfill.
 9. To address the area affected, please identify the vertical and horizontal boundaries within which the adjusted groundwater quality standards would apply by identifying the affected water bearing unit and by supplying a legal description along with a map delineating the limits of the landfill property to which the adjusted standard would apply.
 10. In Figures B-1 through B-12 Aerial Photographs Sample Locations, the legend for the purplish line reads, “Southern/Eastern Landfill Property Boundary”. However, the purplish line is shown traversing only part of the way across the northern and western perimeter of the landfill. (Pet. Exh. 1) Figure 4-1 depicts the property boundary around the full perimeter with a blue line. (Pet. Exh. 4.)
 - (a) Please clarify if the property boundary depicted in Figure 4-1 accurately reflects the property boundary that should appear in Figures B-1 through B-12.
 - (b) In Figure 4-1 in the northwest corner of the property, the yellow line depicting the boundary of waste appears to cross outside the blue line depicting the property boundary. Please clarify if the waste boundary extends beyond the property line or provide a revised figure depicting the property boundary and waste boundary.

11. Exh. 1 indicates that for Figure B-12 (Exh. 1), “the actual boundary of the landfilled waste is outlined with a solid red line.” The solid red line in Figure B-12 extends west beyond the “southern tributary” surface water, indicating the landfilled waste area incorporates portions of the creek. A solid red line denotation also appears in Figure 2 (Exh. 3-1) in a slightly different location east of the southern tributary. Figure 2 (Exh. 3-1) also denotes a disjointed yellow line as the “Boundary of Waste”. Figure 4-1 (Exh. 3) also depicts the same details but in slightly different locations. The locations of the monitoring wells, piezometers, and soil borings are also shifted from Figure B-12 to Figure 2 to Figure 4-1. Please provide revised Figure B-12 (Exh. 1), Figure 2 (Exh. 3-1), and Figure 4-1 (Exh. 4) showing consistent and precise details.
12. Figure B-12 (Exh. 1) and Figure 2 (Exh. 3-1) depict the following monitoring wells as outside the landfill property boundary: MW-2, MW-6, MW-7. Figure 4-1 (Exh. 4) depicts MW-6 and MW-7 as inside the landfill property boundary and MW-2 and MW-5 as outside. Exh. 5-7 at 17 states that MW-6 is located on residential property adjacent to the site.
 - (a) Please clarify the locations of each of the onsite and offsite monitoring wells.
 - (b) Please provide a figure accurately depicting the monitoring well locations.
13. Figure 2 “Cross Sections A-A’, B-B’, and C-C’ ” (Exh. 3, Att. A1) depict depth profiles for the landfill.
 - (a) Please provide a plan view site map showing the locations of the cross sections.
 - (b) Please indicate the lowest elevation of the bottom of the landfill.
14. Table 1 (Exh. 5-7) provides groundwater elevations for MW-1 through MW-7. The lowest groundwater elevation appears to be 481.28 feet in MW-2. Figure 2 (Exh. 3, Att. A1) shows the landfill elevations. The lowest elevation of the bottom of the landfill provided in the record appears to be approximately 485 feet above NGVD [National Geodetic Vertical Datum].
 - (i) Please indicate if any of the monitoring wells were screened below the lowest elevation of the bottom the landfill. If not, please explain why.
 - (ii) Please identify if any of the monitoring wells are screened in the “uppermost aquifer” as defined in 35 Ill. Adm. Code 810.103.
15. Exh. 3 explains MW-3 is located within the landfill. Exh. 3 at 6-7. Results for MW-3 were provided in Table 5-1.3 (Aug-07, Oct-01, Feb-08, May-08), Table 5-2.3 (Aug-08, Nov-08, Feb-09, May-09). Exh. 5-1, 5-2. Results for leachate were provided in Table 5.8-2 (Feb-14). Exh. 5-8. The petition at 3 states, “Perchlorate was not detected in the leachate sample collected in February 2013.” Pet. at 3. The exhibits don’t appear to

contain results for leachate sampling from February 2013, although Table 5-8.2 of Exh. 5-8 contains leachate results dated February 26, 2014.

