



Florida Department of Environmental Protection

Southwest District
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926
Telephone: 813-632-7600

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

Transmitted via email only to Casey.Stephens@bocc.citrus.fl.us

Mr. Casey Stephens, Director
Citrus County Solid Waste Division
P.O. Box 340
Lecanto, Fl. 34460-0340

May 21, 2010

RE: Citrus County Central Class I Landfill Operation Permit Renewal
Pending Permit No.: 21375-018-SO/01, Citrus County
WACS No.: SWD/09/39859

Dear Mr. Stephens:

This is to acknowledge receipt of the additional information dated and received April 21, 2010, prepared by SCS Engineers, in support of the above permit application for permit renewal to operate an existing Class I landfill, referred to as the Citrus County Central Class I Landfill, located on S.R. 44, 3 miles east of Lecanto, Citrus County, Florida.

This letter constitutes notice that a permit will be required for your project pursuant to Chapter(s) 403, Florida Statutes.

Your application for a permit is incomplete. This is the Department's second request for information. Please provide the information listed below promptly. Evaluation of your proposed project will be delayed until all requested information has been received.

GENERAL:

1. The requested information and comments below do not necessarily repeat the information submitted by the applicant. However, every effort has been made to concisely refer to the section, page, drawing detail number, etc. where the information has been presented in the original submittal.
2. Please submit **4 copies** of all requested information. Please specify if revised information is intended to supplement, or replace, previously submitted information. Please submit all revised plans and reports as a complete package. For revisions to the narrative reports, deletions may be struckthrough (~~struckthrough~~) and additions may be shaded **shaded** or similar notation method. This format will expedite the review process. Please include revision date on all revised pages.
3. Please provide a summary of all revisions to drawings, and indicate the revision on each of the applicable plan sheets. Please use a consistent numbering system for drawings. If new sheets must be added to the original plan set, please use the same numbering system with a prefix or suffix to indicate the sheet was an addition, e.g. Sheet 1A, 1B, P1-A, etc.
4. Please be advised that although some comments do not explicitly request additional information, the intent of all comments shall be to request revised calculations, narrative, technical specifications, QA documentation, plan sheets, clarification to the item, and/or other information as appropriate. **Please be reminded that all calculations must be signed and sealed by the registered professional engineer (or geologist as appropriate) who prepared them.**

The following information is needed in support of the solid waste application [Chapter 62-701, Florida Administrative Code (F.A.C.)]:

SECTION C (Rule 62-701.300, F.A.C.):

1. It does not appear that Section C (formerly Section D) was revised to discuss the facility's compliance with the prohibitions related to CCA treated wood or dust, as indicated in the April 21, 2010 response letter. Please verify and revise Section C, as appropriate.

SECTION K - LANDFILL OPERATIONS REQUIREMENTS (Rule 62-701.500, F.A.C.)

Attachment K-1 - Operations Plan:

Please provide the following additional information and revisions to the facility Operations Plan. Please provide replacement pages with revisions noted (deletions may be struckthrough [struckthrough] and additions may be underlined [underlined] or a similar method may be used) and each page numbered with the document title and date of revision.

2. **Table of Contents:** An extraneous document appears to have been included in the Table of Contents of Attachment K-1. Please verify and revise the Table of Contents accordingly.

3. **Section 2.8.2:**

a. Please verify whether the applicant is proposing to use latex paint itself as an alternate daily cover [ADC] or as an additive to the Posi-Shell ADC.

b. Please revise this section to describe the proper formulation and application of each approved ADC material "per manufacturer's specification".

4. **Section 2.9.1:** Please revise the operation procedures for the GCCS to include the following information:

a. Daily start-up and shutdown procedures for the entire system.

b. Operating and maintenance procedures for the vertical wellhead and horizontal collectors. O&M procedure for the wellhead did not appear to be included in the information in Attachments I through M.

c. System readings taken at the wellhead and adjustments to the system made as a result of those readings.

d. Procedures for evaluation of the performance of the system.

e. Procedures for isolation of parts of the system in the event of damage, repair, or maintenance of parts of the system.

f. Condensate management system monitoring and maintenance procedures.

g. As specific description of the safety protocols and considerations relating to subsurface landfill fires.

5. **Section 8:**

a. Your April 21, 2010 response letter indicates that the applicant has chosen the pipe re-rounding option to rehabilitate the collapsing leachate riser pipes in Phase 1/1A.

1) The October 23, 2009 e-mail and attachments provide a general description of this option but does not provide specific details of the work that will be conducted at this facility. Please provide specific information regarding the work to be conducted for the Department's review and approval prior to initiating the rehabilitation.

