

Technical Support Document (TSD)  
For  
Thurston Manufacturing Company  
Draft Synthetic Minor Source Permit  
Permit No. R7-TMNSR-FY16-001

This document sets forth the legal and factual basis for permit conditions, with references to applicable Clean Air Act statutory and regulatory provisions, including provisions under the federal Tribal Minor New Source Review (TMNSR) program, 40 C.F.R. §§ 49.151 - 49.161.

40 CFR Section 49.158 establishes a permitting program to provide for the establishment of Federally-enforceable and enforceable as a practical matter requirements for air pollution sources located within Indian country. The owner or operator of an air pollution source who wishes to obtain federally and practicably enforceable limitations on the source's actual emissions or potential to emit must submit an application to the Permitting Authority requesting such limitations. The United States Environmental Protection Agency (EPA) then develops the permit via a public process. The permit remains in effect until it is modified, revoked or terminated by the EPA in writing.

This technical support document fulfils the requirement of 40 CFR Section 49.158 (b) (4) by describing the proposed limitation and its effect on the potential to emit of the air pollution source. Unlike the Air Quality Permit, this Technical Support Document is not legally enforceable. The Permittee is obligated to follow the terms of the permit. Any errors or omissions in the summaries provided here do not excuse the Permittee from the requirements of the permit.

## TSD Table of Contents

1.0 SOURCE DESCRIPTION AND CONTACT INFORMATION .....	3
(A) Permit Applicant and Facility Information.....	3
(B) Permit Applicant and Tribe Environmental Contact Information .....	3
(C) Source Description .....	4
2.0 AIR POLLUTANT EMISSIONS AND REGULATORY ANALYSIS.....	5
(A) Synthetic Minor Source Permit Request .....	5
(B) TMNSR Rule Amendments and Modification of Emission Units .....	7
(C) Control technology review factors.....	11
(1) <b>Local air quality conditions</b> .....	11
(2) <b>Typical control technology or other emissions reduction measures used by similar sources in surrounding areas</b> .....	11
(3) <b>Anticipated economic growth in the area</b> .....	13
(4) <b>Cost-effective emission reduction alternatives</b> .....	14
(D) Other Federal Requirements.....	15
(1) <b>Endangered Species Act (ESA) Impacts</b> .....	15
(2) <b>National Environmental Policy Act (NEPA) Review</b> .....	22
(3) <b>National Historic Preservation Act (NHPA)</b> .....	22
(4) <b>Environmental Justice (EJ)</b> .....	23
(5) <b>Consultation with the Winnebago Tribe of Nebraska</b> .....	24
(6) <b>Public participation requirements</b> .....	24
TSD APPENDIX – POTENTIAL TO EMIT-EMISSION INVENTORY .....	25

## 1.0 SOURCE DESCRIPTION AND CONTACT INFORMATION

### (A) Permit Applicant and Facility Information

Permit Applicant	Facility (SIC Codes: 3523 and 3531)
Thurston Manufacturing Company 1708 H Avenue Thurston, NE 68062	Thurston Manufacturing Company 1708 H Avenue Thurston, NE 68062

### (B) Permit Applicant and Tribe Environmental Contact Information

**Permit Applicant's Facility Contact:**

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Thurston, NE 68062  
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**Tribe Environmental Contact:**

Joseph Painter, Manager  
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Winnebago Tribe of Nebraska  
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Winnebago, NE 68071  
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Phone: 402-878-4060 x1001  
Fax: 402-878-4059

### **(C) Source Description**

Thurston Manufacturing Company produces agricultural equipment and side-dump trailers at a facility that is located in the Village of Thurston, Nebraska and within the exterior boundaries of the Winnebago Indian Reservation.

The Winnebago Indian Reservation occupies the northern half of Thurston County, Nebraska, a portion of southeastern Dixon County, Nebraska, and a portion of southwestern Woodbury County, Iowa. The Winnebago Tribe of Nebraska also has a small plot of off-reservation Trust land in southern Craig Township, Burt County, Nebraska.

The facility operates under standard industrial classification (SIC) code 3523 (Farm Machinery and Equipment), SIC code 3531 (Construction Machinery and Equipment), and North American Industrial Classification System (NAICS) code 333111 (Farm Machinery and Equipment Manufacturing). The current manufacturing process includes a paint booth constructed in 2012, a plasma cutting table constructed in 2014, a shot blast machine constructed in 2012, a parts washer constructed in 2012/2013, gas metal arc and flux cored arc welding operations with unknown construction dates, and two fabrication machines with plasma torches with unknown construction dates.

## **2.0 AIR POLLUTANT EMISSIONS AND REGULATORY ANALYSIS**

The primary pollutants at this facility are volatile organic compounds (VOC), hazardous air pollutants (HAP), particulate matter (PM), PM smaller than or equal to 10 microns (PM<sub>10</sub>), and PM smaller than or equal to 2.5 microns (PM<sub>2.5</sub>). The uncontrolled potential emissions for all of these pollutants at the facility are above major source thresholds under Prevention of Significant Deterioration (PSD) permitting requirements and/or Title V (Part 71) permitting requirements.

On July 1, 2011, the United States Environmental Protection Agency (EPA) adopted regulations (76 FR 38748) codified at 40 CFR sections 49.151 through 49.161, establishing a Federal Implementation Plan (FIP) under the Clean Air Act for Indian country. This FIP includes federal Tribal Minor NSR (TMNSR) regulations for the protection of air resources in Indian country. The EPA is charged with direct implementation of the program regulations where there is no approved Tribal implementation plan. This permit has been developed pursuant to 40 CFR § 49.158 which creates an air permitting mechanism for major sources that wish to voluntarily limit emissions to become synthetic minor sources.

The TMNSR program requires preconstruction permitting for new and modified minor sources, and provides a mechanism for an otherwise major stationary source of regulated NSR pollutants to voluntarily accept restrictions on its potential to emit to become a synthetic minor source. This mechanism may also be used by an otherwise major source of hazardous air pollutants (HAP) to voluntarily accept restrictions on its potential to emit to become a synthetic minor HAP source. Such restrictions must be enforceable as a practical matter, and the reviewing authority has the discretion to require any additional requirements, including control technology requirements, based on the specific circumstances of the source.

