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JUN 11 2018

INCOMPLETE
FORM 302 - Rev. 09/16
DEPARTMENT OF
WATER RESOURCESJUN 12 2018
INCOMPLETE
WATER RESOURCES
WESTERN REGION

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

APPLICATION FOR PERMIT

To appropriate the public waters of the State of Idaho

Ident. No. 63-34554

1. Name of applicant(s) Nunhems USA, Inc Phone 208-674-4000
 Name connector (check one): ☐ and ☐ or ☐ and/or
 Mailing address 1200 Anderson Corner Road City Parma
 State Idaho ZIP 83660 Email shane.roe@bayer.com
2. Name of representative, if any Shane Roe - Site Services Manager Phone 208-674-4079
 Mailing address Same City _____
 State _____ ZIP _____ Email shane.roe@bayer.com
- a. ☒ Send all correspondence for this application to the representative and not to the applicant OR
☐ Send original correspondence to the applicant and copies to the representative.
- b. ☒ The representative may submit information for the applicant but is not authorized to sign for the applicant OR
☐ The representative is authorized to sign for the applicant. Attach a Power of Attorney or other documentation.
3. Source of water supply Ground Water which is a tributary of n/a
4. Location of point(s) of diversion:

Twp	Rge	Sec	Govt Lot	1/4	1/4	1/4	County	Source	Local name or tag #
06N	05W	9			SW	NW	Payette	Ground Water	Well #1 - No tag

5. Water will be used for the following purposes:
- Amount 0.15 cfs for Irrigation purposes from 3/11 to 11/15 (both dates inclusive)
 (cfs or acre-feet per year)
- Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
 (cfs or acre-feet per year)
- Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
 (cfs or acre-feet per year)
- Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
 (cfs or acre-feet per year)
6. Total quantity to be appropriated is (a) 0.15 cubic feet per second (cfs) and/or (b) _____ acre-feet per year (af).
7. Proposed diverting works:
- a. Describe type and size of devices used to divert water from the source. Submersible Pump - Grundfos 1hp, Model B, installed in a 8" well casing - unknown depth of well.
- b. Height of storage dam _____ feet; active reservoir capacity _____ acre-feet; total reservoir capacity _____ acre-feet. If the reservoir will be filled more than once each year, describe the refill plan in item 12. For dams 10 feet or more in height AND having a storage capacity of 50 acre-feet or more, submit a separate Application for Construction or Enlargement of a New or Existing Dam. Application required? ☐ Yes ☐ No
- c. Proposed well diameter is _____ inches; proposed depth of well is _____ feet.
- d. Is ground water with a temperature of greater than 85°F being sought? ☐ Yes ☐ No
- e. If well is already drilled, when? 1973/1974?; drilling firm Unknown - No records
 well was drilled for (well owner) Unknown; Drilling Permit No. Unknown - No tag

For Department Use

Received by [Signature] Date 6/11/18 Time 12:04pm Preliminary check by A. Skinner
 * Fee \$ 125.00 Received by Amanda Viver Receipt No. C105222 Date 6/11/18

* C105222 PAID \$125.00 FOR WELL DRILLING PERMIT FEE UPGRADE.

FILING FOR WATER RIGHT PERMIT APPLICATION RECEIPT C105117 - \$100.00 - 5/18/18

8. Description of proposed uses (if irrigation only, go to item 9):

- a. Hydropower; show total feet of head and proposed capacity in kW. _____
- b. Stockwatering; list number and kind of livestock. _____
- c. Municipal; must complete and attach the Municipal Water Right Application Checklist.
- d. Domestic; show number of households _____
- e. Other; describe fully. _____

9. Description of place of use:

- a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
- b. If water is used for other purposes, place a symbol of the use (example: D for Domestic) in the corresponding place of use below. See instructions for standard symbols.

TWP	RGE	SEC	NE				NW				SW				SE				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
06N	05W	9							5										5

Total number of acres to be irrigated: 5

10. Describe any other water rights used for the same purposes as described above. Include water delivered by a municipality, canal company, or irrigation district. If this application is for domestic purposes, do you intend to use this water, water from another source, or both, to irrigate your lawn, garden, and/or landscaping? We receive irrigation water from the local irrigation district but this is not used in any way to irrigate the 5 acres irrigated by the well indicated with this application.

- 11. a. Who owns the property at the point of diversion? Nunhems USA, Inc.
- b. Who owns the land to be irrigated or place of use? Nunhems USA, Inc.
- c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing: _____

12. Describe your proposal in narrative form, and provide additional explanation for any of the items above. Attach additional pages if necessary. Change in use from Domestic to Irrigation. Sole use will be for irrigation of approximately 5 acres.

13. Time required for completion of works and application of water to proposed beneficial use is 1 years (minimum 1 year).

14. **MAP OF PROPOSED PROJECT REQUIRED** - Attach an 8½" x 11" map or maps clearly identifying the proposed point of diversion, place of use, section #, township & range. The map scale shall not be less than two (2) inches equal to one (1) mile.

The information contained in this application is true to the best of my knowledge. I understand that any willful misrepresentations made in this application may result in rejection of the application or cancellation of an approval.

Tracy Landry
Signature of Applicant
Tracy Landry Secretary
Print Name (and title, if applicable)

Signature of Applicant

Print Name (and title, if applicable)

State of Idaho
Department of Water Resources
Place of Use and Point of Diversion
Proposed Irrigation for Numhems USA, Inc.