2) Pending the Department's review of the specific information regarding the proposed rehabilitation, the Department will reserve determination as to whether operation of the revised leachate system will be changed such that changes to Section 8 are required. **This comment is for information purposes only and does not require a response other than acknowledgement of the comment.**

6. **Rule 62-701.320(5)(b), F.A.C.** Please address the comments in John Morris' May 21, 2010 memorandum (attached) regarding this application. You may call Mr. Morris at (813) 744-6100, extension 336, to discuss the items in his memorandum.

SECTION S - FINANCIAL RESPONSIBILITY REQUIREMENTS (Rule 62-701.630, F.A.C.)

7. **Revised Attachment S-1:**

a. The closure and long-term care estimates provided in cost estimates provided in Attachment G (total for closing \$5,633,193.00 and long-term care \$168,656.00/year x 30 years= \$5,059,677.00), are approved (see attached letter). A copy of the approval letter will be forwarded to Mr. Fred Wick, Solid Waste Section, FDEP, 2600 Blair Stone Road, Tallahassee, Florida 32399-2407. Please work with him directly to assess the facility's compliance with the funding mechanism requirements of Rule 62-701.630, F.A.C.

This staff assessment is preliminary and is designed to assist in the review of the application prior to final agency action. The comments provided herein are not the final position of the Department and may be subject to revision pursuant to additional information and further review.

Please provide all responses that relate to engineering for design and operation, including plan sheets, signed and sealed by a professional engineer. Responses that relate to the facility operations should be included as part of the Operation Plan. All replacement pages should be numbered, and with revision date.

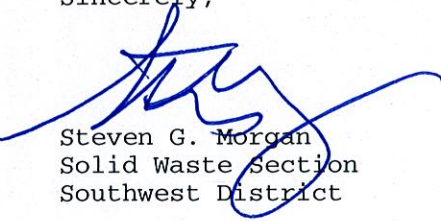
Please respond by **July 12, 2010**, responding to all of the information requests and indicating when a response to any unanswered questions will be submitted. If the response will require longer than the above schedule, you should develop an alternate timetable for the submission of the requested information for Department review and consideration. If the Department does not receive a timely, complete response to this request for information, the Department may issue a final order denying your application. A denial for lack of information or response will be unbiased as to the merits of the application. The applicant may reapply as soon as the requested information is available.

Mr. Casey Stephens, Director
Citrus County Solid Waste Division

Citrus County Central Class I Landfill
Page 4 of 4

Please provide **4 copies** of your response to this letter as one complete package. If there are points that must be discussed and resolved or you would like to set up a meeting to discuss this letter and subsequent submittals, please contact me at (813) 632-7600 ext. 385.

Sincerely,



Steven G. Morgan
Solid Waste Section
Southwest District

SM/sgm

Attachment

cc: Dominique Bramlett, P.E., SCS Engineers, dbramlett@scsengineers.com
Patty Jefferson, Citrus County, patty.jefferson@bocc.citrus.fl.us
Fred Wick/Frank Hornbrook, FDEP, Tallahassee (e-mail)
John Morris, P.G., FDEP Tampa (e-mail)
Susan Pelz, P.E., FDEP Tampa (e-mail)



Florida Department of Environmental Protection

Southwest District
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926
Telephone: 813-632-7600

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

Transmitted via email only to: Casey.Stephens@bocc.citrus.fl.us

Mr. Casey Stephens, Director
Citrus County Solid Waste Division
P.O. Box 340
Lecanto, FL 34460-0340

May 21, 2010

RE: Citrus County Central Class I Landfill
Financial Assurance Cost Estimates
Pending Permit No.: 21375-018-SO/01, Citrus County
WACS No.: SWD/09/39859

Dear Mr. Stephens:

This letter is to acknowledge receipt of the revised cost estimates dated April 20, 2010 (received April 21, 2010), prepared by SCS Engineers for closure and long-term care of the Citrus County Landfill (Phases 1, 1A, 2, & 3 and the old 60 acre landfill). The revised cost estimates received on April 21, 2010 (total for closing \$5,633,193.00 and long-term care \$168,656.00/year x 30 years= \$5,059,677.00), are **APPROVED**. The approved estimates are for closing 31.2 acres (Phases 1, 1A, 2, & 3) and long-term care of 91.2 acres. The next annual update (revised or inflation-adjusted estimates) is due no later than **September 1, 2010**.

A copy of these estimates will be forwarded to Mr. Fred Wick, Solid Waste Section, FDEP, 2600 Blair Stone Road, Tallahassee, Florida 32399-2407. Please work with him directly to assess the facility's compliance with the funding mechanism requirements of Rule 62-701.630, F.A.C. If you have any questions, you may contact me at (813) 632-7600 ext. 385.