This permit authorizes facility-wide emission limits for volatile organic compounds (VOC) and particulate matter (PM) to avoid both PSD permitting requirements for major sources; and Title V (Part 71) permitting requirements for major sources. This permit also authorizes facility-wide emission limits for both individual HAP and Total HAP to avoid Title V (Part 71) permitting requirements for major sources. The restrictions replace those agreed to by the owner pursuant to the March 7, 1999, Potential to Emit (PTE) Transition Policy for Part 71 Implementation in Indian Country (50% PTE Transition Policy).

### **(A) Synthetic Minor Source Permit Request**

In a letter dated May 11, 2001, Thurston Manufacturing Company indicated to EPA Region 7 that it would comply with the recordkeeping requirements of the 1999 Potential to Emit (PTE) transition policy by which EPA would treat a source as nonmajor for the purposes of the Title V program if it keeps records to show that its actual emissions are below 50 percent of the PTE thresholds for major source status.

The 1999 PTE transition policy specified that it would be implemented until EPA adopts and implements a mechanism that a source can use to limit its PTE. Since, a purpose of the Federal TMNSR program is to provide such a mechanism, its implementation terminates the PTE

transition policy. Pursuant to 40 CFR 49.151(c)(1)(ii)(D) and 40 CFR 49.153(a)(3)(v), existing sources previously operating under a synthetic minor mechanism, such as the 1999 PTE transition policy, were required to submit an application pursuant to § 49.158 for a synthetic minor source permit under this TMNSR program by September 4, 2012.

As an existing synthetic minor source and synthetic minor HAP source established by the 1999 Potential to Emit (PTE) transition policy, TMC was required to submit an application pursuant to §49.158 for a synthetic minor source permit under this program by September 4, 2012.

TMNSR program overview applicability provision 40 CFR § 49.151(c) (1) (ii) (D):

*If your existing synthetic minor source and/or synthetic minor HAP source was established through a mechanism other than those described in paragraphs (c)(1)(ii)(B) and (C) of this section, you must submit an application pursuant to §49.158 for a synthetic minor source permit under this program by September 4, 2012. The reviewing authority has the discretion to require any additional requirements, including control technology requirements, based on the specific circumstances of the source.*

On September 4, 2012, EPA Region 7 received a synthetic minor construction permit application for the Thurston Manufacturing Company that included the use of air permit application forms provided by EPA, as well as those used by the Iowa Department of Natural Resources (IDNR). In a letter dated November 2, 2012, EPA Region 7 notified Thurston Manufacturing Company that the application was administratively complete and that EPA would disregard all reference to the IDNR on the completed IDNR forms. The synthetic minor source permit application requested the following material usage limits for a new paint booth constructed in 2012: 2,500 gallons of topcoat a year, 2,500 gallons of primer a year, and 2,500 gallons of solvent a year.

On June 4, 2013, EPA Region 7 received additional information from Thurston Manufacturing Company providing material usage recordkeeping data and charts for 2011, 2012, and 2013. The data indicates that the facility's actual combined paint usage (topcoat and primer) has consistently averaged over 6,000 gallons per rolling 12-month period, and the facility's actual solvent usage has averaged as high as 2,297 gallons per rolling 12-month period. Based on the reported actual material usage data, the requested material usage limits in the September 2012 permit application would be too restrictive.

The permittee's contractor submitted to EPA an email, dated June 4, 2013, which included the calculated VOC and HAP emissions data and associated charts from all non-combustion sources for the time period July 2011 to May 2013. These charts displayed the following emission limits:

- VOC emissions not to exceed 75 TONS in the 12-month rolling period.
- Total HAP Emissions not to exceed 24 TONS in the 12-month rolling period.
- Single HAP Emissions not to exceed 9 TONS in the 12-month rolling period. If a single HAP Emission (xylene, toluene, ethyl benzene, or naphthalene) exceeds 7.2 tons in the 12-month rolling period, daily record taking begins

The revised proposed emission limits appear to be based on limits contained in an air permit issued by the State of Iowa for a facility that similarly manufactures side dump trailers. The reviewing authority, EPA Region 7, considered the above revised emission limits proposed by Thurston Manufacturing Company as received by EPA on June 4, 2013, in determining the corresponding facility-wide VOC, Total HAP, and individual HAP emissions limitations based on 12-month rolling sums that will allow the source to maintain synthetic minor status for each of those pollutants.

In 2014 and 2015, the reviewing authority received additional information in email correspondence with the permittee and the permittee's contractor Donn Stone regarding emissions units operating at the facility. The reviewing authority considered the additional information received, as well as specification reference documents obtained from manufacturer websites, in determining that the potential to emit for PM, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions from all emissions units currently operating at the facility are above the major source thresholds. The reviewing authority is proposing emissions limitations that will allow the source to maintain synthetic minor status for those pollutants.

#### **(B) TMNSR Rule Amendments and Modification of Emission Units**

On May 9, 2014, EPA amended the TMNSR program rules to change permitting requirements by adding exemptions for certain emissions units and adding definitions for construction-related terms. The amended changes became effective on June 30, 2014.

An exemption added by the 2014 amended rule that applies to TMC is 40 CFR 49.153 (c) (11) (iii):

*Furnaces or boilers used for space heating that use only gaseous fuel, with a total maximum heat input (i.e., from all units combined) of 10 MMBtu/hr or less in attainment areas.*

TMC has only two natural gas fired combustion units used to supply makeup air for the production building. Since the combined maximum heat input of the two units is 6.8 MMBtu/hr, the emissions units are exempt from permitting requirements.

The 2014 amended rule added definitions for construction-related terms "begin construction" and "commence construction" to be more consistent with the major NSR program and thus minimizing any potential confusion. Along with the added definitions, the rule changed the applicability requirement 40 CFR 49.153(a) (3) (ii):

From Pre-June 30, 2014:

*(ii) If you wish to **commence** construction of a new synthetic minor source and/or a new synthetic minor HAP source or a modification at an existing synthetic minor source and/or synthetic minor HAP source, on or after August 30, 2011, you must obtain a permit pursuant to § 49.158 prior to **commencing** construction.*

To Post-June 30, 2014:

(ii) If you wish to **begin** construction of a new synthetic minor source and/or a new synthetic minor HAP source or a modification at an existing synthetic minor source and/or synthetic minor HAP source, on or after August 30, 2011, you must obtain a permit pursuant to §49.158 prior to **beginning** construction.