- (a) Please clarify if the leachate sample referred to in the petition on page 3 is the February 26, 2014 sample shown in Table 5-8.2.
 - (b) Please clarify if perchlorate, picloram, p-Dioxane, or MCPPE were detected in any leachate samples, and if so, when and at what concentration.
16. In Exh. 5-2 Table 5-2.5, there is a column heading entitled "Oct-07". Please clarify if this should this be "Oct-08".
 17. Exh. 5 Tables 5-1.1, 5-1.3, and 5-1.4 provide a footnote for the analytical results for August 2007 and October 2007, stating, "[A]dditional parameters were analyzed for assessment monitoring. These parameters included unfiltered arsenic, barium, chloride, iron, manganese, sulfate, thallium, TDS, and picloram. Results are not reported under 2007-310-SP. Results were reported in the Assessment Monitoring Report submitted January 14, 2008." Exh. 5, Table 5-1.1, 5-1.3, 5-1.4. Please provide the results referred to in this footnote.

35 Ill. Adm. Code 104.406(e)

18. For the constituents detected in the groundwater associated with herbicides (p-dioxane, MCPPE, and picloram), please address whether they would attenuate naturally if there were no additional herbicide application using the same three constituents. If so, please describe how long would it take for concentrations to dissipate below the groundwater quality standards.
19. Please address whether other herbicides are available that would be effective in post closure care maintenance of the landfill site and that would not contain constituents listed under 35 Ill. Adm. Code 620.410(b) or 620.420(b) capable of migrating to groundwater. Additionally, address whether other herbicides are available that might migrate to groundwater but would be readily biodegradable thereby only persisting in the groundwater for a short amount of time.
20. Please address costs associated with the use of alternative herbicides identified above and whether it would be economically reasonable and technically feasible for the Collinsville landfill.
21. Instead of permanently adjusting the groundwater quality standards for the constituents associated with herbicide use (picloram, p-Dioxane and MCPPE), please address whether Collinsville could switch herbicide products, put an institutional control on property that only readily biodegradable herbicide products may be used, and wait for the groundwater quality to reach steady-state compliance with the groundwater quality standards for picloram, p-Dioxane and MCPPE.

22. Exh. 1 refers to “Area 1, Coal/Gob Storage Area”, which was “present on both sides of Canteen Creek...and was located along the northern perimeter of the current project site.” Exh. 1 at 1. Figures B-1 through B-12 and 4-1 show a portion of Area 1 lies outside the boundary of landfill waste but inside the Collinsville landfill property boundary. Exh. 1, Exh. 4.
- (a) Please address whether the portion of Area 1 outside the landfill waste boundary has been capped.
 - (b) Please address whether a new cap over the portion of Area 1 within the Collinsville Landfill property boundary and outside the landfill waste boundary has the potential to permanently reduce levels of constituents in the requested adjusted standard to below the applicable groundwater standards. Please explain if such a cap would minimize infiltration into the historic gob materials and thereby reduce acid mine drainage attributed to the leaching of constituents from the soil to the groundwater. If so, address the potential costs associated with this option.
 - (c) The Surface Coal Mining Land Conservation and Reclamation Act addresses lands “affected by surface and underground coal mining”. 225 ILCS 720. Address whether capping the portion of Area 1 within the Collinsville Landfill property boundary and outside the landfill waste boundary could be considered a mine reclamation project pursuant to the Surface Coal Mining Land Conservation and Reclamation Act [225 ILCS 720] and 62 Ill. Adm. Code 1700 through 1850. If so, please address the costs and benefits of doing so.

35 Ill. Adm. Code 104.406(f)

23. IEPA stated, “[T]here does not appear to be any specific proposed language for a Board order...” Rec. at 4. Exh. 8 presents proposed standards for listed parameters in table format that also includes “Notes/Comments” and “Source”. Additionally, Collinsville requests the adjusted standard provide “for those inorganic parameters not specifically identified, Class II groundwater standards shall apply.” Pet. at 9-10 (paragraph 17). Please provide specific proposed language for a Board order, listing each constituent, the adjusted standard value or citation to the Class II groundwater quality standards, and proposed sampling frequency without the “Notes/Comments” and “Source” columns contained in Exh. 8.
24. Please propose adjusted standard language to clearly identify the vertical and horizontal boundaries within which the adjusted groundwater quality standards would apply by identifying the affected water bearing unit and by supplying a legal description and a map delineating the portion of the landfill property to which the adjusted standard would apply.
25. The petition states that the proposed adjusted standards are based on:

1. “the highest or lowest (pH concentration) detected and the estimated future concentrations” for TDS, Chloride, Manganese, Sulfates, pH, Perchlorate, MCP, and p-Dioxane.
 2. Class I standard for sulfate
 3. “background concentrations established at the site” for iron;
 4. Class II standard for Picloram; and
 5. Class II standard for “those inorganic parameters not specifically identified” in Exh. 8.
- Pet. at 9-10, Exh. 8.

