STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Central Region Office
1250 West Alder St., Union Gap, WA 98903-0009 • 509-575-2490

November 10, 2022

Megan Silcott
Nachurs Alpine Solutions
421 Leader Street
Marion, OH 43302
SilcottM@nachurs-alpine.com
kfaust@mspgroupllc.com

Re: Opinion on Proposed Cleanup for the following Property associated with a contaminated Site:

- **Site Name:** Nachurs Alpine Solutions
- **Site Address:** 101 North 1st Street, Sunnyside
- **Cleanup Site ID:** 14601
- **Facility/Site ID:** 29243
- **VCP Project ID:** CE0510

Dear Megan Silcott:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your proposed independent cleanup of a property associated with the Nachurs Alpine Solution site (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70A.305 RCW.

Issue Presented and Opinion

Ecology has determined that, upon completion of your proposed cleanup, no further remedial action will likely be necessary at the Property to clean up contamination associated with the Site.[1] However, further remedial action will remain necessary elsewhere at the Site to clean up contamination.

1 – Note that achieving cleanup levels via the proposed remedial technologies and methods carries uncertainties. Determination of no further action by Ecology will be contingent on sampling results confirming that MTCA cleanup levels have been achieved at selected points of compliance.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70A.305 RCW, and its implementing regulations,

Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided as follows.

Summary of Opinion

Releases of nitrates, arsenic, and metals (cobalt, molybdenum, and nickel) to groundwater occurred at the Site, associated with the operation of an agricultural fertilizer storage and distribution business. Nachurs Alpine Solutions (NAS) leased the property from Burlington Northern Santa Fe (BNSF) Railways Company between 1973 and 2017. The Property was vacated by late 2017 and is now a vacant lot. Fertilizer was received on the Property via rail cars on a rail spur, stored in above ground storage tanks, and loaded into trucks for distribution. The Property is 0.35 acres in area and is bound by BNSF railroad tracks to the north, a rail spur to the south, and North 1st Street to the East. Vacant land continues to the west of the Property between the railroad and the rail spur, until the two merge about 815 feet west of North 1st Street. The Property is not shown as a distinct parcel but rather is within BNSF Railway lands in Yakima County's online Geographic Information System (GIS) tool. A detailed description of the Property is attached. The Property is roughly rectangular in shape and is approximately 60 feet in the north-south direction by 250 feet in the east-west direction.

Groundwater at the Site was characterized through the collection of 29 groundwater grab samples and sampling of four monitoring wells a total of six (6) times between September 2020 and June 2022. Soil at the Site was characterized though the collection of 54 soil samples from 35 locations.

Groundwater was found to be contaminated at the Site with nitrates, arsenic, and metals (cobalt, molybdenum, and nickel) at concentrations above cleanup levels. As further discussed below, no soil contamination was found above MTCA cleanup levels at concentrations exceeding regional or area-specific background.

The CAP proposed groundwater treatment via injection for the Property. Injection authorization has been obtained from Ecology's Water Quality Program, Underground Injection Control. Few practicable remedial options are available for the groundwater contamination at the Site. Ecology has concluded that no disproportionate cost analysis (DCA) is required under WAC 173-340-360(3) since no more permanent remedial alternative has been identified to address the Site contamination.

NAS (now a part of Wilbur-Ellis company) is seeking a property-specific No Further Action (NFA) determination in order to close their lease agreement with BNSF. NAS's consultant, Geosyntec, has proposed the injection remedial approach to address the groundwater contamination beneath the Property in order to achieve a property specific NFA as expeditiously as possible.

Ecology has no objection to the proposed approach for independent cleanup of the Property but notes that issue of a NFA determination for the Property will be contingent on achieving cleanup levels at selected points of compliance.

Cleanup of the contaminated groundwater is complicated by upgradient concentrations of nitrates and arsenic in groundwater above MTCA cleanup levels. Area-specific background concentrations for nitrates and arsenic in groundwater have been developed for the Site. Cleanup on the Property to concentrations less than these area-specific background concentrations could results in recontamination by groundwater migrating onto the Property. Hence, cleanup to the area-specific background concentrations for nitrates and arsenic is proposed. Ecology concurs with this conclusion. However, further cleanup would be needed in the future should the area-specific nitrate and arsenic contamination be cleaned up or attenuate.

Because contamination will remain on the Property above cleanup levels, an Environmental Covenant (EC) restricting use of groundwater will be needed. An EC triggers a 5-year periodic review process. During such periodic reviews, an assessment can be made regarding area specific background conditions. Based on such periodic review, Ecology may require further action on the Property in the future.

Groundwater compliance monitoring will follow injection treatment. Ecology will expect a minimum of four consecutive quarters of groundwater monitoring with results below selected cleanup levels/area-specific background prior to issue of a NFA determination. Additional monitoring rounds may be required if Ecology identifies potential concerns regarding post-injection contamination rebound.

Property Description

This opinion only applies to the Property described in this section, which was affected by release(s) at the Site. The Property includes an area of BNSF Railway Company property depicted in Figure 1 in Enclosure A. Ecology notes that BNSF properties are not identified as parcels within Yakima County's online GIS system but are rather shown as railroad right-of-way. The Property was leased from BNSF by Nachurs Alpine Solutions and is defined by the following property corners:

- SE corner of the Site is Lat/Long: 46.32741618/-120.02017823, located approximately 24.5 ft north and 1.3 ft east of the NE corner of Parcel 22102614408.
- NE corner of the Site is Lat/Long: 46.32759282/-120.02018029, located approximately 64.4 ft north of the SE corner of the Site.

- NW corner of the Site is Lat/Long: 46.32759699/-120.02120192, located approximately 258.2 ft west of the NE corner of the Site.
- SW corner of the Site is Lat/Long: 46.32743687/-120.02120341, located approximately 58.4 ft south of the NW corner of the Site and 259.9 ft NW of the SE corner of the Site.

Description of the Site

The Site is defined by the nature and extent of contamination associated with the following releases:

- Nitrates, arsenic, and metals (cobalt, molybdenum, and nickel) into the groundwater[1].

1 – Releases at the Site impacting groundwater occurred via soil. With the exception of arsenic and cobalt, no cleanup level exceedances have been found in soil samples collected at the Site. This is believed to be due to the high solubility of the released agricultural fertilizer/trace nutrient chemicals. Note that the Method B direct contact concentration and regional background concentration for arsenic in soil were exceeded; however, the Method A, unrestricted land use-based cleanup level for arsenic in soil was not exceeded. In addition, the distribution of cobalt results in soil appears to be consistent with background. These soil cleanup level exceedances are further discussed below.

Enclosure A includes a detailed description and diagrams of the Site, as currently known to Ecology.

Please note a parcel of real property can be affected by multiple sites. At this time, Ecology has no information suggesting that the parcels associated with this Site may be affected by another site. However, the Site is in an area with nitrates and arsenic in groundwater commonly at concentrations above cleanup levels. This area-wide contamination is further discussed below.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Ecology. Email regarding Remedial Investigation and Cleanup Action Plan for 101 North 1st Street, Sunnyside, WA. October 19, 2022.
2. Geosyntec Consultants. Email regarding Remedial Investigation and Cleanup Action Plan for 101 North 1st Street, Sunnyside, WA. October 10, 2022.
3. Geosyntec Consultants. *Remedial Investigation and Cleanup Action Plan, Former Nachurs Alpine Solutions*. September 23, 2022.
4. Geosyntec Consultants. *Off-Site Investigation Work Plan, Nachurs Alpine Solutions.* May 20, 2021.