Before June 30, 2014, the term “commence construction” was not defined in the TMNSR program rules. The major source definitions of the terms “Construction,” “Commence” and “Begin actual construction” are defined at 40 CFR 52.21 (b):

(8) **Construction** means any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) that would result in a change in emissions.

(9) **Commence** as applied to construction of a major stationary source or major modification means that the owner or operator has all necessary preconstruction approvals or permits and either has:

(i) Begun, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or

(ii) Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.

(11) **Begin actual construction** means, in general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying underground pipework and construction of permanent storage structures. With respect to a change in method of operations, this term refers to those on-site activities other than preparatory activities which mark the initiation of the change.

As of June 30, 2014, the TMNSR program defines the terms “begin construction” and “commence construction” at 40 CFR 49.152 (d):

**Begin construction** means, in general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying underground pipework and construction of permanent storage structures. With respect to a change in method of operations, this term refers to those on-site activities other than preparatory activities which mark the initiation of the change. The following preparatory activities are excluded: Engineering and design planning, geotechnical investigation (surface and subsurface explorations), clearing, grading, surveying, ordering of equipment and materials, storing of equipment or setting up temporary trailers to house construction management or staff and contractor personnel.

***Commence construction*** means, as applied to a new minor stationary source or minor modification at an existing stationary source subject to this subpart, that the owner or operator has all necessary preconstruction approvals or permits and either has:

*(i) Begun on-site activities including, but not limited to, installing building supports and foundations, laying underground piping or erecting/installing permanent storage structures. The following preparatory activities are excluded: Engineering and design planning, geotechnical investigation (surface and subsurface explorations), clearing, grading, surveying, ordering of equipment and materials, storing of equipment or setting up temporary trailers to house construction management or staff and contractor personnel; or*

*(ii) Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.*

The production building was expanded in 2012-2013 by approximately 35,000 square feet to accommodate new process equipment. As an existing synthetic minor source and synthetic minor HAP source, TMC should have obtained a synthetic minor source permit pursuant to 40 CFR 49.158 prior to “commencing construction” or “beginning construction” of any modifications on or after August 30, 2011 (the effective date of the TMNSR rule).

In addition, before the modifications that occurred in 2012 or after, as an existing synthetic minor source and synthetic minor HAP source, TMC was subject to program overview applicability provision 40 CFR 49.151(c) (1) (ii)(D):

*If your existing synthetic minor source and/or synthetic minor HAP source was established through a mechanism other than those described in paragraphs (c)(1)(ii)(B) and (C) of this section, you must submit an application pursuant to §49.158 for a synthetic minor source permit under this program by September 4, 2012. The reviewing authority has the discretion to require any additional requirements, including control technology requirements, based on the specific circumstances of the source.*

and applicability provision 40 CFR 49.153(a) (3) (v):

*For all other synthetic minor sources or synthetic minor HAP sources that obtained synthetic minor status or synthetic minor source permits through a mechanism other than those described in paragraphs (a)(3)(iii) and (iv) of this section, you must submit an application for a synthetic minor source permit under this program by September 4, 2012 under §49.158.*

As noted in the first paragraph of the Synthetic minor source permits requirements of 40 CFR 49.158:

*Note that if you propose to construct or modify a synthetic minor source, you are also subject to the preconstruction permitting requirements in §§49.154 and 49.155, except for the permit*

*application content and permit application completeness provisions included in §49.154(a)(2) and §49.154(b).*

As provided by 40 CFR 49.158 (c)(4), responsibilities under this program for a source that already has synthetic minor source or synthetic minor HAP source status prior to the effective date of this rule (that is, prior to August 30, 2011) include:

*(i) After submitting your synthetic minor source permit application, you must respond in a timely manner to any requests from the reviewing authority for additional information.*

*(ii) Provided that you submit your application as required in paragraph (c)(3) and any requested additional information as required in paragraph (c)(4)(i) of this section, your source will continue to be considered a synthetic minor source or synthetic minor HAP source (as applicable) until your synthetic minor source permit under this program has been issued. Issuance of your synthetic minor source permit under this program will be in accordance with the applicable requirements in §§49.154 and 49.155 and all other provisions under this section.*

*(iii) Should you fail to submit your application as required in paragraph (c)(3) or any requested additional information as required in paragraph (c)(4)(i) of this section, your source will no longer be considered a synthetic minor source or synthetic minor HAP source (as applicable) and will become subject to all requirements for major sources.*

Although the facility did not receive a synthetic minor source permit prior to the modifications that occurred in 2012 or after, EPA intends to issue a synthetic minor source permit, which includes permit requirements based on the preconstruction provisions, for all non-exempt emissions units at the facility for which information has been received, as of the date of the permit issuance. The permit establishes allowable emissions limits for all permitted emissions units at the source at the time of issuance.

The permit is intended to be a snapshot of the emissions units constructed at the facility on the date of issuance. The permittee is being put on notice that nothing in the permit shall alter the requirement to obtain a construction permit prior to beginning construction or modification of an emission unit. If the permittee constructs or operates any source or modification not in accordance with the terms of any approval to construct, the permittee shall be subject to appropriate enforcement action. Any proposed modifications, as defined at 40 CFR 49.152(d), that would increase an emissions unit's allowable emissions of pollutants above its existing permitted annual allowable emissions limit, the permittee shall first obtain a permit modification pursuant to the TMNSR regulations approving the increase. For a proposed modification that is not otherwise subject to review under the PSD or TMNSR regulations, such proposed increase in the annual allowable emissions limit shall be approved through an administrative permit revision as provided at 40 CFR 49.159(f).

The TSD Appendix provides an emission inventory developed by EPA for all emissions units, including the two exempt emissions units, considered in issuing the permit. The potential to emit, both uncontrolled and controlled, for each emission unit are provided. The facility-wide

PTE for each pollutant, including the proposed annual allowable emissions as limited by the permit, are provided in a summary table at the end of the TSD Appendix.