For the each of the parameters listed in Exh. 8, please provide supporting documentation for the basis of the proposed adjusted standard values as is more specifically addressed below.

- (a) The petition contains information regarding the statistical analysis for background concentrations for MW-6. Exh. 5-4, App. E, Table 1, 2, 14; Exh. 5-7, App. A, Table 3; Exh. 7 at 15-17, App. A, Table 4. However, the record does not contain any statistical analysis to support the proposed adjusted standard values, including those greater than the highest detected values. The Board has previously required that a statistically valid value for a proposed adjusted groundwater quality standard be addressed. See Petition for Adjusted Standard from 35 Ill. Adm. Code 620.420 for Nobel Risley’s Landfill No. 2 (AS 08-3), slip op. at 3 (Nov. 1, 2007). Please provide statistically valid values for the each of the proposed adjusted groundwater quality standards in Exh. 8 and the accompanying statistical analysis addressing outliers, normality, trends, mean, standard deviation, and upper confidence limit (UCL). See AS 08-3 Second Amended Petition (Feb. 28, 2008), Exh. 8.
- (b) For constituents where the requested adjusted standard is based on “the estimated future concentrations” (Pet. at 10), please provide the method, modeling, and calculations used to determine the estimated future concentrations.
- (c) **Picloram**
An adjusted standard is requested for picloram of 5 mg/L based on the Class II water quality standard. (Exh. 8.) The petition states, “The herbicide, picloram, has been periodically detected in the background well, MW6, but not at levels of regulatory concern.” Pet. at 5. However, the record indicates Picloram was detected a only single time in MW-6, the background well, in the results dated November 2007 at a concentration of 0.000942 mg/L. Exh. 5-4, Table 14 (Version 3). The 99% Confidence Limit for picloram in Table 3 (Exh. 5-7, App. A) is 0.00094 mg/L. The Class I water quality standard is 0.5 mg/L.
 - (i) Please clarify if picloram was detected at any other time or in any other well besides in November 2007 in MW-6 and in what concentration.

- (ii) Please explain why an adjusted standard from the Class I water quality standard is necessary for picloram since it was detected below the Class I standard and the single detection occurred nearly 8 years ago.
- (iii) Please provide justification for basing the requested adjusted standard on the Class II standard of 5.0 mg/L, which is greater than the Class I standard and the 99% UCL of 0.00094 mg/L.

(d) **P-Dioxane**

The petition states, “the proposed Adjusted Standards for ... p-dioxane ... will be based on a value associated with the maximum detected concentrations.” Pet. at 9. The proposed adjusted standard for p-dioxane does not appear to be based on the current maximum detected concentrations, but rather is greater than the maximum detected concentrations. P-Dioxane has a highest detected value of 0.0129 mg/L and a proposed adjusted standard of 0.025 mg/L. Please provide justification for a requested adjusted standard for p-Dioxane that is greater than the highest detected value.

(e) **MCPP**

An adjusted standard is requested for MCPP of 0.20 mg/L. The highest and only detected value for MCPP appears to be 0.0097 mg/L in November 2013 for MW-1. The petition states, “MCPP was detected above Class I Groundwater Standards [0.007 mg/L] in one duplicate sample collected in November 2013, but was not detected in the corresponding field sample or any samples collected during the first, second or third quarters of 2014 or the February 2013 leachate sample...[B]ased on lack of reproducibility or multiple detections of MCPP, its one-time detection is considered an anomaly – an artifact of field, sample shipment or laboratory activities”. Pet. at 3-4. Further, the petition states that MCPP is “not believed present”. Exh. 8. Petition states, “[T]he proposed Adjusted Standards for ... MCPP will be based on a value associated with the maximum detected concentrations.” Pet. at 9. The proposed adjusted standard for MCPP does not appear to be based on the maximum detected concentrations, but rather is greater than the maximum detected concentration.