0 0.075 0.15 0.3 Miles



63-34554

Background

Nunhems, USA Inc. (Nunhems) is an agricultural seed processing facility in Parma, Idaho that currently staffs approximately 165 full time employees and hires approximately 50 seasonal workers during their peak production between April and December. The facility, located at 1200 Anderson Corner Road, Parma, ID 83660, expanded its vegetable seed operation in 2009 (Project CarOnEx) to include processing tomato, lettuce, carrots, and onions seeds which required the construction of Buildings M, P, and Q, as well as, substantial remodeling of Building L where most of the seed processing (from a wastewater perspective) occurs. The Building L remodel included the segregation of waste streams to incorporate separate treatment processes.

There are two industrial processes that produce wastewater streams as the onion, carrot, and tomato seeds are treated at the facility; Process A and Process B. Process B is an osmotic priming operation with the wastewater currently routed to an on-site lined Evaporative Lagoon constructed in 2009. The Process B wastewater is not applicable to industrial water reuse and therefore limited information was evaluated as part of this industrial reuse permit application. Process A is a disinfection, pelleting, and drum priming seed treatment operation with the wastewater stored in an on-site lined Fire Retention Pond.

Figure 1 provided in Appendix A is a process flow diagram that balances the water and wastewater flows on-site. Based on evaluating the overall potable water usage metered from the onsite domestic well (Well No. 4, Nunhems Well ID 429415, Tag D0059096) and the individual meters for Process A and Process B, an overall water balance was completed from March 2014 to March 2016 (see Table 1 below).

TABLE 1: ANNUAL WATER BALANCE EVALUATION

Water Meter	Meter Type	LOCATION	Usage (gallons)	
			March 2014 - March 2015	March 2015 - March 2016
Building L	Building Main	Storage Room	850,299	674,255
Building L	Department	Disinfection	592,364	421,815
Building L	Department	Pelleting	5,286	5,956
Building L	Soft Water	Osmotic Priming	51,875	19,571
Building L	Hose Bibs	Osmotic Priming	6,707	2,010
Building L	Department	Drum Priming	5,742	2,377
Building M	Building Main	Equipment Room	138,376	237,662
Campus	Campus Main	Pump House	1,594,000	1,967,000

Wastewater Totals

Fire Retention (Process A)	648,500	447,000
Evaporation Lagoon (Process B)**	13,500	5,000
Sanitary***	932,000	1,515,000
TOTAL	1,594,000	1,967,000

** Estimated by Bayer to include clean and rinse (equates to ~23% of metered Osmotic Priming water).

*** Calculated by subtraction (not metered separately). Checks based on 25gpd/employee standard.

While Process A accounts for over 30% of the wastewater generated onsite, Process B averages less than 1% by volume annually. The sanitary wastewater volume totals were calculated by subtraction and checked against the industry standard method for approximation of 25 gallons per day per employee. The sanitary wastewater is treated with five onsite leachfields which will be discussed in Section 8 regarding land application of water above the fields and system loading capacity.

The Process A wastewater is sent to the Fire Retention Pond. The primary function of the Fire Retention Pond is to supply 750,000 gallons of water to the fire suppression system in the event of a fire. But, the Fire Retention Pond also serves as an irrigation system water supply during the summer months (April through September). The minimum pond volume is maintained by the addition of canal irrigation water to offset the irrigation use and evaporation. An 8-inch overflow line was installed during the 2009 expansion to prevent flooding of the area but has since been plugged to eliminate potential offsite drainage.

The Process A wastewater includes constituents that wash from the seeds during hot water (118°F) processing and disinfection using 1% sodium hypochlorite. This wastewater contains small particles of seed and organic material with minimal residual chlorine associated with the sodium hypochlorite use. During the facility expansion in 2009, the wastewater generated from Process A was deemed beneficial for onsite landscape irrigation use (given dissipation of the

chlorine residual) and is routed to the Fire Retention Pond. The primary function of the Fire Retention Pond is to supply 750,000 gallons of supplemental water to the fire suppression system in the event of a fire. But, the Fire Retention Pond also serves as an irrigation system water supply during the summer months (April through September). The minimum pond volume is maintained by the addition of Farmers Cooperative Sebree Canal Extension (Canal) water to offset the irrigation use and evaporation. The landscape thrives with the use of this blended stream for irrigation and soil, plant, and water quality testing indicates the water is suitable for reuse irrigation.

A site aerial is provided in **Figure 2**.