### **(C) Control technology review factors**

In accordance with 40 CFR 49.155 (a) (2), EPA Region 7 conducted a case-by-case control technology review under 40 CFR 49.154 (c) (1) that considered the following factors:

#### **(1) Local air quality conditions.**

Thurston Manufacturing Company is located within the Winnebago Indian Reservation occupying northern Thurston County, Nebraska.

Based on monitoring data, Thurston County is currently unclassifiable or in attainment with the national ambient air quality standards for all criteria pollutants [see Clean Air Act Section 107(d) (1) (A)]. An area is unclassifiable when there is insufficient monitoring data. Ambient air quality designations are presented in 40 CFR Part 81. Areas of the country where air pollution levels exceed the national ambient air quality standards may be designated "nonattainment." Thurston Manufacturing Company is not located in a designated nonattainment area.

#### **(2) Typical control technology or other emissions reduction measures used by similar sources in surrounding areas.**

EPA Region 7 researched surrounding state government websites for similar manufacturing sources with Surface Coating Operations using VOC and HAP coatings and solvents that sought and obtained synthetic minor permits. The permits typically require some combination of the following control technology or other emissions reduction measures:

- Reduce the HAP or VOC content of the coatings and solvents used.
- Switch to coating materials that do not contain particular target HAP species of concern.
- Perform coating operations in an enclosure so emissions can be captured and possibly treated.
- Employ work practices to reduce the amount of coating or solvent that needs to be applied to complete a specific job, thereby reducing the potential for emissions. These practices include:
  - Use high efficiency spray guns to minimize the amount of coating overspray and increase the fraction of coating that reaches the intended part substrate. This minimizes coating consumption to minimize emissions from overspray.
  - Using spray gun cleaning techniques and/or equipment that minimizes the amount of emissions released.
  - Using covered solvent containers and other housekeeping measures to minimize solvent emissions.
  - Painter Training.

On May 1, 2015, EPA published a permit by rule (PBR) for auto body repair and miscellaneous surface coating operations in Indian country that became effective on June 1, 2015. The PBR includes a condition to:

- Limit VOC containing materials (e.g., coatings, thinners, and clean-up solvent) to less than 5,000 gallons per year based on a 12-month rolling total for facilities located in ozone attainment/ unclassifiable areas.

Other conditions applicable to sources seeking coverage under this PBR are intended to be generally consistent with the requirements in 40 CFR 63, Subpart HHHHHH, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources.

The following is a list of requirements in 40 CFR 63 Subpart HHHHHH that are included in the Permit by Rule:

- 40 CFR 63.11173(e) (1) - requirements to have certified painters;
- 40 CFR 63.11173(e) (2) - requirements for spray booths;
- 40 CFR 63.11173(e) (3) and (4) - requirements for spray guns;
- 40 CFR 63.11177(a) - records of certification for each painter;
- 40 CFR 63.11177(b) - records of spray booth filter efficiency; and
- 40 CFR 63.11177(c) - records of spray gun transfer efficiency.

EPA Region 7 is proposing permit requirements that include most of the measures identified above, including all of the Subpart HHHHHH consistent requirements included in the permit by rule for auto body repair and miscellaneous surface coating operations in Indian country that became effective on June 1, 2015. Although Thurston Mfg. is not currently subject to the Subpart HHHHHH NESHAP requirements, most of the proposed Subpart HHHHHH consistent permit requirements appear to be currently implemented at the facility.

Two Subpart HHHHHH consistent requirements in the proposed permit that are not presently fully implemented by the operator include (1) the requirement for certified painters and (2) maintaining records of each painter's certification. As noted in the technical support document for the proposed Subpart HHHHHH rule:

*Painter training has been shown to have a significant effect on the amount of coating needed and the amount of overspray per job and is a management practice to reduce emissions. Requiring spray painters to be trained and certified would ensure that painters are skilled in the techniques needed to achieve a high rate of transfer efficiency. Data collected by Spray Technique Analysis and Research (STAR®) programs in various states have shown that painter training can have a significant effect on the amount of coating used and the transfer efficiency of the coating operation.*

In addition, three of the above regulatory PBR emissions reduction measures that are not being proposed as permit requirements for this facility include:

- Reduce the HAP or VOC content of the coatings and solvents used.
- Switch to coating materials that do not contain particular target HAP species of concern.
- Limit VOC containing materials (e.g., coatings, thinners, and clean-up solvent) to less than 5,000 gallons per year based on a 12-month rolling total for facilities located in ozone attainment/ unclassifiable areas.

EPA Region 7 proposes to allow the permittee flexibility to use existing coatings and solvents without limiting HAP or VOC content of coatings or switching to coatings without a target HAP. As mentioned previously, based on the reported actual material usage data, the requested 7,500 gallons per year VOC-containing material usage limits in the September 2012 permit application would be too restrictive.

Similar to the typical control technology used by similar sources in surrounding areas, the proposed permit requires that the plasma cutting table, shot blast machine, and fabrication machines control PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and metal HAP emissions with dust collectors.

As with similar sources in surrounding areas, no control technology is proposed for welding operation emissions or the parts washer with a natural gas-fired burner.

The proposed permit includes emission limitations that reduce the facility's potential emissions of VOC, individual HAP, total HAP, PM, PM<sub>10</sub>, and PM<sub>2.5</sub> to less than major source thresholds. The permit also includes monitoring, recordkeeping and reporting requirements necessary to assure compliance with each limit.

The proposed permit requires monthly calculations of emissions both on an emissions unit-specific basis and facility-wide pollutant basis. Should EPA determine that calculated actual emissions are approaching or exceeding an emission limit, or should EPA determine that the permittee is failing to maintain adequate monitoring and recordkeeping requirements, EPA may revise, reopen, revoke or reissue the permit to require daily calculations of emissions, and/or require additional control technologies and emission reduction measures such as reducing the HAP or VOC content of the coatings and solvents used.

### **(3) Anticipated economic growth in the area.**

TMC is located in the Village of Thurston within the exterior boundaries of the Winnebago Indian Reservation in the Northeastern corner of Nebraska. The Village of Thurston shares educational services, a Chamber of Commerce, and Economic Development with the nearby Village of Pender. Thurston Manufacturing Company is the Village of Thurston's major employer.