5. Geosyntec Consultants. *Groundwater Well Installation and Monitoring Work Plan, Nachurs Alpine Solutions*. April 30, 2020.
6. August Mack Environmental. *Limited Phase II Subsurface Investigation, 101 North 1st Street, Sunnyside*. February 22, 2018.

A number of these documents are accessible in electronic form from the Site webpage https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=14601. The complete records are stored in the Central Files of the Headquarters Office of Ecology, for review by appointment only. Visit our Public Records Request page https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests, to submit a public records request or get more information about the process. If you require assistance with this process, you may contact the Public Records Officer at publicrecordsofficer@ecy.wa.gov or 360-407-6040.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Proposed Cleanup

Ecology has concluded that, upon completion of your proposed cleanup, **no further remedial action** will likely be necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. **Characterization of the Site**.

   Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action for the Property. The Site is described above and in **Enclosure A.**

   Site Contaminants

   Site contaminants found above MTCA cleanup levels in groundwater are nitrates, arsenic, and metals (cobalt, molybdenum, and nickel). Other than cobalt, no cleanup level exceedances were found in soil samples. However, cobalt concentrations in soil were consistent with area-specific background concentrations, as further discussed below.

   The lack of soil cleanup level exceedances is believed to be due to the high solubility of the released agricultural fertilizer/trace nutrient chemicals. Based on the lack of soil cleanup level exceedances, no cleanup of unsaturated soils at the Site appears to be warranted.

Soil Characterization

Soils at the sites were characterized through the collection of 54 soil samples from 35 locations between 2018 and 2022. Soil samples were collected at depths ranging from 0-3 feet below ground surface (ft bgs) to 4-6 ft bgs.

The sole cleanup level exceedances for soil were for cobalt. The Method B soil protective of groundwater concentration of 4.3 mg/kg for cobalt in soil was exceeded in all soil samples (concentrations from 6.0 to 16 mg/kg). The distribution of the cobalt in soil data appears to be consistent with a data distribution for a natural occurring substance. Two soil samples collected off-Property at location MW-1 had cobalt concentrations of 10 mg/kg and 12 mg/kg. These concentrations were consistent with concentration of cobalt in Site soils and further corroborate that concentrations of cobalt in soil at the Site are consistent with background. No further actions appear to be warranted with respect to Site soils.

Groundwater Characterization

Groundwater at the Site is shallow, with the depth to groundwater ranging from 2.7 to 6.0 ft bgs. Lithologies were typically silty sand to sandy silt. Groundwater flows to the southeast at the Site, based on both a potentiometric surface map prepared for the Site and groundwater flow directions established at other sites in the vicinity.

Groundwater was characterized through grab sampling at 29 locations and sampling of four (4) monitoring wells between September 2002 and June 2022. Groundwater maximum concentrations are summarized in Table 1:

Table 1 – Maximum Concentration of Site Contaminants in Groundwater

Contaminant	Maximum Groundwater Concentration (µg/L)	Location of Maximum Concentration	Groundwater Cleanup Level (µg/L)
Nitrates	1,200,000	SB-13	10,000[2]
Arsenic	520[3]	SB-3	6.0[4]
Cobalt	22.9[3]	SB-10	4.8[1]
Molybdenum	290[3]	SB-15	80[1]
Nickel	200[3]	SB-13	100[2]

1 – Method B cleanup level, direct contact, non-cancer.

2 – Washington State Maximum Contaminant Level in Drinking Water (MCL).

3 – Maximum concentrations for As, Co, Mo, and Ni listed are for dissolved metals concentration.

4 – Regional (Yakima Basin) background concentration

Although cleanup level exceedances of several contaminants were found both north (upgradient) and south (downgradient) of the Property, the highest concentrations of Site contaminants were all found on the Property. On- and off-Property maximum concentrations are summarized as follows:

Table 2 – Upgradient and Downgradient Maximum Concentrations in Groundwater

Contaminant	Maximum On-Property Groundwater Concentration (µg/L)[1]	Maximum Upgradient Groundwater Concentration (µg/L)[1]	Maximum Downgradient Groundwater Concentration (µg/L)[1]	Groundwater Cleanup Level (µg/L)
Nitrates	1,200,000	68,000[2]	28,000	10,000
Arsenic	520	90	120	6.0
Cobalt	22.9	<1	10	4.8
Molybdenum	290	76	75	80
Nickel	200	NA	NA	100

1 – Maximum concentrations for As, Co, Mo, and Ni listed are for dissolved metals concentration.

2 – The Maximum upgradient nitrate concentration at MW-1 was not repeated in subsequent sampling rounds. The next highest concentration was 20,000 µg/L.

NA = Nickel not analyzed for in upgradient and downgradient groundwater samples.

Based on the maximum concentrations presented in Table 2, cleanup level exceedances for nitrates and arsenic in groundwater extend off-Property, both upgradient and downgradient. Cobalt is found in groundwater at concentrations above the cleanup downgradient of the Property, but not upgradient. No cleanup level exceedances were found for molybdenum off-Property. Nickel was not analyzed in samples collected off-Property; however, the magnitude of exceedances on the Property suggests that off-Property impacts are unlikely.

The downgradient extent of contamination appears to have been generally defined. Nitrates and arsenic groundwater contamination has migrated to the southeast, beneath the property at 105 S 1st St and slightly beyond North 1st Street. Cobalt contamination appears to have not migrated beyond North 1st Street.

Table 3 summarizes properties that are likely impacted by each of the groundwater contaminants:

Table 3 – Downgradient Properties with Likely Groundwater Cleanup Level Exceedances

Contaminant	Subject Property	N 1st St Right-of-Way	105 S 1st St Parcel 22102614408	108 E Blaine Ave – Parcel 22102522555	Blaine Ave Right-of Way
Nitrates	X	X	X	X	
Arsenic	X	X	X	X	?
Cobalt	X	X	X		
Molybdenum	X	?			
Nickel	X				

X – Indicates existing data suggest that the indicated property has the contaminant in groundwater at concentrations above cleanup levels. Not all of these properties were sampled.

? – Indicates existing data suggest that the indicated property may have contaminant in groundwater above cleanup levels

Notification of property owners regarding known or suspected cleanup level exceedances is warranted. **Ecology requests that the owners of such impacted properties to be notified via certified mail, and Ecology be copied on such correspondence.** Based on Yakima County's online parcel mapping system, it appears that parcels at 108 E. Blaine Avenue and 105 S. 1st Street are owned by Milne Fruit Products.

The presence of upgradient nitrate and arsenic contamination in groundwater complicates development of cleanup goals at the Site for these contaminants. Nitrates in groundwater are commonly present in the area due to various agricultural sources such as concentrated animal feeding operations (CAFOs). Ecology's Water Quality Program is currently monitoring groundwater quality in the lower Yakima Valley for nitrate contamination in groundwater. An area-specific background concentration of 48,000 µg/L for nitrates in groundwater was developed within the RI/CAP, based on data collected in the area by Ecology's Water Quality Program.