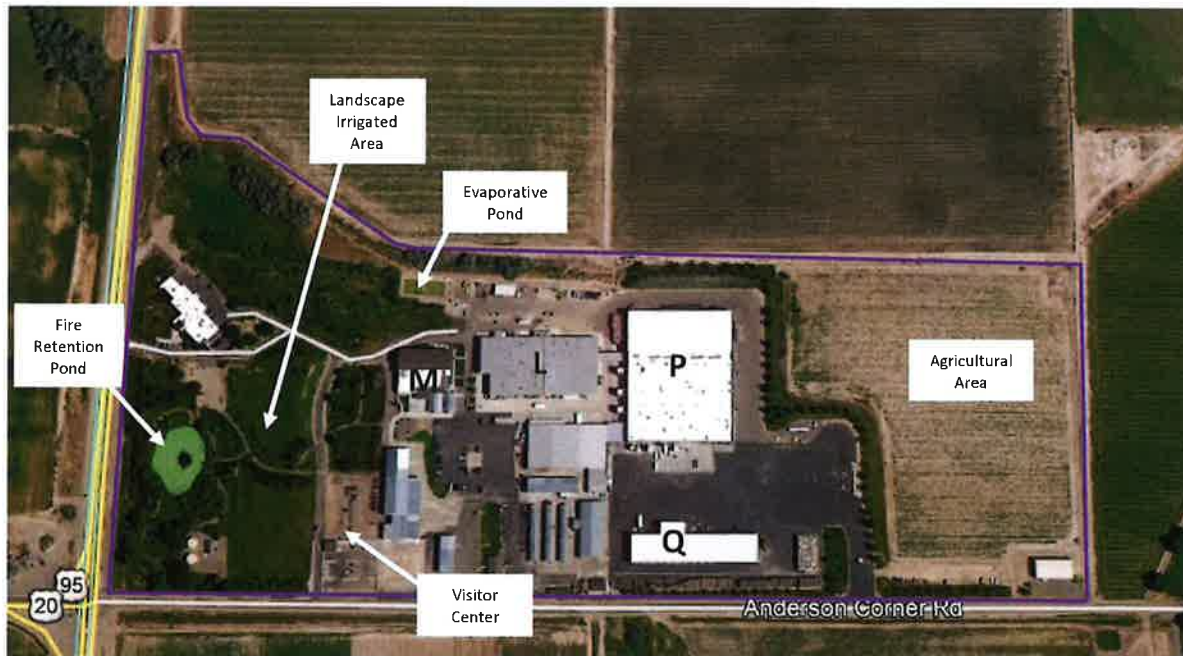


FIGURE 2: NUNHEMS SITE AERIAL

To provide metered agronomic loading rates of the nutrient-rich Process A wastewater to the site throughout the irrigation season and to allow for future expansion, Nunhems is installing a 500,000-gallon Process A wastewater storage tank and is expanding the irrigation area to include the agricultural land on the east side of the Nunhems property (Process A Wastewater Upgrades Project described in Section 4 below). The landscape irrigation area is approximately 9 acres and the currently farmed agricultural land is approximately 13 acres (currently leased to Pace-Nielsen Farms, Inc.) for total irrigated area of approximately 22 acres on Nunhems owned land. The expanded land application area will distribute the wastewater nutrients to agronomic rates that are commonly used for beneficial reuse of industrial water.

Section 1. Operation and Management Responsibility

As indicated above, the Process A wastewater is currently stored in the Fire Retention Pond during the non-irrigation months (October through March). During irrigation season (April through September), water supplied by the Canal is blended with the water stored in the Fire Retention Pond to provide landscape irrigation for the site. This irrigation process is managed by

Nunhems and Power Enterprises with laboratory testing completed by Western Laboratories, Inc. and Analytical Laboratories, Inc. Figure 3 below provides contact information and outlines party responsibilities for the system as it is currently operated.

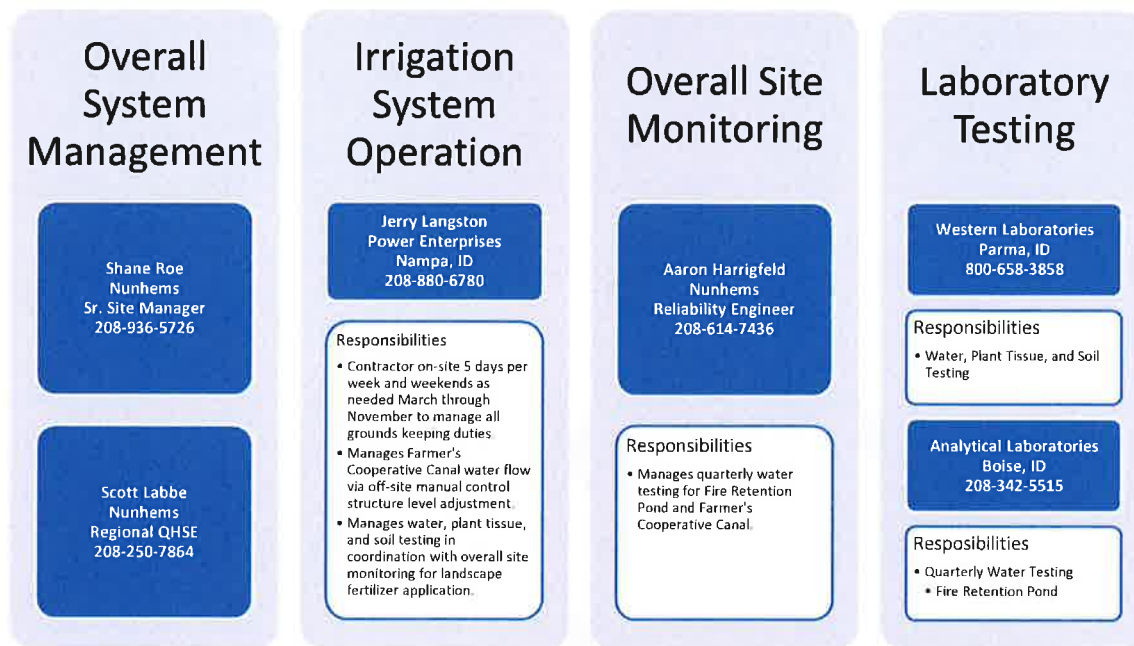


FIGURE 3: ORGANIZATIONAL CHART FOR IRRIGATION SYSTEM OPERATIONS AND MAINTENANCE

A more detailed description of the grounds keeping duties along with a copy of the contract/agreement between Nunhems and Power Enterprises is provided in Appendix B.