- (i) Please provide justification for a requested adjusted standard for MCPP that is greater than the highest detected value.
- (ii) Please address whether an adjusted standard for MCPP is necessary since the reported detection is considered an “anomaly” due to an artifact of sampling or analysis.

(f) **TDS**

The petition states that the proposed adjusted standard for TDS is “[b]ased on the highest...concentration) detected and the estimated future concentrations.” Pet. at 10. The highest detected value for TDS is 1,660 mg/L, however, the proposed adjusted standard is 2,500 mg/L. The Class I and II standards are 1,200.0 mg/L.

Please provide justification for a requested adjusted standard for TDS that is greater than the highest detected value.

(g) **Chloride**

For chloride, Exh. 8 indicates the “Highest detected value to date” is 492 mg/L, and the proposed adjusted standard value is 600 mg/L. The tables in the record do not appear to contain information regarding the value of 492 mg/L. In the petition, the highest value for chloride appears to be 451 mg/L (Exh. 5-7, App. A, Table 2, MW-1, May 2013).

- (i) Please provide supporting documentation for the highest value detected to date for chloride.
- (ii) Please provide justification for a requested adjusted standard for chloride that is greater than the highest detected value.

(h) **Iron**

For iron, the petition states that the highest value detected to date is 18.8 mg/L (138 mg/L from a turbid well), and that the proposed adjusted standard of 69 mg/L is “based on background concentrations”. Pet. at 10, Exh. 8. The petition contains information regarding the highest value of 18.8 mg/L (Exh. 5-3, Table 5-3.3, MW-4, May 2010), however, it does not appear to contain documentation regarding the 138 mg/L reading in a turbid well. The petition also does not appear to contain information regarding background concentrations to support a value of 69 mg/L. The petition indicates MW-6 is the background well, and the highest reading in the record appears to be 1.920 mg/L from February 2007 and the most recent background UCL is 0.04 mg/L. Exh. 5-7, App. A, Table 3.

- (i) Please provide supporting documentation regarding the 138 mg/L reading in a turbid well and background concentrations that support a value of 69 mg/L.
- (ii) Please provide justification for a requested adjusted standard for iron that is greater than the highest detected value.

(i) **Manganese**

For manganese, Exh. 8 indicates the “Highest detected value to date” is 20.6 mg/L and the proposed adjusted standard is 25 mg/L. The tables in the record do not appear to contain information regarding this value of 20.6 mg/L. In the petition, the highest value for manganese appears to be 16.4 mg/L (Exh. 5-1, Table 5-1.4, MW-4, February 2008). For manganese, a value of 0.206 mg/L was recorded for MW-6, May 2011. Exh. 5-5, Table 5-5.4.

- (i) Please provide supporting documentation for the highest value detected to date for manganese.

- (ii) Please provide justification for a requested adjusted standard for manganese that is greater than the highest detected value.

(j) **Sulfate**

- (i) Since Collinsville states that Class I standards already apply to the landfill site, please clarify the rationale for requesting an adjusted standard for sulfate of 400 mg/L that is equal to the Class I standard of 400 mg/L.
- (ii) For sulfate, Exhibit 8 indicates the “Highest value detected to date – 159 mg/L”. According to Exh. 5.2, Table 5-2.2 for MW-2, a value of 188 mg/L was detected for sulfate in the November 2008 sampling. Please explain if this higher value of 188 mg/L would affect the rationale Collinsville used to arrive at the proposed limit of 400 mg/L that is based on Class I standards.

(k) **pH**

The petition states the proposed adjusted standard for pH of 5.0-9.0 is “[b]ased on the...lowest (pH concentration) detected and the estimated future concentrations.” Pet at 10. The lowest pH detected was 5.37 in MW-2 for February 25, 2014. Exh. 5-8, Table 5-8.2.