Arsenic in upgradient groundwater is likely attributable to carbon source(s) in groundwater resulting in localized reducing geochemical conditions, causing mobilization of naturally occurring arsenic within soils. An area background study for arsenic in groundwater was presented within the RI/CAP. This background study resulted in an area-specific background concentration for total arsenic of 71 µg/L.

The use of area specific background concentrations for nitrates and arsenic in groundwater at the Site is discussed below.

2. **Establishment of cleanup standards and points of compliance**.

Cleanup Standards

Ecology has determined the cleanup levels and points of compliance presented below meet the substantive requirements of MTCA. The following cleanup levels have been selected for the Site:

Table 4 – Selected Cleanup Levels for Site Contaminants

Contaminant	Maximum Soil concentration (mg/kg)	Soil Cleanup Level (mg/kg)	Maximum Groundwater Concentration (µg/L)	Groundwater Cleanup Level (µg/L)
Nitrates	930	130,000[1]	1,200,000	10,000[2]
Arsenic	10.1	5.1[5]/20[6]	520[4]	6.0[5]
Cobalt	16	4.3[3]	22.9[4]	4.8[1]
Molybdenum	1.9	32[3]	290[4]	80[1]
Nickel	18.6	68[3]	200[4]	100[2]

1 – Method B cleanup level, direct contact, non-cancer.

2 – Washington State Maximum Contaminant Level in Drinking Water (MCL).

3 – Method B, Soil protective of groundwater pathway.

4 – Maximum concentrations for As, Co, Mo, and Ni listed are for dissolved metals concentration.

5 – Regional (Yakima Basin) background concentration

6 – Method A cleanup level

The selected cleanup levels are for unrestricted land use.

Area Specific Background or Nitrates and Arsenic

As discussed above, area-specific background concentrations were developed within the RI/CAP for nitrates (48,000 µg/L) and total arsenic (71 µg/L). The development of these area-specific background concentrations is important since cleanup of contamination below cleanup levels on the Property could result in recontamination from upgradient groundwater for nitrates and arsenic.

"Area background" is defined in MTCA as concentrations of hazardous substances that are consistently present in the environment in the vicinity of a site which are the result of human activities unrelated to releases from that site. WAC 173-340-360 (4)(d) states:

> "*When area background concentrations (see WAC 173-340-200 for definition) would result in recontamination of the site to levels that exceed cleanup levels, that portion of the cleanup action which addresses cleanup below area background concentrations may be delayed until the off-site sources of hazardous substances are controlled. In these cases the remedial action shall be considered an interim action until cleanup levels are attained*."

Therefore, cleanup should target area-specific background concentrations for nitrates and arsenic. Should area groundwater concentrations of nitrates and arsenic be addressed or attenuate at some point in the future, then nitrates and arsenic in groundwater on the Property should be cleaned up to the concentrations presented in Table 4.

Points of Compliance

In order to be eligible for a property specific NFA determination, points of compliance are throughout the Property.

Terrestrial Ecological Evaluation (TEE)

The Site is located within an industrial/railyard area. A large hayfield is located approximately 130 feet northwest of the site. No ecological receptor concerns are expected for the contaminated groundwater at the Site. No exceedance of TEE-based concentrations in MTCA Table 749-2 were identified in soil samples by Ecology, hence no further action regarding the TEE pathway is warranted.

3. **Selection of cleanup action.**

Ecology has determined the cleanup action you proposed for the Site meets the substantive requirements of MTCA.

The CAP proposes groundwater treatment via injection for the Property. An injection authorization has been obtained from Ecology Water Quality Underground Injection Control program. Few practicable remedial options are available for the Site contamination. Ecology has concluded that no disproportionate cost analysis (DCA) is needed since a more permanent remedial alternative has not been identified.

NAS (now a part of Wilbur-Ellis company) is seeking a property-specific No Further Action (NFA) determination in order to close their lease agreement with BNSF. NAS's consultant, Geosyntec, has been working to identify and design the most appropriate remedial option to address the groundwater contamination beneath the Property in order to achieve a property specific NFA as expeditiously as possible. Ecology has no objection to the proposed approach for independent cleanup of the Property but notes that issue of a NFA determination for the Property will be contingent on achieving cleanup levels at selected points of compliance.

Cleanup of the contaminated groundwater is complicated by concentrations of nitrates and arsenic in groundwater above area-specific background concentrations developed at the Site. Cleanup on the Property to concentrations less than these area-specific background concentrations could results in recontamination by groundwater migrating onto the Property. Hence, cleanup to the area-specific background concentrations for nitrates and arsenic is proposed. Ecology concurs with this conclusion. However, further cleanup would be needed in the future should the area-specific nitrate and arsenic contamination be cleaned up or attenuate.

Because contamination will remain on the Property above cleanup levels, an Environmental Covenant (EC) restricting use of groundwater will be needed. An EC triggers a 5-year periodic review process. During such periodic reviews, an assessment can be made regarding area specific background conditions. Based on such periodic review, Ecology may require further action on the Property in the future.

Groundwater compliance monitoring will follow injection treatment. Ecology will expect a minimum of four consecutive quarters of groundwater monitoring with results below selected cleanup levels/area-specific background prior to issue of a NFA determination. Additional monitoring rounds may be required if Ecology identified potential concerns regarding post-injection contamination rebound.

The CAP proposed compliance monitoring at monitoring wells MW-2, MW-3, and MW-4 on the Property. Ecology notes that monitoring wells MW-2, MW-4, and MW-4 appear to be appropriate locations for compliance monitoring; however, additional compliance monitoring location(s) may be needed. For example, groundwater cleanup level exceedances have occurred in the western part of the property, but no monitoring wells are currently located in this area. Ecology anticipates that a monitoring well will likely be needed in this area.

Once cleanup objectives on the Property have been achieved, Ecology notes that cleanup of off-Property downgradient groundwater will be needed to achieve a Site NFA determination. Ecology encourages the proposed source area cleanup on the Property and notes that with that source area cleanup, there may be some natural attenuation of contaminants in downgradient groundwater though dispersion and geochemical processes. However, Ecology encourages further action toward achieving cleanup levels throughout the entire Site such that a Site NFA determination can be made.

Limitations of the Opinion

1. **Opinion does not settle liability with the state.**

   Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion does not:

   - Resolve or alter a person's liability to the state
   - Protect liable persons from contribution claims by third parties.

   To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. **Opinion does not constitute a determination of substantial equivalence.**

   To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you proposed will be substantially equivalent. Courts make that determination. *See* RCW 70A.305.080 and WAC 173-340-545.

3. **Opinion is limited to proposed cleanup.**

   This letter does not provide an opinion on whether further remedial action will actually be necessary at the Site upon completion of your proposed cleanup. To obtain such an opinion, you must submit a report to Ecology upon completion of your cleanup and request an opinion under the Voluntary Cleanup Program (VCP).

4. **State is immune from liability.**

   The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70A.305.170(6).

Contact Information

Thank you for choosing to clean up the Site under the VCP. As you conduct your cleanup, please do not hesitate to request additional services. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our webpage [1].
If you have any questions about this opinion, please contact me by phone at (509) 454-7835 or e-mail at Frank.Winslow@ecy.wa.gov.