During the design and construction of the Process A Wastewater Upgrades Project, a Plan of Operation will be developed based on the report structure found in Appendix C. The farming company that currently leases the agricultural land is aware they will be included as a responsible party in the system operation and the property lease between Nunhems and Pace-Nielsen Farms, Inc. (provided in Appendix B) will be updated to reflect reuse on the site. The Process B Evaporative Lagoon system can be included in the Plan of Operation.

Section 2. Permits and Other Regulatory Requirements

This is a new permit application for the site. The Nunhems plant expansion in 2009 included significant upgrades to improve the wastewater and stormwater management systems on-site. The Nunhems project manager and consulting project engineer coordinated with Idaho Department of Environmental Quality (IDEQ) and Southwest District Health staff throughout the design and construction of Project CarOnEx.

The Nunhems facility is designated as SIC 0161 and retains all stormwater onsite. Therefore, the site is not covered by the Multi-Sector General Permit and development of a Stormwater Pollution Prevention Plan (SWPP) is not required. The Nunhems facility meets the requirements of a Tier I facility and the current Spill Prevention Control and Countermeasure (SPCC) Plan dated August 2015 is in compliance with 40 CFR 112.6 (Qualified Facilities Plan Requirements) and the

Tier I Qualified Facility SPCC Plan found in 40 CFR 112 Appendix G. A copy of the SPCC Plan is provided in Appendix D.

The Nunhems site RCRA classification (IDD984668632) is Conditionally Exempt Small Quantity Generator (CESQG) for ignitable (D001) and corrosive (D002) waste generation (laboratory use) per North American Industry Classification System Codes 42491 and 11121.

The three underground fuel storage tanks (3-140626) on the Nunhems site were permanently taken out service (in place) in 1975 and 1982.

The Nunhems site operates under Air Quality Permit P-2015.0017 (Appendix D).

Section 3. Land Application Site

A site topographic map (Figure 4, Appendix E) highlights the stormwater, wastewater, and Canal irrigation systems. Two stormwater detention basins were constructed along the north property line and in the northwest corner in 2009. The northwest detention basin is irrigated to keep a healthy vegetated area for uptake and treatment of detained stormwater. The sanitary wastewater is treated with five onsite leachfields. Two small leachfields serve the new Visitor Center constructed in 2016 and the Fire House. Leachfield 1 serves Building N and Leachfield 2 and Leachfield 3 serve the remaining buildings.

Process B wastewater (not included in the industrial water reuse plan for the site) is pumped to and retained in a 100,000 gallon, lined, aerated lagoon structure with residuals properly handled and landfill disposed off-site. The 750,000-gallon, lined Fire Retention Pond receives both Process A wastewater (year-round) via a lift station/forcemain and Canal irrigation water (April through September) via an 8-inch underground gravity line with off-site manual control structure. Canal irrigation water also runs in a concrete-lined ditch along the east side of the property. The 13-acre agricultural field is siphon-tube, flood irrigated. An Irrigation Pump Station with a 6-inch pressure-regulated loop supplies screened water from the Fire Retention Pond to the 7-acre landscape area in zones with battery-operated solenoids and 4-inch to 12-inch popups. A map of the existing irrigation areas and source water is provided as Figure 5 Appendix F.

Nunhems currently has Farmers' Cooperative Ditch Company Stock Certificate #3748 and #3867 totaling 16.0 shares (or 32 irrigable acres) of irrigation rights. This meets the 22-acre need. The landscape irrigation system is operated at night when the plant is shut down and site is not occupied.

Well #298667, Water Right No. 63-30202 has a 0.04 cubic feet per second (CFS) diversion rate (2,500 gallon per day maximum) for domestic use. This well is only used for landscape irrigation purposes, therefore, during the design of the Process A Wastewater Upgrades Project, Nunhems will submit an application for permit amendment to Idaho Department of Water Resources (IDWR) for change of well use from domestic to irrigation. Based on 1-inch applied per week, the well diversion rate can meet the irrigation needs of 5 acres.

Well #429415, Water Right No. 63-33336 supplies the industrial, commercial, domestic, and fire protection water for the site facilities. The industrial/commercial and domestic total diversion

rate of 0.28 CFS (or 125 gallons per minute [gpm]) is well above the average site use of less than 10 gpm.

See Appendix G for irrigation and well water right documentation.

The Nunhems site is located approximately 1.5 miles west of the Snake River and 2 miles east of Nyssa, Oregon (Figure 6). The site and surrounding surface topography flows to the northwest towards the Snake River.



FIGURE 6: NUNHEMS AREA TOPOGRAPHY

A FEMA map (Figure 7) illustrates the Nunhems site is not located within a floodplain.