In conducting the control technology review, EPA considered the anticipated growth rate of the source. According to a 2011 press release by Thurston Manufacturing in the Pender Times:

*On top of filling the 22 new full time positions now available within the production facility, plans are in place to invest three to five million dollars towards a 50% increase in facilities and equipment over the next 5 years using various funding sources.*

More recently in a 2015 press release in the Pender Times:

*Thurston Manufacturing announces reduction in staff size due to agriculture market conditions - 23 percent of staff out of jobs, 86 remain*

*According to Thurston Manufacturing CEO Layton Jensen, the company had enjoyed a rapid expansion in the agriculture sector over the past six years, building its staff to record high numbers.*

*In 2014, corn prices tumbled to half the value of their high water mark of more than \$7 per bushel, forcing growers to re-evaluate their previous aggressive equipment buying habits.*

Based on the information obtained, EPA does not anticipate significant increases in growth for the foreseeable future. Consequently, EPA does not believe that emissions increases resulting from economic growth in the area will pose unique or additional impacts on air quality in the foreseeable future that might warrant more stringent requirements to control emissions than those contained in the proposed permit.

**(4) Cost-effective emission reduction alternatives.**

The proposed emission limitations are consistent with control technologies or other emissions reduction measures used by similar sources in surrounding areas with the same attainment status for all criteria pollutants, including ozone attainment, as where the source is located. EPA believes that, because these control measures are currently used by other similar sources in surrounding areas, they are technically and economically feasible, and cost effective.

## **(D) Other Federal Requirements**

### **(1) Endangered Species Act (ESA) Impacts.**

The EPA is obligated to consider the impact that a federal project may have on listed species or critical habitats. Section 7 of the ESA requires the EPA, as a federal agency, to use its authority to conserve listed endangered and threatened species. To support this requirement, section 7 (a) (2) of the ESA requires the EPA to insure that an agency action, such as the issuance of air construction permits, is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat for such species.

In complying with its duty under ESA, the EPA, as the action agency, examined the potential effects on listed species and designated critical habitat relating to issuing a CAA synthetic minor source permit in Indian country.

#### ***Permit Request***

The EPA received a CAA permit application from Thurston Manufacturing Company, requesting voluntarily restrictions on its potential to emit to become a synthetic minor source. The facility is located in the Village of Thurston, Nebraska and within the exterior boundaries of the Winnebago Indian Reservation.

The facility occupies approximately 20 acres of land of which approximately eight of those acres are developed. Thurston Manufacturing Company manufactures agricultural equipment and side dump trailers. In 1971 the facility started production down the hill from the current location. There have been four building expansions since the facility was moved to the current location in 1979. Most recently in 2012-2013, the production building footprint was expanded by approximately 35,000 square feet to accommodate new process equipment. Maps providing aerial views of the Thurston Manufacturing Company facility before and after the production building expansion are provided below:



U.S. Fish and Wildlife Service  
National Wetlands Inventory

Thurston  
Manufacturing  
Company \*



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or completeness of the base data shown on this map. All copyright metadata should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

~~Before~~ Production Building Expansion



U.S. Fish and Wildlife Service  
National Wetlands Inventory

Thurston  
Manufacturing  
Company \*



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or completeness of the base data shown on this map. All copyright metadata should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