Sincerely,



Steve Morgan
Solid Waste Section
Southwest District

sgm

cc: Dominique Bramlett, P.E., SCS Engineers, dbramlett@scsengineers.com
Patty Jefferson, Citrus County, patty.jefferson@bocc.citrus.fl.us
Fred Wick/Frank Hornbrook, FDEP, Tallahassee (e-mail)
John Morris, P.G., FDEP Tampa (e-mail)
Susan Pelz, P.E., FDEP Tampa (e-mail)

Memorandum

Florida Department of Environmental Protection

TO: Steve Morgan
FROM: John R. Morris, P.G. *JRM*
DATE: May 21, 2010
SUBJECT: Citrus Central Class I Landfill, Citrus County
Operation Permit Renewal Application, Pending Permit #21375-018-S0
Environmental Monitoring Review Comments (Responses to RAI #1)
cc: Susan Pelz, P.E.

I have reviewed portions of the materials submitted to the Department in support of the application for renewal of the Class I landfill operations permit that was prepared by SCS Engineers, on behalf of Citrus County Solid Waste Management Division, received April 21, 2010. These materials were prepared in response to the Department's letter dated March 3, 2010 that requested additional information regarding this application for the referenced facility. My review focused on the hydrogeologic and environmental monitoring aspects of the application for the referenced permit and included the following:

- Document entitled "Citrus County Class I Central Landfill, Operations Permit Renewal Application, RAI No. 1 Response" dated April 21, 2010, including:
 - Letter prepared by SCS Engineers dated April 21, 2010, re: "Response to Request for Additional Information No. 1 (RAI No. 1)" [referred to as the "**response letter**"],
 - Attachment B – Department Form #62-701.900(1), effective date January 6, 2010, signed and sealed April 20, 2010,
 - Attachment C – Document entitled "Citrus County Class I Central Landfill, Operation Permit Renewal Application," dated April 21, 2010 [referred to as the "**Engineering Report**"],
 - Attachment H – Document entitled "Citrus County Landfill, Biennial Water Quality Monitoring Report, 2009" [referred to as the "**BWQMR document**"] prepared by SCS Engineers, dated April 21, 2010.

Additional information is required to address the requirements of Rules 62-701.410 and 62-701.510, F.A.C., and to evaluate the adequacy of the proposed monitoring plan. Please have the applicant address all of the review comments that do not include the phrase: "**No additional information is requested.**" Please have the applicant submit responses to the following review comments that provide revised submittals, or replacement pages to the submittals, that use a ~~strike-through~~ and underline format, or similar format, to facilitate review. Please also have the applicant include the revision date as part of the header/footer for all revised pages (including text, figures, tables, attachments, forms, plan sheets, etc.).

The review comment numbers presented below are consistent with my memorandum dated March 2, 2010. The information requests have been referenced to sections of the permit application and are also referenced to the sections of the supporting document where appropriate, as presented below:

PART M – WATER QUALITY AND LEACHATE MONITORING REQUIREMENTS

(Rule 62-701.510, F.A.C.)

1. **L.1.h.(3): Two and one-half year report requirements, or every five years if in long-term care, signed, dated and sealed by PG or PE** [Rule 62-701.510(9)(b), F.A.C.]. [Renumbered from item #M.1.h.(2)]

- a. The response letter referred to revised page 31 of the application form that referenced Section L.1.h.(3) of the Engineering Report. **No additional information is requested.**

(Comment #1., continued)

Please submit revisions to the BWQMR document to address the following:

Section 1 – Introduction

b. The response letter itemized the information required by the Department's SOP FS 2212, Sections 3.5.2 and 3.5.3 to determine if elevated dissolved oxygen and turbidity values reported during well purging represent naturally occurring conditions. Please submit revisions to the appropriate section of the BWQMR to address the following:

1) The response letter indicated that turbidity had historically been elevated at well MW-10, however it did not discuss the turbidity measurements recorded during the July 2008 sampling event [4.88 NTU] or the April 2009 resampling event [8.84 NTU] that met the purging criterion [see attached table]. Please discuss the variability in turbidity values measured during successive sampling events conducted at well MW-10, and explain why these conditions would be considered to be naturally occurring.

2) The response letter indicated that the last six items listed in SOP FS 2212, Section 3.5.2 [items #5 through #10] have previously been submitted to describe elevated turbidity. Please indicate when the information described in item #6 was submitted to the Department [*A description of conditions at the site that cause the turbidity to be high and any procedures that will be used to minimize turbidity in the future.*]. In the event that a description of the procedures that will be used to minimize turbidity in the future have not been provided, please submit revisions to the appropriate section of the BWQMR to present this information.

3) The response letter referenced USGS reports that indicated elevated dissolved oxygen can occur in the unconfined Floridan aquifer and in areas such as the Brooksville Ridge, and that based on sampling techniques conducted at the facility it would appear that the elevated dissolved oxygen levels at MW-1R, MW-2, MW-3 and MW-19 are due to naturally occurring conditions. Please discuss the variability in dissolved oxygen measurements recorded at monitor wells around the facility since the July 2009 sampling event and the causes for the increased dissolved oxygen measurements that no longer meet the purging criterion [see attached table]. Please explain why these conditions would be considered to be naturally occurring.