Canyon County Preliminary DFIRM

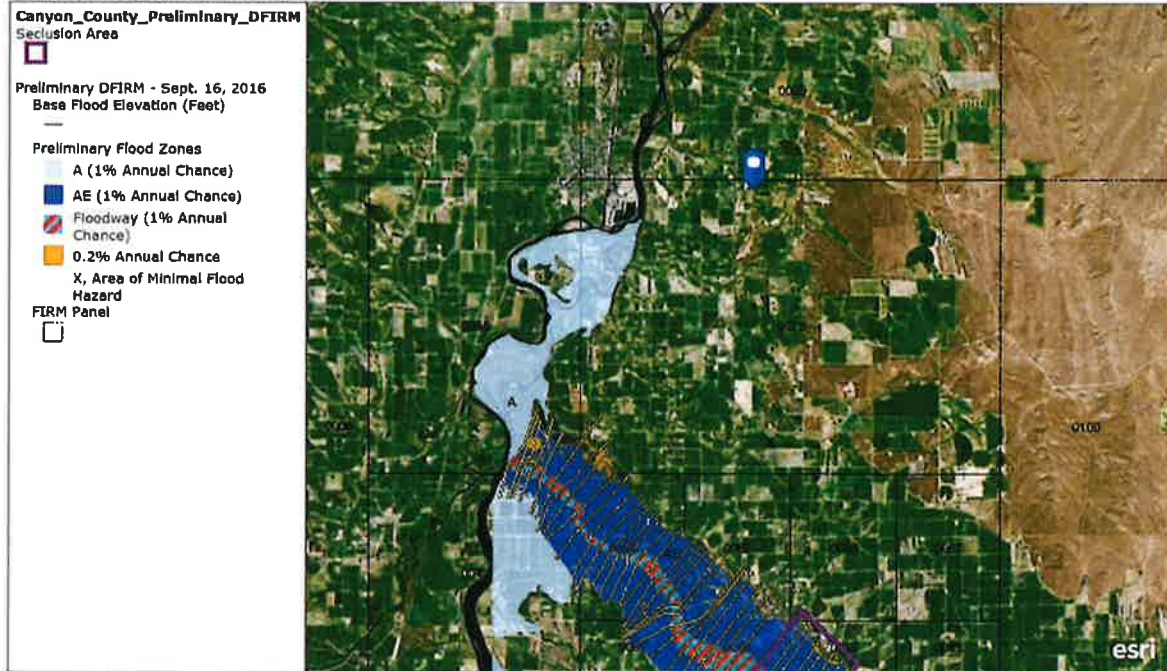


FIGURE 7: NUNHEMS AREA FLOODPLAIN MAP

An analysis of area wetlands is provided in Section 7.

Figure 8 shows the location and approximate ground elevation of the Canal control structure with the relative perimeter elevation profile reaching a low point at the northwest corner of the Nunhems property.



FIGURE 8: NUNHEMS AND FARMERS' COOPERATIVE SEBREE EXTENSION CANAL CONTROL STRUCTURE ELEVATION PROFILE

The Nunhems property is located in Payette County but sits just east of the Canyon County line which runs along Highway 95. The rural private property is surrounded by agricultural land with several residential homes and farming business out buildings. The Anderson Corner Grocery (and gas station) was once located to the west of the Nunhems property on the northwest corner of Highway 95 and Anderson Corner Road but the property is currently vacant. There are no public roads on the Nunhems property. In 2009, Nunhems constructed a Fire Station on the southeast corner of their property for use by the rural volunteer fire district. The Fire Station is fenced and only inhabited during training and emergency situations (not staffed).

A source water assessment review was conducted for the area using the IDEQ database. Figure 9 shows land use, surface water, and source water delineation information for the area wells that are no longer in service for domestic use.

[illegible]

Figure 9 shows a stream denoted as perennial flowing through the Nunhems site. The site topography follows this northwest flow pattern, and an intermittent stream channel may exist during wet weather events. The Farmers Cooperative Sebree Canal Extension is shown on Figure 9 and is routed to the site as described above (Figure 4).

Source water assessments were completed in 2002 for two domestic wells located on the Nunhems property (Appendix H). These two well sources combined as a single supply for the site (Sunseeds PWS #3380031). Table 2 below summarizes the assessment susceptibility scores.

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TABLE 1: SUNSEEDS (PWS #3380031) SOURCE WATER ASSESSMENT SUSCEPTIBILITY SCORES, JULY 2002

Well	Susceptibility Scores ¹									
	Hydrologic Sensitivity	Contaminant Inventory				System Construction	Final Susceptibility Ranking			
		IOC	VOC	SOC	Microbials		IOC	VOC	SOC	Microbials
Well #1	H	M	M	M	L	M	H	M	M	M
Well #2	M	M	M	M	L	M	M	M	M	M

¹H = High Susceptibility, M = Moderate Susceptibility, L = Low Susceptibility.

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Heavy agriculture, naturally occurring high arsenic levels, and the sites proximity to the Highway 95 traffic corridor were highlighted as contributing to the potential contaminant scores.

The Well #1 construction log indicated insufficient low permeability layers resulting in a high hydrologic sensitivity score. The source water assessment noted an arsenic concentration of 15 parts per billion (ppb) was measured. In 2002, this concentration was below the regulated drinking water maximum contaminant level (MCL) of 50 ppb for existing systems. **In 2006, the arsenic MCL of 10 ppb was enforced and the Nunhems PWS 3380031 received violation notices (IDWR water system details and violation summary are provided in Appendix 7).**

The source water assessment report describes the 3-year TOT delineated area corridor as north eastward trending.

In 2010, a new well (Well ID 429415) was constructed onsite, Well #1 (Well ID 421532) was decommissioned, and Well #2 (Well ID 298667) was converted to a landscape irrigation supply well (Nunhems will submit an application for permit amendment to IDWR for change of well use from domestic to irrigation).

Figure 10 (Appendix I) shows the area well locations, types, and associated static water levels illustrating the shallow and deep aquifers and groundwater also following the northwest flow toward the Snake River. The ¼ mile boundary (from property reuse edge) is also denoted on Figure 10. The drilling reports for each of the wells located within the boundary are provided in Appendix J.