Sincerely,

Frank P. Winslow, LHG
Toxics Cleanup Program
Headquarter Section

Enclosures (1): A – Site Description and Diagrams

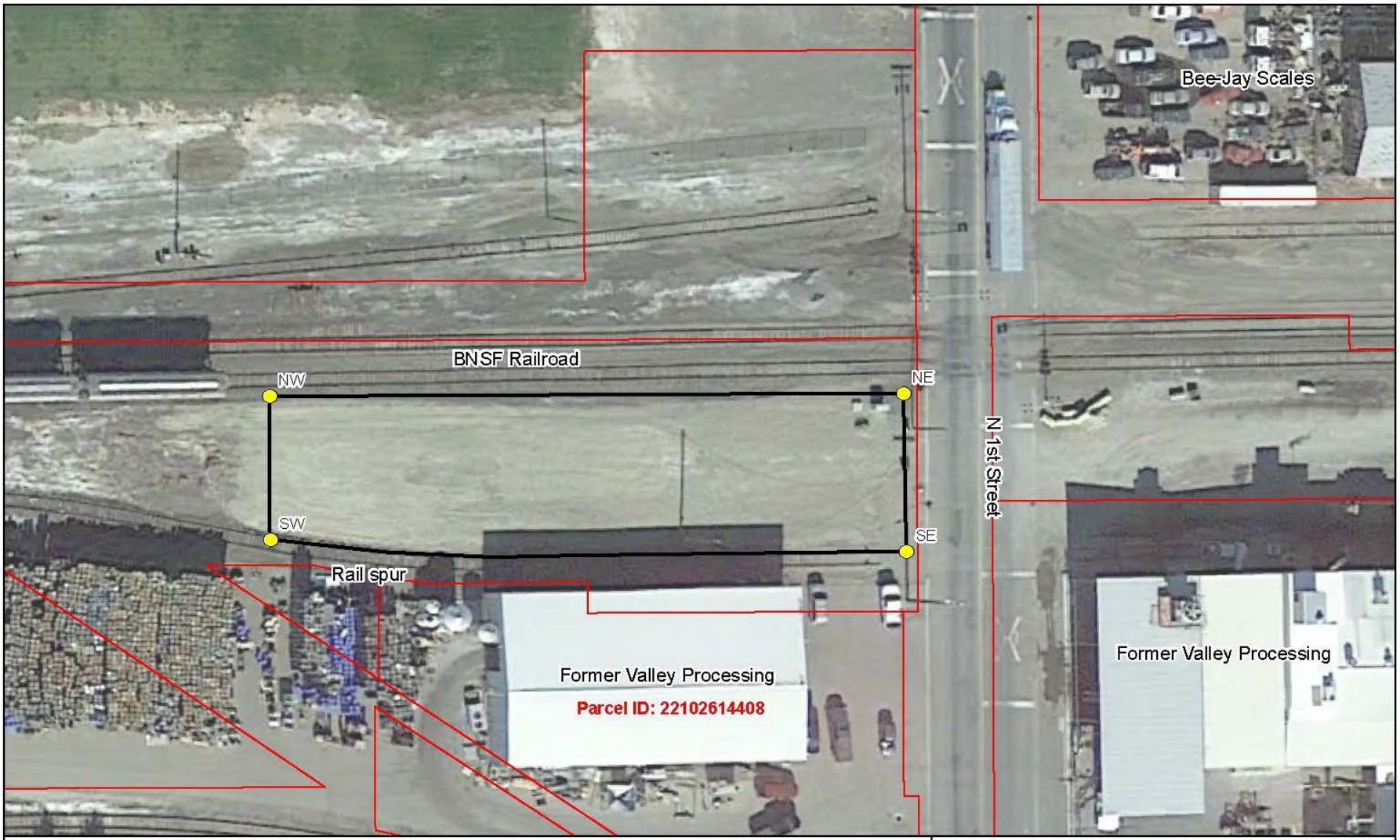
cc: Jan Thompson, Wilbur-Ellis
Luke Smith, Geosyntec Consultants
Melissa Asher, Geosyntec Consultants

[1] https://www.ecy.wa.gov/vcp

Enclosure A

Site Diagrams

DRAFT



Legend

- Site Boundary
- Corner
- Parcel/ROW Boundary

Site Boundary Description:
SE corner of the Site is Lat/Long: 46.32741618/-120.02017823. located approximately 24.5 ft north and 1.3 ft east of the NE corner of Parcel 22102614408
NE corner of the Site is Lat/Long: 46.32759282/-120.02018029. located approximately 64.4 ft north of the SE corner of the Site.
NW corner of the Site is Lat/Long: 46.32759699/-120.02120192. located approximately 258.2 ft west of the NE corner of the Site.
SW corner of the Site is Lat/Long: 46.32743687/-120.02120341. located approximately 58.4 ft south of the NW corner of the Site and 259.9 ft NW of the SE corner of the Site.

Notes:
Map provided by ESRI Basemaps 2016.
ROW = Right of Way

N

0 50 Feet

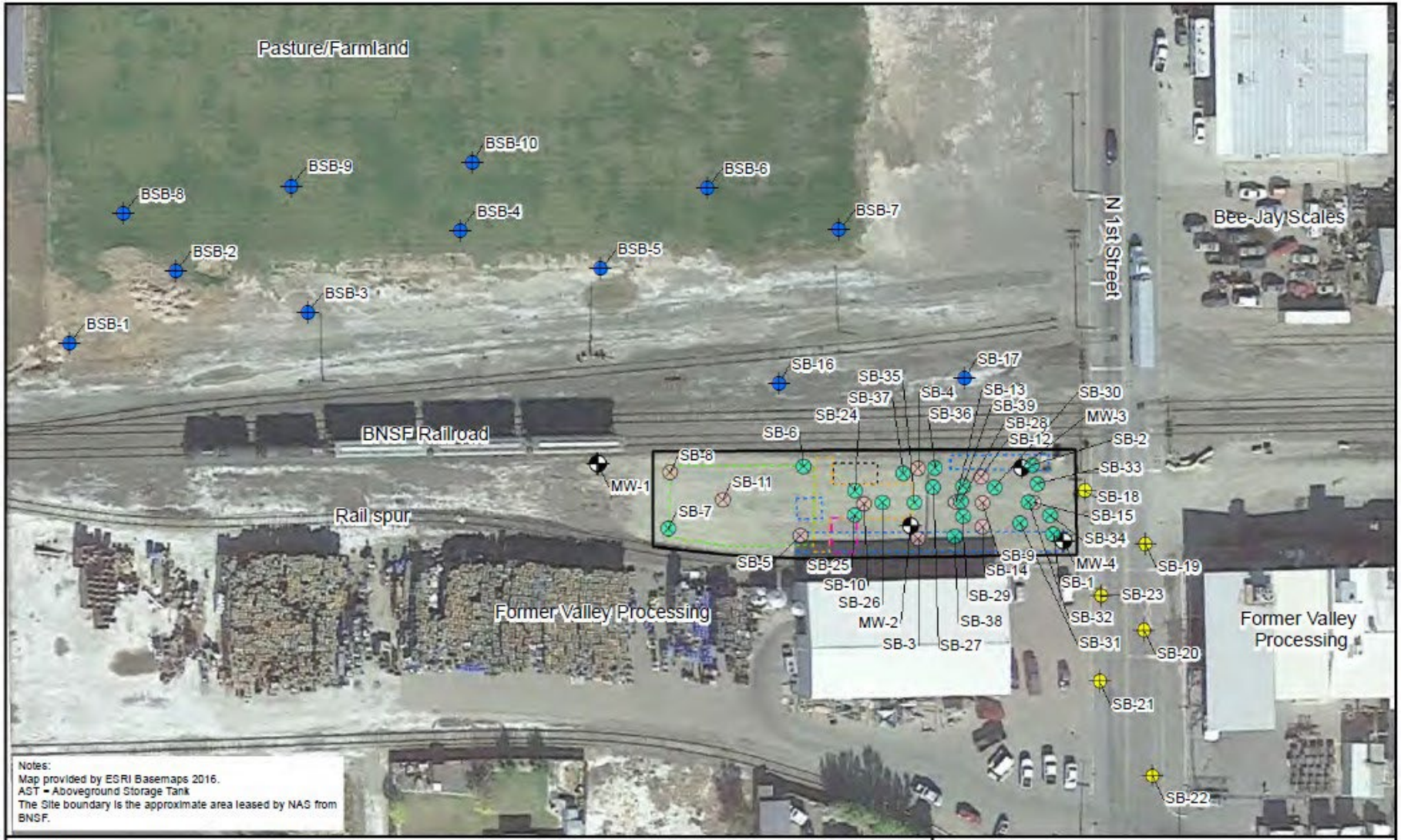
Former Property Leased by Nachurs Alpine Solutions
101 North 1st Street
Sunnyside, Washington