- (i) Please provide justification for a requested adjusted standard for pH that is less than the lowest detected value.
- (ii) In its request for an adjusted standard for pH, Collinsville only indicates an adjusted numeric value of “5-9 pH units”. Exh. 8. For some other parameters, Collinsville has requested adjusted standards based on the Class II standards. Please clarify if Collinsville requests an adjusted standard from the Class I standards for pH at Section 620.410(e) that also includes the wording of the Class II standards at Section 620.420(e) such that the adjusted standard for pH only applies “within 5 feet of the land surface” and “[e]xcept due to natural causes”. See 35 Ill. Adm. Code 620.420(e).

(l) **Perchlorate**

Petition states, “the proposed Adjusted Standards for perchlorate, ...will be based on a value associated with the maximum detected concentrations.” Pet. at 9. Perchlorate has a highest detected value of 0.051 mg/L and a proposed adjusted standard of 0.065 mg/L. Exh. 5-8, Table 5-8.1; Exh. 8. Please provide justification for a requested adjusted standard for perchlorate that is greater than the highest detected value.

- (m) Although not enunciated in Exh. 8 “Summary of Proposed Adjusted Standards and Parameters to be Adjusted”, paragraph 17 of the petition states that Collinsville petitions that “for those inorganic parameters not specifically identified [in Exh. 8], Class II groundwater standards shall apply.” Pet. at 9.

- (i) Since Collinsville states, “The City of Collinsville closed landfill is currently subjected to Class I Groundwater standards” (Pet. at 9), please provide additional justification regarding each of “those inorganic parameters not specifically identified” for which Collinsville seeks to apply the Class II groundwater quality standards consistent with the petition process of 35 Ill. Adm. Code 104.406 and 104.426.
- (ii) Based on the information provided in Exh. 5, only one of “those inorganic parameters not specifically identified” in Exh. 8, arsenic, appears to have exceeded the Class I groundwater quality standards. Arsenic was detected at 0.0176 mg/L in May 2010 (Exh. 5-3, Table 5-3.3, MW-4), 0.0142 mg/L in May 2011 (Exh. 5-5, Table 5-5.3, MW-4), and 0.0137 mg/L in May 2012 (Exh. 5-6, Table 5-6.3, MW-4), however, all of these detections were below the Class I standard of 0.050 mg/L that applied at the time. For the new Class I standard of 0.010 mg/L that was revised in 2012 (R08-18), arsenic was detected above the standard at 0.0109 mg/L in November 2013 (Exh. 3, Table 1; Exh. 5-8, Table 5-8.1) and 0.0232 mg/L in May 2013 (Exh. 5-7, App. A, Table 3, MW-4), but not above the Class II standard of 0.20 mg/L.

Please clarify if any of the other “inorganic parameters not specifically identified” in Exh. 8, besides arsenic, have ever exceeded Class I groundwater quality standards. If not, please explain why an adjusted standard for these parameters is necessary.

- (iii) If the request to apply Class II standards to “those inorganic parameters not specifically identified” is based on “estimated future concentrations”, as Collinsville stated for the parameters that were specifically identified in Exh. 8 (Pet. at 10), please provide the method, modeling, and calculations used to determine the estimated future concentrations.
- (iv) Please clarify if Collinsville is seeking the Class II groundwater quality standards to apply to “those inorganic parameters, even if there is a revision to the Class II numeric groundwater quality standards or an addition of new parameters.
- (v) Provide specific wording for an adjusted standard for the “inorganic parameters not specifically identified” in Exh. 8. For example, include the name for each of the inorganic parameters and a specific numeric standard, or include wording such that the standards of 35 Ill. Adm. Code 620.420(a) Inorganic Chemical Constituents apply, except for those constituents identified in Exh. 8.

26. Address efforts necessary to achieve this proposed adjusted standard and present the corresponding costs per 35 Ill. Adm. Code 104.406(f).