Though management unit buffer zones are determined by IDEQ on a case-by-case basis for industrial reuse, the IDEQ Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater Section 6.5.1 indicates a general buffer zone distance of 500 feet from a private water supply is recommended for land treatment. Therefore, a well field survey was conducted 500 feet around the site to document well location and operation. The results of the well survey are illustrated in Figure 11, Appendix K. Site photographs were taken verifying the decommissioning of two wells on the Nunhems property (Well 395625 and Well 421532). The locations of the two operable wells onsite (Well 298667 and Well 429415) are shown in Figure 11. A well was located across Highway 95 on the Anderson Corner property and, though the

site is cleared, the well appeared operable. An operational residential domestic well was located to the southeast of the Nunhems site across Anderson Corner Road (Well 443194). The Process A Wastewater Upgrades Project (described in Section 4) includes increasing the groundwater irrigated area to provide a 500 foot buffer from neighboring wells and to provide a 50 feet buffer around the Nunhems PWS #3380031 Well ID 429415.

The regional and project site hydrogeology is further evaluated in Section 7 below which includes a Well Location Acceptability Analysis per IDEQ Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater Section 6.6.4.1.

Section 4. General Plant Description

A general description of the Nunhems existing site operation is described in Section 1 above. Figure 1 (Appendix 1) provides the existing water, wastewater and irrigation process flow diagram and water balance. In coordination with this recycled water reuse application, Nunhems has initiated design of the Process A Wastewater Upgrade Project (described in Section 6) which is scheduled to be completed in May 2018 with construction completion in January 2019.

The Process A wastewater is currently stored in the Fire Retention Pond throughout the winter months (October through March). At the start of irrigation season (mid-April) as the canal water mixes with and dilutes the stored Process A wastewater in the Fire Retention Pond, the landscape initially receives irrigation water with a high loading of nutrients that quickly tapers off as canal water further dilutes the concentration of nutrients in the pond. To prevent this front-end loading of nutrients, the installation of a 500,000-gallon Process A Wastewater Storage Tank is proposed to allow for consistent and metered application of nutrients to the irrigation sites. In addition, this project includes expansion of the land application area to include the nearly 13 acres of agricultural land on the east side of the Nunhems property (see Figure 11, Appendix K).

The Process A wastewater was tested in October 2016 and March 2017 and the Canal irrigation water was tested in July 2016. The testing results and estimated loading rates are listed in Table 2.

TABLE 2: PROCESS A WASTEWATER AND IRRIGATION CANAL WATER TESTING SUMMARY

Constituent	Unit	Process A Wastewater		Irrigation Canal Water	Process A Wastewater + Irrigation Canal Water	
		10/31/2016	3/10/2017	7/14/2016	Average Weighted Concentration (mg/L)	Estimated Annual (pounds)
Alkalinity, Bicarbonate as CaCO ₃	mg/L	1,550	1,619		105	5,900
Alkalinity, Carbonate as CaCO ₃	mg/L	5.0	34	99	94	5,300
Alkalinity, Total as CaCO ₃	mg/L	1,550	1,648		106	6,000
Ammonia - N	mg/L	50	90	0.3	4.9	300

TABLE 2: PROCESS A WASTEWATER AND IRRIGATION CANAL WATER TESTING SUMMARY

Constituent	Unit	Process A Wastewater		Irrigation Canal Water	Process A Wastewater + Irrigation Canal Water	
		10/31/2016	3/10/2017	7/14/2016	Average Weighted Concentration (mg/L)	Estimated Annual (pounds)
BOD ₅	mg/L	5,230	6,928	9	411	23,100
Boron	mg/L	1.5	1.7		0.11	6
Calcium	mg/L	1,200	1,279	28	109	6,100
Chloride	mg/L	1,517	1,020	7	91	5,100
Chlorine, Free	mg/L		6.3		0.21	12
Chlorine, Total	mg/L	122	393		17	1,000
COD	mg/L	10,065	12,330		742	41,800
Conductivity	UMHOS/CM	7,685	7,446	0.2		
Copper	mg/L	0.34	0.39	0.010	0.03	2
Hardness, Total as CaCO ₃	mg/L	3,770	4,027		258	14,500
Iron	mg/L	2.4	3.5	8.12	7.8	400
Magnesium	mg/L	187	203	9	21	1,200
Manganese	mg/L	1.4	1.6	0.17	0.26	15
Nitrate – N	mg/L	0.01	0.23	0.50	0.47	27
Nitrite – N	mg/L	0.04	0.06	0.05	0.05	3
Oxygen, Dissolved	mg/L	1.7				
pH	mg/L	6.3	6.0	7.50		
Phosphate, Ortho as P	mg/L	53	103		5.2	300
Phosphate, Total as P	mg/L	54	109	0.22	5.6	300
Potassium	mg/L	909	1,305	4	77	4,400
Sodium	mg/L	929	5,889	17	242	13,600
Sulfate	mg/L	602	1,399	5	71	4,000
Sulfur	mg/L		214		7.1	400
Sulfide	mg/L	0.02			0.001	0
Total Dissolved Solids (TDS)	mg/L	13,519	15,186		951	53,500
Total Kjeldahl Nitrogen as N	mg/L	275	813	1.01	37	2,100
Total Solids (TS)	mg/L	13,600	20,506	168	1,287	72,400
Total Suspended Solids (TSS)	mg/L	680	739	25	70	4,000

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TABLE 2: PROCESS A WASTEWATER AND IRRIGATION CANAL WATER TESTING SUMMARY

Constituent	Unit	Process A Wastewater		Irrigation Canal Water	Process A Wastewater + Irrigation Canal Water	
		10/31/2016	3/10/2017	7/14/2016	Average Weighted Concentration (mg/L)	Estimated Annual (pounds)
Total Volatile Solids (TVS)	mg/L	7,860	12,338		669	37,700
Volatile Suspended Solids (VSS)	mg/L	618			41	2,300
Volatile Total Dissolved Solids (VTDS)	mg/L	6,471	9,289		522	29,400
Zinc	mg/L	0.51	0.75	0.040	0.08	4

Notes:

* Weighted Average of Process A-1 and Process A-2 test results.