Geosyntec consultants

PNR0696 | October 2022

Figure 1

P:\CAD_GIS\Projects\PNR0696_Sunnyside\MXDs\Revisions111721\Appendix B\Figure 2 Lease Boundary.mxd 10/14/2022 4:31:37 AM



Legend

- Upgradient Grab-Groundwater Sample Location
- Downgradient Grab-Groundwater Sample Location
- Monitoring Well and Soil Sample Location
- On-Site Grab-Groundwater and Soil Sample Location
- On-Site Soil Sample Location
- Site Boundary
- Former AST Area (Pre-1999)
- Former Building Location (Pre-1999)
- Former AST Area with Secondary Containment (1999-2017)
- Former Building Location (1999-2017)
- Former Concrete Loading Pad (1999 – 2017)
- SB-23 - Location ID

N

0 80 Feet

Soil and Groundwater Investigation Locations

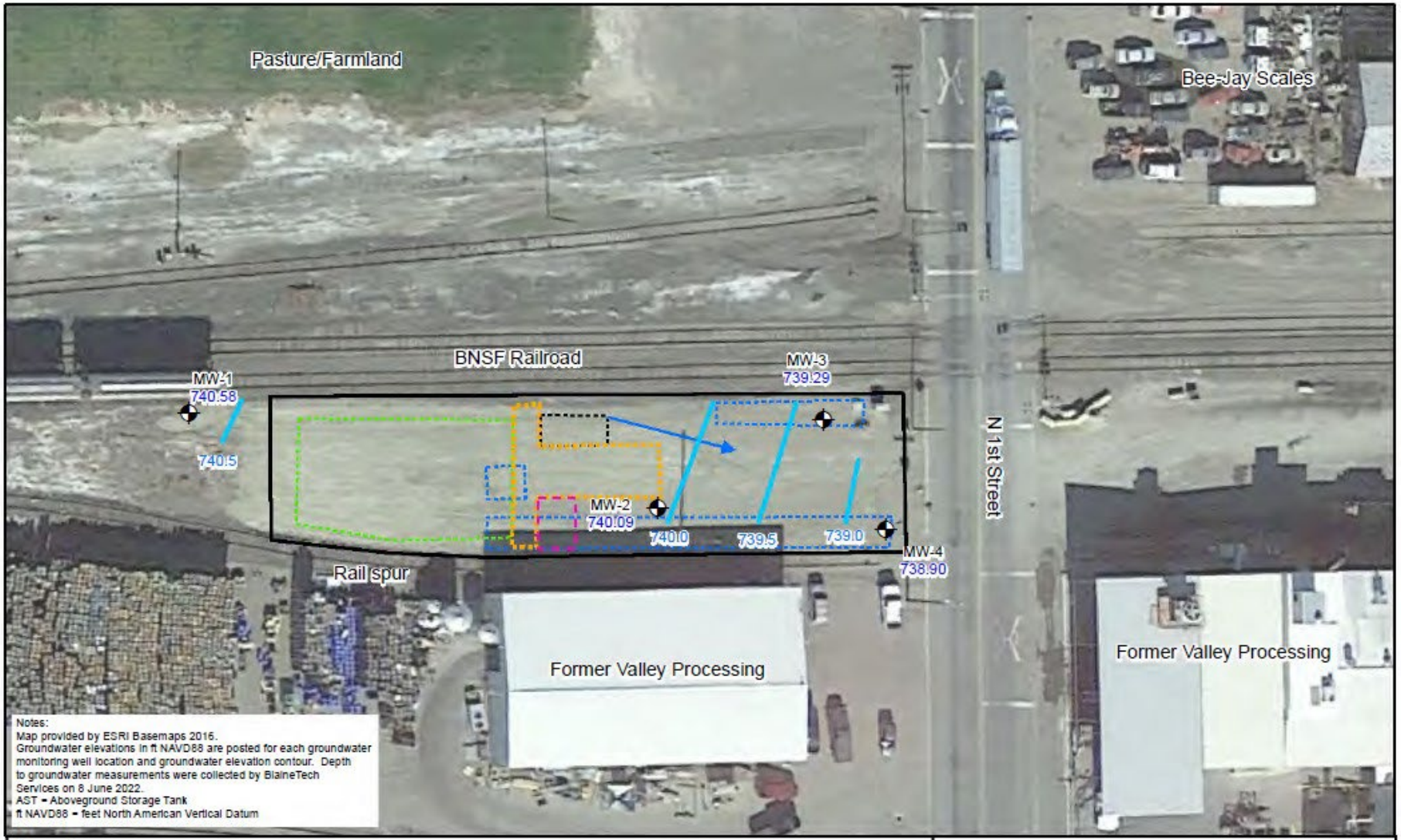
101 North 1st Street
Sunnyside, Washington

Geosyntec consultants

Figure 3

PNR0696C | August 2022

P:\CAD_GIS\Projects\PNR0696_Sunnyside\MXDs\Revisions052022\Figure 3 Soil and Groundwater Investigation Locations.mxd 8/18/2022 11:52:55 AM



Legend

- Monitoring Well and Soil Sample Location
- Groundwater Elevation Contour (ft NAVD88)
- Groundwater Gradient
- Site Boundary
- Former AST Area (Pre-1999)
- Former Building Location (Pre-1999)
- Former AST Area with Secondary Containment (1999-2017)
- Former Building Location (1999-2017)
- Former Concrete Loading Pad (1999 – 2017)