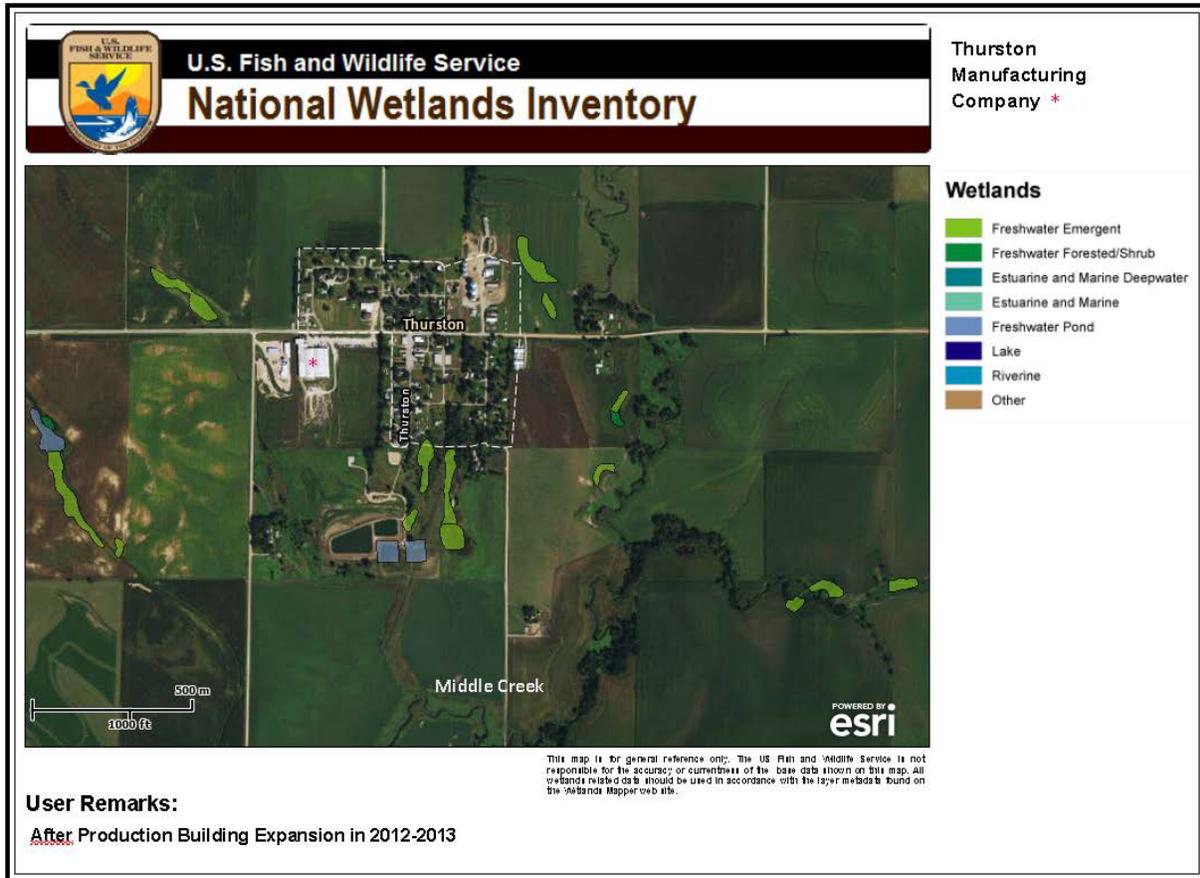
~~After~~ Production Building Expansion

EPA intends to issue a synthetic minor source permit, which includes permit requirements based on the tribal minor NSR preconstruction provisions, for all non-exempt emissions units at the facility for which information has been received, as of the date of the permit issuance. The permit will establish emissions limits for the after-the-fact construction and operation of the following emissions units: Paint Booth, Plasma Cutting Table, Shot Blast Machine, Parts Washer, two types of Welding Operating, and two Fabrication Machines.

If this facility were allowed to operate without the control equipment required by the proposed permit, it would emit air pollutants at levels triggering major source Prevention of Significant Deterioration (PSD) and Title V permitting. The applicant is requesting permit conditions to establish legally and practically enforceable restrictions on VOC, individual HAP, total HAP, PM, PM<sub>10</sub>, and PM<sub>2.5</sub> emission limits to avoid PSD and Title V major source permitting requirements found at 40 CFR Parts 52 and 71, respectively. The proposed permit will include monitoring, recordkeeping and reporting requirements necessary to assure compliance with each limit. To provide legally and practically enforceable permit conditions to reduce potential emissions to levels below the major source thresholds for PSD and Title V requirements, the proposed permit requires monthly calculations of emissions both on an emissions unit-specific basis and facility-wide pollutant basis.

### ***Hydrology***

The facility area located in Thurston, Nebraska, located approximately 20 straight line miles west of the Missouri River. Surface drainage from the facility grounds travels to one of two offsite unnamed intermittent tributaries through a series of defined drainage courses and sheet flow runoff through a farm field. From the confluence of the two intermittent tributaries, the combined tributary travels south to Middle Creek. Middle Creek is approximately 4,000 straight line feet from the facility and is classified as a perennial stream per United States Geological Survey topographic maps. A map providing an aerial view of the Thurston Manufacturing Company facility showing Middle Creek and nearby wetlands is provided below:



### *Threatened and Endangered Species*

The EPA accessed U.S. Fish and Wildlife Service (FWS) websites for information on threatened and endangered species and designated critical habitat for those species. FWS maintains a website titled Environmental Conservation Online System (<http://ecos.fws.gov/ecp/>) that provides access to databases for:

1. Threatened and endangered species that may be present within the proposed facility area and
2. Designated critical habitat for threatened and endangered species.

The EPA accessed the FWS Information, Planning, and Conservation System (IPaC) database (<http://ecos.fws.gov/ipac>) to identify species listed as threatened and endangered that have been documented as being present in facility area, and received the official species list from the FWS Nebraska Ecological Services Field Office on December 8, 2015. There are no critical habitats within the facility area.

The official species list from FWS stated that the following threatened or endangered species may be found in the facility area:

**Least Tern (*Sterna antillarum*)**  
**Listing Status: Endangered**

**Piping Plover (*Charadrius melodus*)**  
**Listing Status: Threatened**

**Pallid Sturgeon (*Scaphirhynchus albus*)**  
**Listing Status: Endangered**

**Western Prairie Fringed Orchid**  
**(*Platanthera praeclara*)**  
**Listing Status: Threatened**

**Northern Long-eared Bat (*Myotis septentrionalis*)**  
**Listing Status: Threatened**

### **Least Tern**

Listing Status: Endangered

Effects Determination: No Effect

The interior least tern is migratory and its breeding range extends from Texas to Montana and from eastern Colorado and New Mexico to northern Indiana. They were declared endangered in 1985 (50 Federal Register 21792; May 28, 1985.) Interior least terns nest in riparian areas with sparsely vegetated sand and gravel bars within a wide, unobstructed river channel or salt flats along lake shorelines, at higher elevations away from the water's edge. The primary food is small fishes, but it also eats shrimp and occasionally other invertebrates. The least tern is known to use the Missouri River corridor for nesting and as a migratory corridor. The facility is located approximately 20 straight line miles west of the Missouri River. Given the location of the facility on industrial property adjacent to farm fields, apparent lack of habitat within the facility area, the proposed permitting of the after-the-fact construction and operation of the facility will have no effect on the least tern.

### **Piping Plover**

Listing Status: Threatened

Effects Determination: No Effect

The piping plover was declared threatened in 1985 (50 Federal Register 50733; December 11, 1985.)

It is a small shorebird that inhabits barren sand and gravel shores of rivers and lakes. The main foods taken are freshwater invertebrates washed up on shore, terrestrial, and benthic invertebrates. The Northern Great Plains population of piping plovers nest on the shorelines and islands of alkali (salty) lakes in North Dakota and Montana. They nest on sandbar islands and reservoir shorelines along the Missouri River and reservoirs in Montana, North Dakota, South Dakota, and Nebraska. In Nebraska, they nest on the Platte River system, Niobrara, Loup, and Elkhorn Rivers. The facility is located approximately 20 straight line miles west of the Missouri River. Given the location of the facility on industrial property adjacent to farm fields, apparent lack of habitat within the facility area, the proposed permitting of the after-the-fact construction and operation of the facility will have no effect on the piping plover.

### **Pallid Sturgeon**

Listing Status: Endangered

Effects Determination: No Effect

The pallid sturgeon was federally listed as an endangered species on September 6, 1990. In Nebraska, the pallid sturgeon is found in the Missouri and lower Platte Rivers. Floodplains, backwaters, chutes, sloughs, islands, sandbars, and main channel waters formed the large river ecosystem that provided macrohabitat requirements for the pallid sturgeon, a species that is associated with diverse aquatic habitats. The expected occurrence of the pallid sturgeon is in the Lower Platte River and Missouri River. The Missouri River is approximately 20 straight line miles away from the facility, the Lower Platte is even farther away from the facility. Thus, no potential habitat occurs within the facility area.