Actual March 2015 to February 2016 Process A-1 Annual Flow (gal): 45,000.

Actual March 2015 to February 2016 Process A-2 Annual Flow (gal): 402,000.

Estimated Canal Water Annual Flow (gal): 6,300,000.

This permit application outlines the current and future onsite irrigation system operation using Process A industrial wastewater and canal irrigation water. Land application of combined industrial reuse water is proposed for the 13 agricultural acres located on the east side of the property. To provide onsite well buffering, 4 acres of the existing 9 landscape irrigation acres will be designed for irrigation with the existing onsite irrigation well (Well ID 298667). The remaining 5 landscape acres will be irrigated with combined industrial reuse water for a total of 18 acres. A process flow diagram of the proposed Process A Wastewater Upgrades is provided in Figure 12, Appendix L.

Based on the 2015 Process A wastewater volumes and assumed future Process A production, Nunhems anticipates that approximately 450,000 gallons of WW will be sent to the new Process A Wastewater Storage Tank each year. Approximately 80 percent of that volume (or approximately 350,000 gallons) is sent during non-irrigation season. Therefore, a Process A Wastewater Storage Tank volume of 500,000 gallons is deemed adequate by Nunhems (per project kickoff meeting on January 17, 2018). Table 3 provides incremental monthly Process A Wastewater Storage Tank volumes.

TABLE 3: PROCESS A WASTEWATER STORAGE TANK VOLUME ANALYSIS

Date	Initial Process A Wastewater Storage Tank Volume (gal)	Influent Process A Wastewater (gal)	Process A Wastewater to Irrigation (gal) ^b	Final Process A Wastewater Storage Tank Volume (gal) ^c
Mar-15	295,555	60,015	0	355,570
Apr-15 ^a	355,570	18,927	74,461	300,035
May-15 ^a	300,035	15,778	74,461	241,352

63-34554



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region • 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

July 26, 2018

NUNHEMS USA INC
1200 ANDERSON CORNER RD
PARMA, ID 83660

Application for Permit No. 63-34554

Dear Applicant(s):

The Department of Water Resources has received your water right application. Please refer to the number referenced above in all future correspondence regarding this application.

A legal notice of the application has been prepared and is scheduled for publication in the INDEPENDENT ENTERPRISE on 8/1/2018 and 8/8/2018. Protests to this application may be submitted for a period ending ten (10) days after the second publication.

If the application is protested, you will be sent a copy of each protest. All protests must be resolved before the application can be considered for approval. If the protest(s) cannot be resolved voluntarily, the Department will conduct a conference and/or hearing on the matter.

If the application is not protested, the Department will process your application and notify you of any action taken on the application. If your application is approved, the Department will send you a copy of the permit.

Please contact this office if you have any questions regarding the application.

Sincerely,

Rachel Neely
Administrative Assistant

Neely, Rachel

From: Neely, Rachel
Sent: Thursday, July 26, 2018 10:35 AM
To: 'Ind-Ent Legals'
Subject: Payette Legal Ads
Attachments: Payette Cover Letter.docx; Payette Legal Ad.docx

Good Morning Legal Clerk,

Please see the attached ads for publication on 8/1/2018 & 8/8/2018.

Please confirm these are okay to publish as shown.

Thank you,

Rachel Neely

Administrative Assistant I
IDWR-Western Region
2735 Airport Way Boise, ID 83705
Rachel.Neely@idwr.idaho.gov

July 26, 2018

LEGAL NOTICE DEPARTMENT
INDEPENDENT ENTERPRISE
124 S MAIN
PAYETTE, ID 83661

RE: Application for Permit No. 63-34554
Application for Permit No. 65-23771

Dear Legal Notice Department:

Please publish the enclosed legal notices on the dates indicated (once a week for two consecutive weekly issues). If you cannot publish the notices on the proposed dates, please contact us immediately.

An affidavit of publication must be submitted to the Department along with the publication bill. Please send the affidavit and bill to this office before 8/20/2018. Your cooperation is appreciated.

Sincerely,

Rachel Neely
Administrative Assistant

Enclosure(s)

The following applications have been filed to appropriate the public waters of the State of Idaho:

63-34554

NUNHEMS USA INC
1200 ANDERSON CORNER RD
PARMA, ID 83660
Point of Diversion SWNW S9 T06N R05W PAYETTE County Source GROUND WATER
Use: IRRIGATION 03/01 to 11/15 0.15 CFS
Total Diversion: 0.15 CFS
Date Filed: 6/21/2018
Place of Use: IRRIGATION
T06N R05W S9 SWNW
Total Acres: 5
Water bearing zone to be appropriated is from 80 to 100 feet.

65-23771

ROGER STEWART
BONNIE STEWART
PO BOX 855
PAYETTE, ID 83661
Point of Diversion SWSW S35 T09N R05W PAYETTE County Source GROUND WATER
Use: DOMESTIC 01/01 to 12/31 0.04 CFS
Use: IRRIGATION 03/01 to 11/15 0.06 CFS
Total Diversion: 0.1 CFS
Date Filed: 5/23/2018
Places of Use: IRRIGATION, DOMESTIC
T09N R05W S35 SWSW
Total Acres: 2

Permits will be subject to all prior water rights. For additional information concerning the property location, contact Western Region office at (208) 334-2190; or for a full description of the right(s), please see www.idwr.idaho.gov. Protests may be submitted based on the criteria of Idaho Code § 42-203A. Any protest against the approval of the application(s) must be filed with the Director, Dept. of Water Resources, Western Region, 2735 Airport Way, Boise ID 83705 together with a protest fee of \$25.00 for each application on or before 8/20/2018. The protestant must also send a copy of the protest to the applicant.