MW-4 — Location ID
738.90 — Groundwater Elevation in feet NAVD88

N

0 50 Feet

Groundwater Elevation Contour Map - June 2022

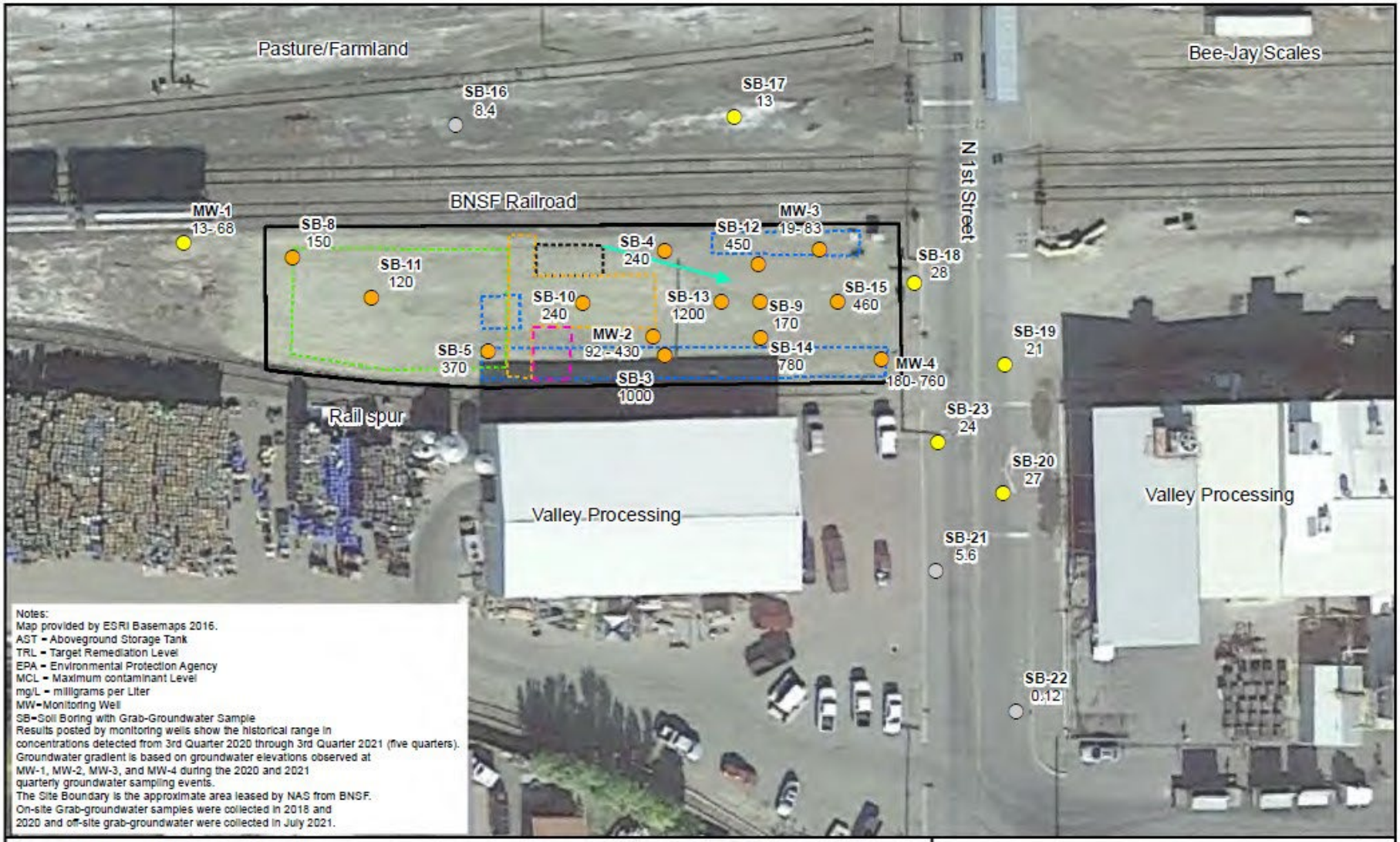
101 North 1st Street
Sunnyside, Washington

Geosyntec consultants

Figure 4

PNR0696C | August 2022

P:\CAD_GIS\Projects\PNR0696_Sunnyside\MXDs\Revisions052022\Figure 4 Groundwater Elevation 2022.mxd 8/30/2022 5:21:03 AM



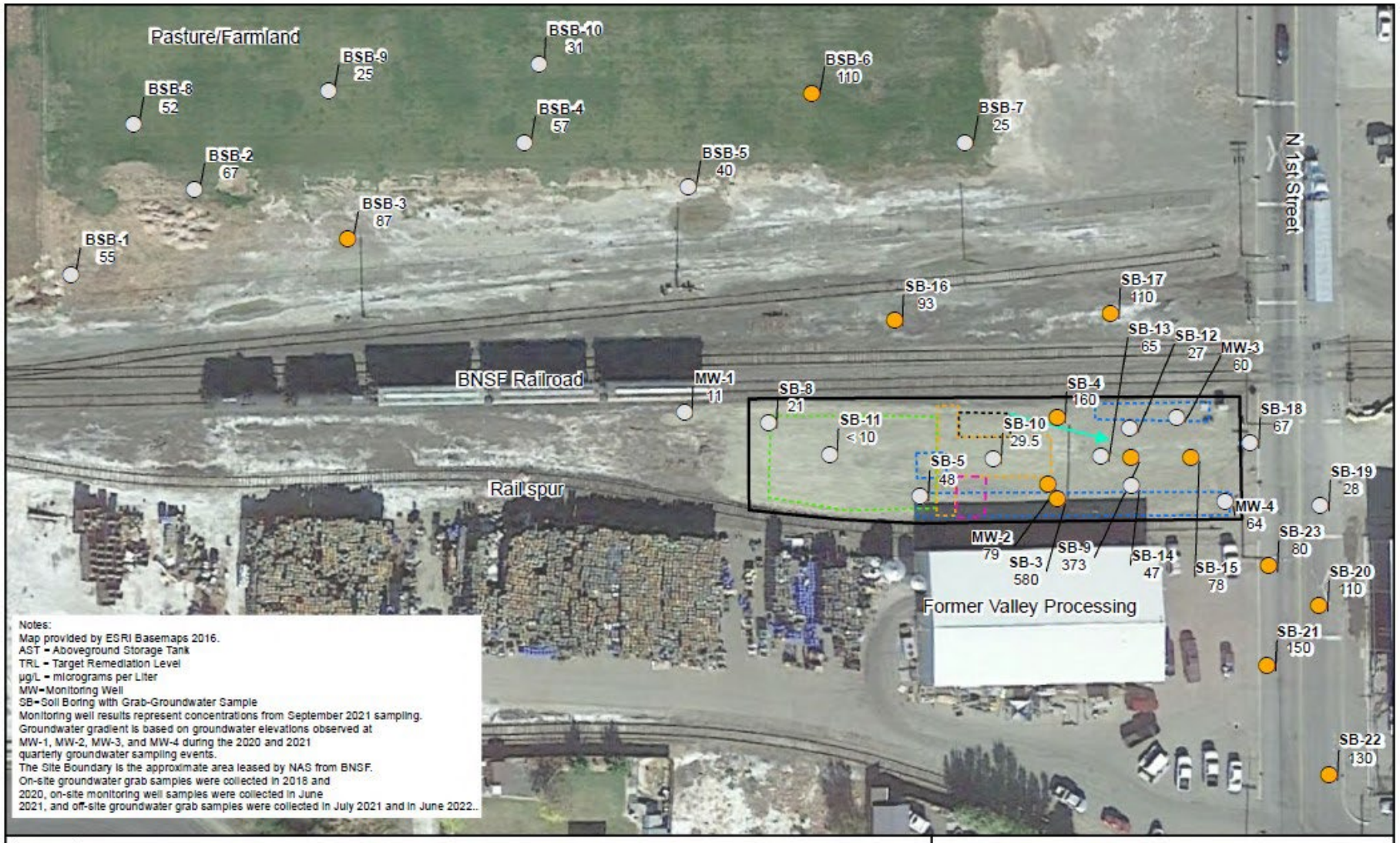
Nitrate in Groundwater Sampling Locations