### **Western Prairie Fringed Orchid (WPFO)**

Listing Status: Threatened

Effects Determination: No Effect

The western and eastern prairie fringed orchids were added to the U.S. List of Endangered and Threatened Wildlife and Plants on September 28, 1989. The WPFO, federally listed as threatened, inhabits tall-grass calcareous silt loam or sub-irrigated sand prairies. In eastern Nebraska they are found in upland prairies and loess soils. In central and northeast Nebraska they occur in wet prairies and meadows.

The location of the facility is within a developed area on industrial property adjacent to farm fields. A comparison of maps providing aerial views of the Thurston Manufacturing Company facility before and after the production building expansion in 2012-2013 indicates that the project footprint would not have involved removing native vegetation.

According to the Notice of Intent (NOI) for Authorization to Discharge Under the NPDES General Permit for Storm Water Discharges Associated with Industrial Activity received by the Nebraska Department of Natural Resources from the facility on January 10, 2012, the action area drains to wetlands or wet meadows in the range of the western prairie fringed orchid or small white lady's slipper.

Given the minimal potential for drainage to wetlands, particularly if Best Management Practices (BMPs) were utilized to control storm water runoff during the building expansion project, the proposed permitting of the after-the-fact construction and operation of the facility will have no effect on the WPFO.

### **Northern Long-eared Bat (NLEB)**

Listing Status: Threatened

Effects Determination: No Effect

On April 2, 2015, the USFWS listed the northern long-eared bat as a threatened species. NLEB are very useful because they feed on spiders, beetles, and flying insects (such as mosquitoes). The primary factor threatening the northern long-eared bat is white-nose syndrome. However, because populations of the bat are depressed by this disease, human activities that were not significant before may be so now. In the final listing rule for the northern long-eared bat, USFWS states that critical habitat is not determinable at this time and plans to propose and determine appropriate critical habitat within one year of the final listing. NLEB have been found in 39 states, including Nebraska. However, no potential habitat appears to occur within the facility area.

### ***EPA Determination of ESA Impacts***

The CAA Synthetic Minor Source permit action will have the beneficial effect of controlling air pollution by establishing emissions limits below major source thresholds for all non-exempt operations currently at the facility. The EPA has concluded that the proposed permit action will have “no effect” on Least Tern, Piping Plover, Pallid Sturgeon, Western Prairie Fringed Orchid, and Northern Long-Eared Bat.

The EPA consulted with the FWS. Based on information EPA provided and FWS office records, FWS concurred on February 9, 2016, that the issuance of the subject CAA permit will have no effect to federally listed species, or their critical habitats.

The EPA gathered information on listed species from the following sources:

1. Thompson, Bruce C., Jerome A. Jackson, Joanna Burger, Laura A. Hill, Eileen M. Kirsch and Jonathan L. Atwood. 1997. Least Tern (*Sternula antillarum*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/290> doi:10.2173/bna.290
2. U.S. Fish and Wildlife Service, 2009. *Piping Plover 5-Year Review: Summary and Evaluation*; [http://www.fws.gov/northeast/endangered/PDF/Piping\\_Plover\\_five\\_year\\_review\\_and\\_summary.pdf](http://www.fws.gov/northeast/endangered/PDF/Piping_Plover_five_year_review_and_summary.pdf)
3. Elliott-Smith, Elise and Susan M. Haig. 2004. Piping Plover (*Charadrius melodus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/002> doi:10.2173/bna.2
4. United States. U.S. Fish and Wildlife Service. *Pallid Sturgeon 5-Year Review*; U.S. Fish and Wildlife Service, 2007. Retrieved from [http://ecos.fws.gov/docs/five\\_year\\_review/doc1059.pdf](http://ecos.fws.gov/docs/five_year_review/doc1059.pdf)
5. U.S. Fish and Wildlife Service. January 2014. Revised RECOVERY PLAN for the Pallid Sturgeon (*Scaphirhynchus albus*). [http://ecos.fws.gov/docs/recovery\\_plan/Pallid%20Sturgeon%20Recovery%20Plan%20Final%20Revision%20signed%20version%20012914\\_3.pdf](http://ecos.fws.gov/docs/recovery_plan/Pallid%20Sturgeon%20Recovery%20Plan%20Final%20Revision%20signed%20version%20012914_3.pdf)

6. U.S. Fish and Wildlife Service. 2009. Western Prairie Fringed Orchid (*Platanthera praeclara*) 5-Year Review: Summary and Evaluation. 37 pp.  
[http://www.fws.gov/midwest/endangered/plants/pdf/wpfo\\_5YrReview2009.pdf](http://www.fws.gov/midwest/endangered/plants/pdf/wpfo_5YrReview2009.pdf)
7. Western Prairie Fringed Orchid Fact Sheet. U.S. Fish and Wildlife Service, Ecological Services Field Offices in the Upper Midwest. 2011.
8. General NPDES Permit Number NER900000 for Storm Water Discharges From Industrial Activity to Waters of the State of Nebraska  
[http://www.deq.state.ne.us/publica.nsf/23e5e39594c064ee852564ae004fa010/9c04cb7b875b5a0b8625687400613d3b/\\$FILE/ISW-%20General%20Permit.pdf](http://www.deq.state.ne.us/publica.nsf/23e5e39594c064ee852564ae004fa010/9c04cb7b875b5a0b8625687400613d3b/$FILE/ISW-%20General%20Permit.pdf)
9. 80 FR 17973 18033 – April 2, 2015 - Threatened Species Status for the Northern Long-Eared Bat With 4(d) Rule <https://www.gpo.gov/fdsys/pkg/FR-2015-04-02/pdf/2015-07069.pdf>
10. U.S. Fish and Wildlife Service. 2016. Northern Long-Eared Bat (*Myotis septentrionalis*) Status: Threatened with 4(d) Rule  
<http://www.fws.gov/midwest/endangered/mammals/nleb/>

## **(2) National Environmental Policy Act (NEPA) Review.**

Under Section 793(c) of the Energy Supply and Environmental Coordination Act of 1974, no action taken under the Clean Air Act shall be deemed a major federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act of 1969. The proposed permitting action is taken under regulations implementing the Clean Air Act and is therefore exempt from the NEPA. See Section 7(c) of the Energy Supply and Environmental Coordination Act of 1974, 15 U.S.C. 793(c) (1).