35 Ill. Adm. Code 104.406(g)

27. The Memorandum of Understanding between Collinsville and IEPA (Exh. 2-1) refers to Attachment A (copy of the groundwater or water well ordinance), Attachment B (identification of the legal boundaries within which the ordinance is applicable), and Attachment C (statement of authority). A copy of the groundwater control and usage Ordinance No. 3747 was included in Exh. 2-1, however, the record does not contain Attachment B or C. Please provide Attachments B and C.
28. Collinsville states, “The MOU and Ordinance, presented in Exhibit Two, prohibit the installation or use of private groundwater wells for use as a potable water supply within the corporate boundaries of the City except at points of withdrawal by the City.” Pet. at 10. Ordinance No. 3746 authorized the MOU. Exh. 2-1. The MOU addresses the installation and use of potable water supply wells by the City of Collinsville itself. Exh. 2-1. Section II of the MOU requires Collinsville to review only “a registry of sites within its corporate limits that have received ‘No Further Remediation’ determinations from the Illinois EPA” prior to citing public potable water supply wells. Exh. 2-1. Ordinance No. 3747, Section 2.A prohibits the use of “groundwater from within the corporate boundaries of the City” as a potable water supply by any person other than the City of Collinsville. Exh. 2-1.

Although the MOU and Ordinance 3747 refer to only groundwater and sites within the City of Collinsville corporate limits, the petition states, “The Site is described as a closed sanitary landfill along Lebanon Road due east and *outside the city limits of Collinsville, Illinois.*” Pet. at 6, emphasis added. On the other hand, IEPA appears to be under the impression that the Collinsville landfill is within the City limits because IEPA states that the MOU and Ordinance apply “within city limits, which includes the Landfill”. Rec. at 4.

- (a) Please clarify if there is a difference between the City of Collinsville “corporate limits” and “city limits”, and if the Collinsville landfill is located in whole or in part within the corporate limits of the City of Collinsville.
- (b) Please provide a map showing the Collinsville landfill in relation to the City of Collinsville corporate and/or city limits.
- (c) Please clarify if the Collinsville landfill is located inside the City of Collinsville corporate limits, but is not contiguous with the main corporate limits.
- (d) Please clarify on the map what areas adjacent to and surrounding the Collinsville landfill are located inside and outside the City of Collinsville corporate limits. Also, identify the boundaries for other municipalities or the county on the map, if the landfill does not exist completely within the city limits of Collinsville.

- (e) Please clarify if the Collinsville landfill would be included in the “registry of sites within [the City of Collinsville] corporate limits that have received ‘No Further Remediation’ determinations” from IEPA. Exh. 2.
 - (f) Please clarify if the MOU and Ordinance 3747 would apply to the installation of wells or use of groundwater as a potable water supply by any person or the City of Collinsville on the Collinsville landfill and/or the surrounding adjacent properties if they are located outside the corporate limits. If not, please indicate if Collinsville will be preparing another ordinance, MOU, Environmental Land Use Control, Environmental Covenant (in accordance with the Uniform Environmental Covenants Act [765 ILCS 122]), and/or an alternative instrument authorized for environmental uses under Illinois law and approved by the Agency applicable to the Collinsville Landfill and surrounding properties.
 - (g) The Board has required Environmental Land Use Controls (ELUC) prohibiting the use of groundwater for potable purposes in similar adjusted standards even where an ordinance exists. *See, e.g.* Petition by Hayden Wrecking Corporation for an Adjusted Standard from 35 Ill. 620.410(a), AS 04-3, slip op. at 8, 11, 20 (Jan. 6, 2005) (“Even if the City of Madison rescinds its ordinance forbidding the use of the groundwater beneath the Hayden site as a source of potable drinking water, an institutional control will remain in effect until the Agency modifies or removes it.”) and Petition of the Village of Bensenville for an Adjusted Standards from 35 Ill. Adm. Code 620.410 Regarding Chloride, AS 05-2, slip op. at 5, 17 (Oct. 20, 2005). The MOU (Exh. 2) expressly refers to the Ordinance 3747 and specifies the responsibilities to be assumed by the unit of local government, however, the MOU alone does not prohibit the use of groundwater for potable purpose if the ordinance is rescinded or modified. Please comment on the inclusion of an institutional control (ELUC) prohibiting the use of groundwater for potable purpose that will be recorded with the county recorder’s office and remain in effect until IEPA modifies or removes it, as a condition of the adjusted standard.
29. The petition states, “A water well survey was performed in 2000 to identify private potable water wells located within 1,300 feet from the landfill boundary. The survey revealed that property owners, immediately adjacent to and less than 300 feet downgradient of the closed landfill (within the path of the impacted groundwater), used City water.” Pet. at 11. Further, the petition states, “There are no potable water supply wells within 1,300 feet downgradient of the landfill.” Pet. at 11.
- (a) Since the water well survey was conducted 15 years ago in 2000 and the Ordinance and MOU were not in place until 2006, please address whether a more current survey might identify potentially affected wells that were installed in the interim.
 - (b) Please describe the reason for using 1,300 feet from the landfill boundary as a perimeter for the water well survey.