101 North 1st Street
Sunnyside, Washington

Geosyntec consultants

PNR0696C	August 2022	Figure 7a

P:\CAD_GIS\Projects\PNR0696_Sunnyside\MXDs\Revisions052022\Figure 7a Nitrate in GW.mxd 9/2/2022 4:30:10 AM



Total Arsenic in Groundwater Sampling Locations

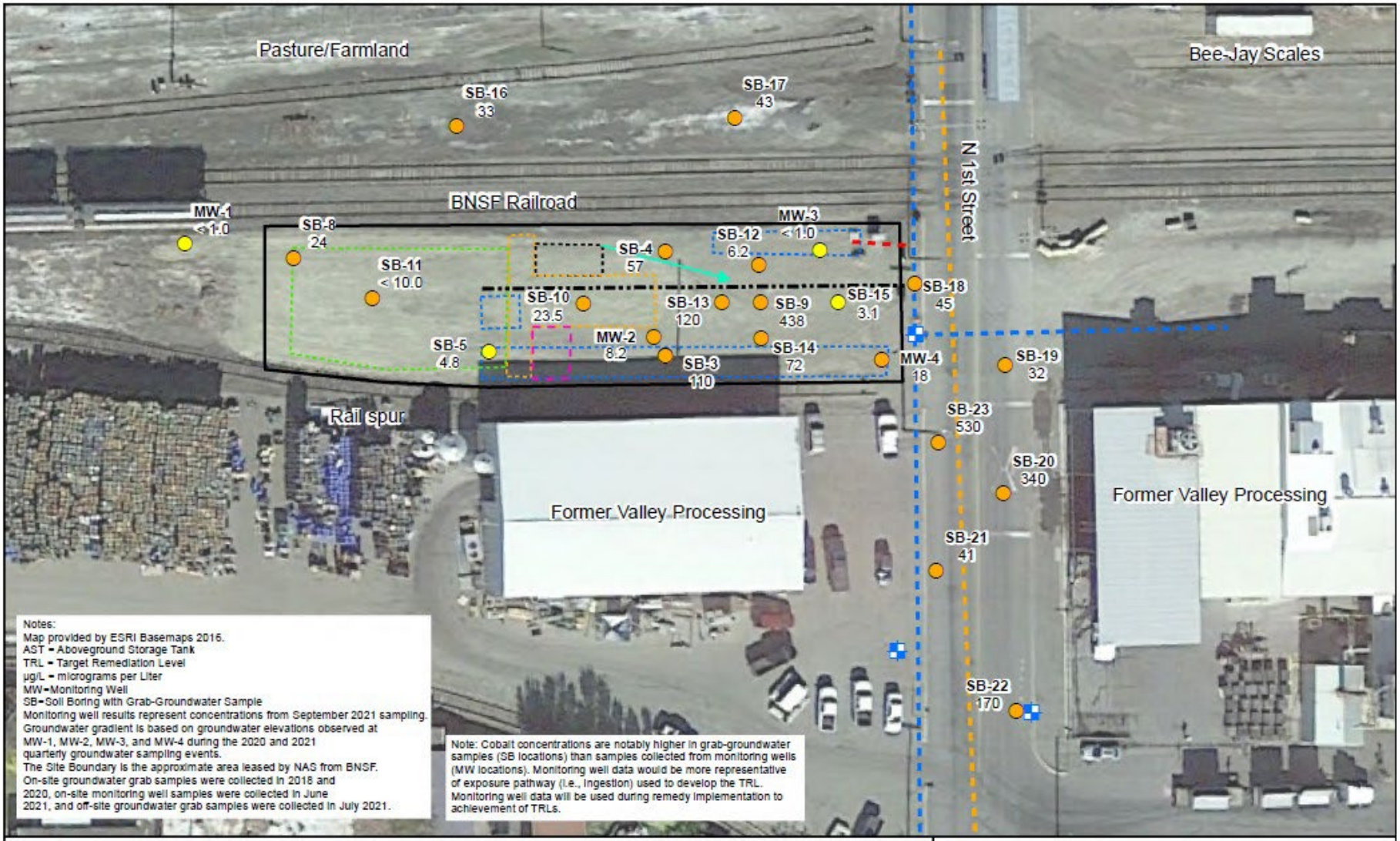
101 North 1st Street
Sunnyside, Washington

Geosyntec consultants

Figure 7b

PNR0696C | September 2022

P:\CAD_GIS\Projects\PNR0696_Sunnyside\MXDs\Revisions052022\Figure 7b Dissolved Arsenic Results.mxd 9/2/2022 1:42:57 PM



Total Cobalt in Groundwater Sampling Locations

101 North 1st Street
Sunnyside, Washington

Geosyntec consultants

PNR0696C	September 2022	Figure 7c

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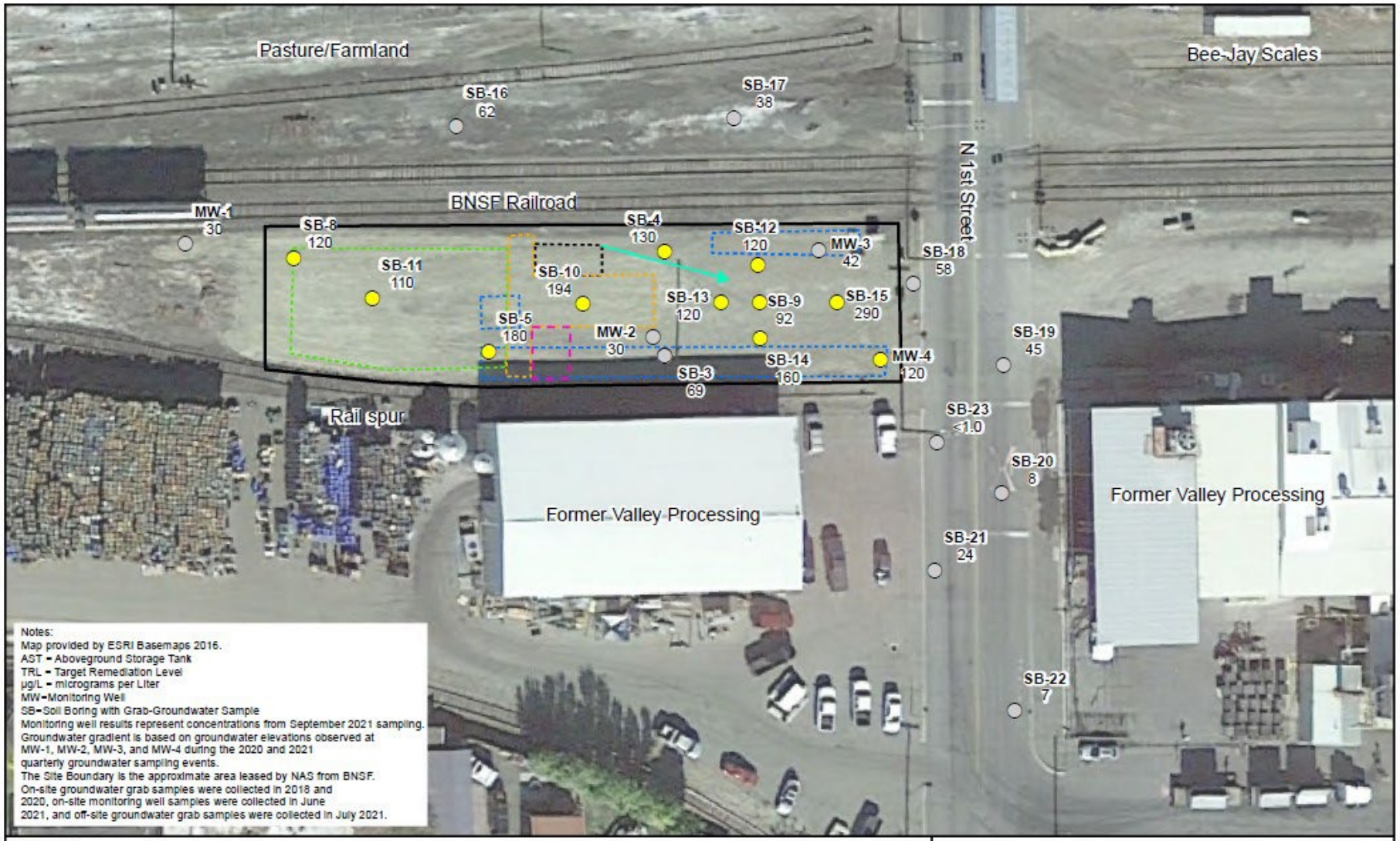