GARY SPACKMAN, Director

Published on 8/1/2018 and 8/8/2018



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region • 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

July 26, 2018

FARMERS COOPERATIVE DITCH CO
PO BOX 69
PARMA ID 83660

Re: Application for Permit No. 63-34554

Dear Interested Party:

The above referenced application may be of interest to you. I would like to inform you that the application has been submitted to the *Independent Enterprise* for advertising. I have enclosed a copy of the application for your convenience. This information is also available on our website www.idwr.idaho.gov.

If you desire to file a formal protest against approval of the application, a written protest along with the \$25.00 protest fee must be received in this office by **August 20, 2018**. A copy of the protest must also be sent to the applicant.

If you have any questions regarding the application, please contact this office at 208-334-2190.

Sincerely,

Rachel Neely
Administrative Assistant
Western Regional Office

Enclosures

Skinner, Aaron

RECEIVED

From: Skinner, Aaron
Sent: Wednesday, July 25, 2018 8:32 AM
To: 'Shane Roe'
Subject: RE: Irrigation Well - Water Bearing Zone

JUL 25 2018

WATER RESOURCES
WESTERN REGION

Hi Shane,

Thanks for the responsive reply. I will add the bearing zone 80' to 100' just to give a little buffer to the 80' estimate. This will be finished up this morning and sent in for advertisement. Thanks for your patience.

Best,

Aaron Skinner
Idaho Department of Water Resources
Water Resource Agent, Sr.
(208) 334-2190
aaron.skinner@idwr.idaho.gov

From: Shane Roe [mailto:shane.roe@bayer.com]
Sent: Wednesday, July 25, 2018 8:05 AM
To: Skinner, Aaron <Aaron.Skinner@idwr.idaho.gov>
Subject: RE: Irrigation Well - Water Bearing Zone

Hi Aaron,
We pull from approximately 80' for this well. We will not need to replace the pump that is already installed. For this well we do not have any well drilling records or tag number as mentioned before in other documentation.

Thanks,

Freundliche Grüße / Best regards,

Shane Roe
Sr. Manager Site Services

//////////

Nunhems USA, Inc.
Site/Facility Management 1
1200 Anderson Corner Road
Parma, ID. 83660
United States
Tel: +1 208 674-4079
Mobile: +1 208 936-5726
E-mail: shane.roe@bayer.com
Web: <http://www.bayer.us>

From: Skinner, Aaron [mailto:Aaron.Skinner@idwr.idaho.gov]
Sent: Tuesday, July 24, 2018 4:05 PM
To: Shane Roe
Subject: Irrigation Well - Water Bearing Zone

RECEIVED

JUL 25 2018

WATER RESOURCES
WESTERN REGION

Shane,

One of the requirements for advertising water right applications in Basin 63 is to identify the water bearing zone of the well. Will you provide me a range in depth you plan on pulling water from? Wells in the area range from 30' to 150' according to available well logs. The driller may have a better idea of what depth they will be setting the new pump. My hope is to have this in advertising by tomorrow afternoon, so this can be published in the paper August 16th and 23rd. Any help is appreciated. Let me know if you have any questions.

Best,

Aaron Skinner
Idaho Department of Water Resources
Water Resource Agent, Sr.
(208) 334-2190
aaron.skinner@idwr.idaho.gov

The information contained in this e-mail is for the exclusive use of the intended recipient(s) and may be confidential, proprietary, and/or legally privileged. Inadvertent disclosure of this message does not constitute a waiver of any privilege. If you receive this message in error, please do not directly or indirectly use, print, copy, forward, or disclose any part of this message. Please also delete this e-mail and all copies and notify the sender. Thank you.

RECEIVED

JUN 21 2018
COMPLETE
WATER RESOURCES
WESTERN REGION

IDWR Western Region
2735 Airport Way
Boise, ID 83705-5082

June 20, 2018

RE: List of Officers of Nunhems USA, Inc.

Nunhems USA, Inc.
Vegetable Seeds
1200 Anderson Corner Road
Parma, Idaho 83660

To Whom It May Concern:

Tel.: (208) 674-4000

As of April 24, 2018 there was a change in the officers of Nunhems USA, Inc.

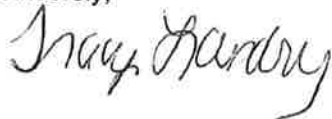
E-mail: Nunhems@bayer.com
www.nunhems.com

The current officers of the corporation are as follows:

Hema Abichandani, President
Karen Kurver, Treasurer
Tracy Landry, Secretary

Please let me know if you have any questions or need additional information.

Sincerely,



Tracy Landry
Secretary
Nunhems USA, Inc.

63-34554

MEMORANDUM

TO: Sascha Marston
FROM: Aaron Skinner
DATE: 6/21/2018
RE: Receipt PCA and Comment Correction

Receipt ID C105222 should have a PCA code 54116 and comment should read as follows:

Well Upgrade Fee for Nunhems USA, Inc. Application for Permit 63-34554
Well ID: 298667
Permit ID: 729468

Receipt ID C105117 should have a PCA code 56103 and comment should read as follows:

Application for Permit for Nunhems USA, Inc. for Irrigation T06N R05W SW NW
PAYETTE COUNTY