- (c) If no potable water wells were identified within 1,300 feet downgradient of the landfill, at what distance was the closest downgradient potable well found?
 - (d) The petition states, "City water is available to all persons in the general area of the landfill." (Pet. at 10.) Indicate whether city water is currently provided to all persons on properties within 1,300 feet of the Collinsville landfill.
30. The Groundwater Impact Map (Exh. 4, Figure 4-1) depicts impacted groundwater from the gob storage and landfill with red and pink outlining. The outlines all appear to be within the landfill property boundary. In Figure 4-1 (Exh. 4), MW-2 and MW-5 appear to be offsite downgradient wells, and MW-7 appears to be located onsite near the downgradient property line. MW-2 only showed exceedances below the Class I pH standard. No data was provided for MW-5 and MW-7.
- (a) Please clarify if Collinsville has identified off-site groundwater impacts from the landfill property.
 - (b) For offsite wells with exceedances of constituents for which Collinsville requested an adjusted standard, except for those due to natural causes or as provided in 35 Ill. Adm. Code 620.450, please address whether the offsite property owners were notified of the adjusted standard petition. If not, please provide contact information for those property owners.
 - (c) Please address which class of groundwater quality standards would apply at the edge of the Collinsville property boundary.
 - (d) Please address whether the applicable groundwater quality standards will be achieved at the edge of the Collinsville landfill property boundary under the adjusted standard.
 - (e) Please provide supporting documentation demonstrating that the requested adjusted standard will not result in offsite impacts above the applicable groundwater quality standards.
31. Exh. 7-1 states, "According to Supplemental Permit No. 2014-234-SP, if concentrations exceed Class I Groundwater Quality Standards, background values, or two times the PQL, a significant change in groundwater quality is said to have occurred." Exh. 7-1 at 17.
- (a) Please explain how this provision in the permit might change if an adjusted standard were granted.
 - (b) Under this permit provision, please explain what Collinsville would be required to do if "a significant change in groundwater quality" occurs.

32. The petition states that two creeks flow along the northern and western edges of the landfill and are sustained and recharged with groundwater. Pet. at 7. Surface water in the creeks along the landfill site perimeter exceeded surface water quality standards for iron and manganese. Iron and manganese standards were also exceeded upstream. Off-site locations did not exceed upstream concentrations or surface water quality standards. (Pet. Exh. 3 at 6.)
- (a) Please provide information regarding the concentrations of the exceedances found in the surface water samples from the site perimeter as well as the upstream exceedances and the downstream concentrations and sample locations.
 - (b) Please clarify if the “off-site locations” that did not exceed surface water quality standards were immediately downstream of the Collinsville landfill.
 - (c) Please address the source of the exceedances for iron and manganese in the surface water and whether concentrations in the groundwater contribute to the exceedances.

35 Ill. Adm. Code 104.406(k)

33. Exhibit 7-1 title page lists “Tables 7-1.1 and 7-1.2 Submitted to IEPA October 24, 2014”. Although Table 7-1.2 appears at the end of Exhibit 7, Table 7-1.1 was not included. Please submit Table 7-1.1 into the record or revise the Exhibit 7-1 title page.
34. Exhibit 7-1 states, “The statistical calculations sheets are presented in Appendix C and summarized in Appendix A, Table 4.” Exh. 7-1 at 16. Although Table 4 was provided, the statistical calculations sheets were not. Please provide the referenced statistical calculations sheets.
35. Exh. 7-1 App. A Table 4 lists sampling results from “25-Jan-13”. Please clarify if the correct date should be November 25, 2013. *See* Exh. 3-1 at 11.

CERTIFICATE OF SERVICE

It is hereby certified that true copies of the foregoing order were mailed, first class, on May 21, 2015, to each of the persons on the service list below.

It is hereby certified that a true copy of the foregoing order was hand delivered to the following on May 21, 2015:

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