Legend

Total Molybdenum in Groundwater (µg/L)

- < 80 µg/L
- >80 µg/L (TRL)
- Groundwater Gradient
- Site Boundary
- Former AST Area (Pre-1999)
- Former Building Location (Pre-1999)
- Former AST Area with Secondary Containment (1999-2017)
- Former Building Location (1999-2017)
- Former Concrete Loading Pad (1999 – 2017)

MW-4 — Location ID
120 — Molybdenum concentration in groundwater µg/L

N

0 50 Feet

Total Molybdenum in Groundwater Sampling Locations

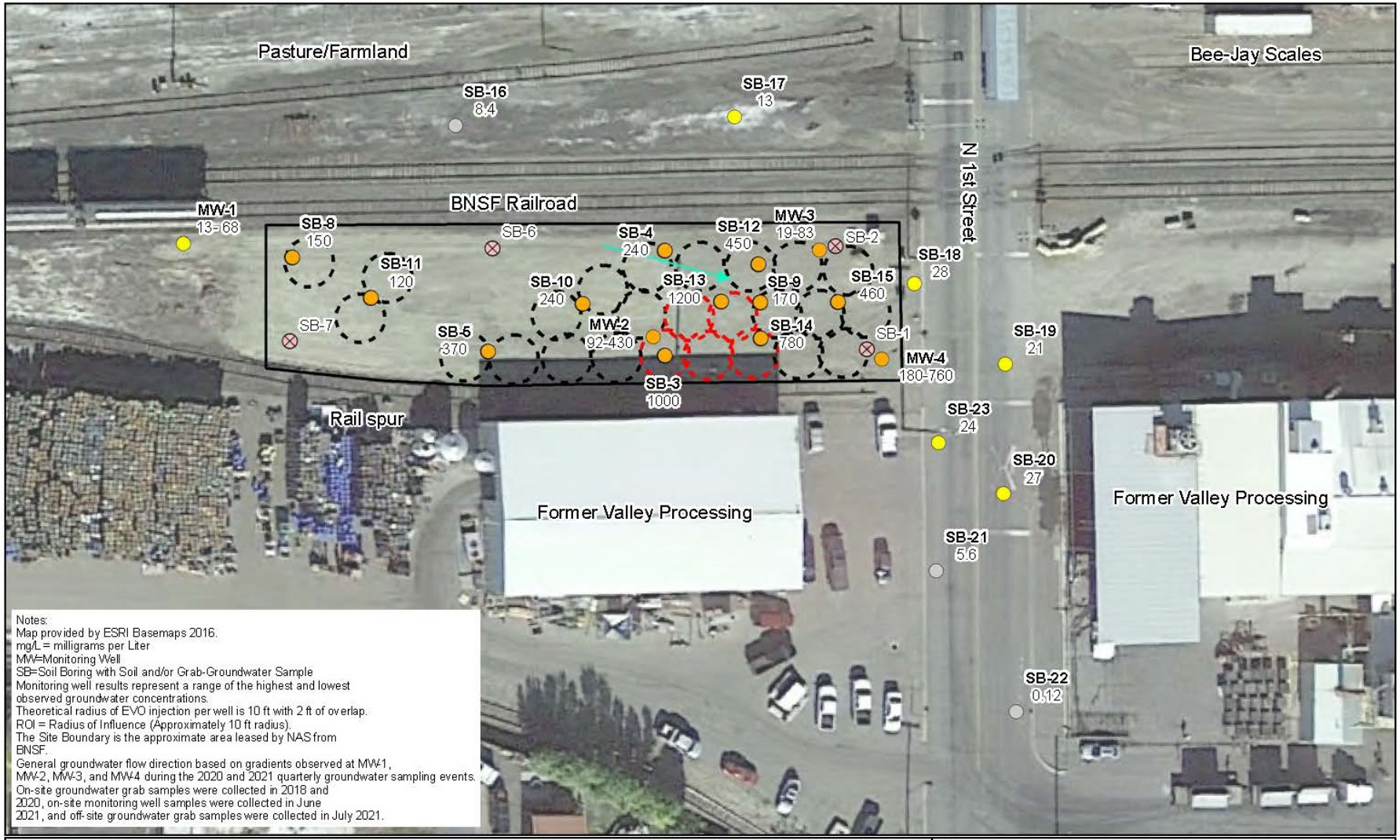
101 North 1st Street
Sunnyside, Washington

Geosyntec consultants

PNR0696C | August 2022

Figure 7d

P:\CAD_GIS\Projects\PNR0696_Sunnyside\MXDs\Revisions052022\Figure 7d Moly in GW.mxd 9/2/2022 1:44:22 PM



Legend

Nitrate as Nitrogen in Groundwater (mg/L)

- <10 mg/L
- 10 - 36.7 mg/L (Background CUL)
- >36.7 mg/L
- Soil Sample Location Only
- General Groundwater Gradient
- Site Boundary
- Proposed Injection location Theoretical ROI
- Proposed Injection location Theoretical ROI (increased EVO dosing planned)

N

0 50 Feet

Revised Proposed Injection Locations

Appendix F - Corrective Action Engineering Design and Implementation Work Plan
101 North 1st Street
Sunnyside, Washington

Geosyntec consultants

PNR0696 | October 2022

Figure 1

P:\CAD_GIS\Projects\PNR0696_Sunnyside\MXDs\Revisions111721\Appendix B\Figure 1 Proposed Injection LocationsV2.mxd 10/6/2022 3:49:24 AM