## **(3) National Historic Preservation Act (NHPA).**

Section 106 of the NHPA requires the EPA to take into account the effect of any action undertaken by the EPA, such as issuing air construction permits, on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places. EPA consults with the state historical preservation officer (SHPO), the tribal historical preservation officer (THPO), and members of the public to receive and consider their views and concerns about historic preservation during projects and activities that are considered covered undertakings. Since the Winnebago Tribe of Nebraska has assumed the SHPO's responsibilities for Section 106 under Section 101(d) (2) of NHPA, thereby having a THPO, EPA is consulting with the THPO in lieu of the SHPO.

Thurston Manufacturing Company is a facility less than fifty years old. The facility occupies approximately 20 acres of land of which approximately eight of those acres are developed. The facility manufactures agricultural equipment and side dump trailers. In 1971 the facility started production down the hill from the current location. There have been four building expansions since the facility was moved to the current location in 1979. Most recently in 2012-2013, the production building footprint was expanded by approximately 35,000 square feet to accommodate new process equipment.

EPA is considering issuing a CAA synthetic minor source permit, which includes permit requirements based on the tribal minor NSR preconstruction provisions, for all non-exempt

emissions units at the facility for which information has been received, as of the date of the permit issuance. The permit will establish emissions limits for the after-the-fact construction and operation of the following emissions units: Paint Booth, Plasma Cutting Table, Shot Blast Machine, Parts Washer, two types of Welding Operating, and two Fabrication Machines.

The EPA considered whether issuing the proposed synthetic minor NSR permit might affect historic properties. EPA searched the National Park Service National Register of Historic Places website <http://focus.nps.gov/nrhp> and found six National Register Sites listed for Thurston County. No part of the existing facility or the Village of Thurston, NE is included in the list.

The EPA consulted with the Winnebago Tribe of Nebraska THPO to determine the scope of its identification efforts. During consultation, the Winnebago THPO Sasha Rivers and Winnebago Tribal Historian David Miller discussed the location of various grave sites in the western area of the Reservation and east of the town of Thurston and indicated there are no known grave sites in the area of potential effects, e.g., in and around the Thurston Manufacturing Company facility, including the expanded footprint of the production building in 2012-2013.

#### **(4) Environmental Justice (EJ).**

Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies. Meaningful involvement means that people have an opportunity to participate in decisions about activities that may affect their environment and/or health; the public's contribution can influence the regulatory agency's decision; their concerns will be considered in the decision making process; and the decision makers seek out and facilitate the involvement of those potentially affected. EPA's goal is to provide an environment where all people enjoy the same degree of protection from environmental and health hazards and equal access to the decision-making process to maintain a healthy environment in which to live, learn, and work.

EPA has developed an EJ mapping and screening tool called EJSCREEN. It is based on nationally consistent data and an approach that combines environmental and demographic indicators in maps and reports. The plant is located in the Village of Thurston, NE and within the Winnebago Indian Reservation. EPA reviewed screen reports for the half-mile and one mile radius around the facility, as well as one for the census block group.

EJ areas of concern are determined by examining various environmental, demographic, and economic indicators. With EJSCREEN, EPA primarily looks at the EJ indicators. EPA uses an 80th percentile threshold to evaluate the potential for EJ concerns in a community, so if an area of interest exceeds the 80th percentile for one or more of the 12 EJ indicators, EPA considers that area to have a high potential for EJ concerns. In this case none of the EJ

indicators exceed the 80th percentile for this location. So, we would not consider this location as one that would have a high potential for EJ concerns.

For this permit action, the EPA is seeking input regarding possible EJ concerns and whether the Permittee's operations might cause a disproportionately high environmental or public health impact to a low income or minority population.

**(5) Consultation with the Winnebago Tribe of Nebraska.**

As part of EPA Region 7's federal program implementation and oversight responsibilities, EPA Region 7's policy is to consult on a government-to-government basis with federally recognized tribal governments when EPA actions and decisions may affect tribal interests. EPA Region 7 initiated consultation about this CAA permitting action with the Winnebago Tribe of Nebraska via written correspondence dated December 1, 2015.

On December 10, 2015, EPA Region 7 representatives spoke with Joseph Painter, Environmental Protection Department Manager, who indicated he would be the designated tribal representative for consultation. A concern was expressed about the Tribe being periodically informed about air emissions from the facility. To address the Tribe's questions on sharing information about air emissions from the facility, a provision was added to the draft permit (see Section III (M) (1) Annual Reports) requiring the Permittee to submit an annual report that includes actual emissions from all non-exempt emissions units at this facility, to the Tribe's Environmental Protection Department Manager.

**(6) Public participation requirements.**

EPA Region 7 is soliciting public input to be considered prior to final decision-making regarding the issuance of the proposed synthetic minor source permit consistent with the 40 CFR § 49.157 Public participation requirements.

EPA Region 7 is providing notice of the proposed permit action in the Pender Times and the Winnebago Indian News. EPA Region 7 is making relevant information, for example, the draft permit and support materials, including this TSD, readily available at the Winnebago Tribe of Nebraska Environmental Office, at the EPA Regional Office, and the EPA website: <http://www.epa.gov/caa-permitting/draft-synthetic-minor-tribal-air-permit-thurston-Manufacturing> .

The comment period for the Public Notice (PN) of this draft permit starts with the date noted on the PN and ends 30 calendar days later. The PN requests comments from interested individuals or agencies. A written request for a public hearing on the draft permit may also be submitted. Any request for a hearing must state the nature of the issues that the requestor proposes to raise at the hearing. In accordance with 40 CFR § 157 (c) (1), the EPA will consider all comments submitted before the end of the public comment period. If there is a significant degree of public interest in a draft permit, a public hearing will be held on the contents of the draft permit. See 40 CFR § 157(c) (4). The final permit will be issued in accordance with the provisions of 40 CFR § 159.

## **TSD APPENDIX – POTENTIAL TO EMIT-EMISSION INVENTORY**