4) The response letter indicated that the last six items listed in SOP FS 2212, Section 3.5.2 [items #5 through #10] have previously been submitted to describe elevated dissolved oxygen. Please indicate when the information described in item #5 was submitted to the Department [*A description of conditions at the site that cause the dissolved oxygen to be high and/or dissolved oxygen measurements made within the screened or open borehole portion of the well with a downhole dissolved oxygen probe.*]. In the event that dissolved oxygen measurements made within the screened portion the monitor wells using a downhole probe have not been provided, please submit revisions to the appropriate sections of the BWQMR to present this information.

Section 3 – Ground Water, Surface Water, and Leachate Monitoring Program

c. The response letter referred the last ¶ of the sub-section entitled "Surface Water Monitoring Program" that was revised to refer to the reporting of surface water discharge sampling events. **No additional information is requested.**

d. The response letter referred to the sub-section entitled "Zone of Discharge" that was revised to refer to Table 3-2. **No additional information is requested.**

e. The response letter referred to the revised summary tables for water quality results reported for wells MW-13 and MW-19 that were provided in Appendix C. **No additional information is requested.**

(Comment #1., continued)

- f. The response letter referred to the revised sub-section entitled "Metals Exceedances – Lead" that described the concentrations reported for the samples collected from well MW-10 during the review period. **No additional information is requested.**
- g. The response letter referred to revised ¶3 in the sub-section entitled "Organic Parameters Exceedances – Benzene" that described the concentrations reported for the samples collected from well MW-10 during the review period. **No additional information is requested.**
- h. The response letter referred to the deletion of ¶4 in the sub-section entitled "Organic Parameters Exceedances – Benzene." **No additional information is requested.**
- i. The response letter referred to the deletion of ¶2 in the sub-section entitled "Organic Parameters Exceedances – Bromodichloromethane and Dibromochloromethane." **No additional information is requested.**
- j. The response letter referred to the deletion of ¶3 in the sub-section entitled "Organic Parameters Exceedances – Methylene Chloride." **No additional information is requested.**
- k. The indication in the response letter that the estimated concentrations of vinyl chloride reported for the samples collected from well MW-18 during July 2008, January 2009, and July 2009 were not "quantifiable detections" is noted. **No additional information is requested.**
- l. The response letter referred to the deletion of ¶5 in the sub-section entitled "Organic Parameters Exceedances – Vinyl Chloride." **No additional information is requested.**
- m. The response letter indicated the low yield/poor quality argument had been removed from the BWQMR. **No additional information is requested.**

Section 4 – Adequacy of Monitoring Program

- n. The response letter referred to new ¶2 of the sub-section entitled "Floridan Aquifer Monitoring Adequacy – Floridan Aquifer Well Locations" that indicated existing compliance wells MW-10 through MW-15, and well MW-17 provided adequate coverage of the west and south sides of the landfill. New ¶2 of this sub-section also proposed a compliance well be installed to the north of the 7-acre lined cell at a location depicted on the figure presented in Appendix F of the revised BWQMR. To authorize this proposed modification of the monitoring plan and the construction of the new compliance well, please submit the following information:
 - A new monitoring plan that meets the requirements of Rule 62-701.510, F.A.C., to replace the monitoring plan submitted as part of the construction permit for Phase 3 [referenced in Specific Condition #A.2.a.(3) of permit #21375-013-SC/01]. The new monitoring plan should include the justification of construction details (well screen length, well screen top/bottom elevations, well screen and sand pack sizes, etc.) for the proposed compliance well;
 - A revised Section L of the Engineering Report that references the new monitoring plan and the proposed compliance well; and,
 - A revised Part L of the application form that replaces the "N/C" entries with references to the new monitoring plan.
- o. The response letter referred to revised ¶1 of Section 2, sub-section entitled "Ground Water Flow Assessment" that referenced the hydrograph provided in Appendix A of the BWQMR. **No additional information is requested.**

(Comment #1., continued)

p. The response letter referred to new ¶3 of Section 2, sub-section entitled "Ground Water Flow Assessment" that presented an interpretation of the ground water contour maps for the review period provided in Appendix A of the BWQMR. **No additional information is requested.**

q. The response letter referred to new ¶4 and ¶5 of Section 2, sub-section entitled "Ground Water Flow Assessment" that evaluated ground water velocity calculations for the facility. Please clarify if the reference in ¶5 of this sub-section to "velocity of ground water in the surficial aquifer" was intended to indicate the "unconfined Floridan aquifer," and submit revisions as appropriate.

r. The reference in the response letter to the hydrograph that was added to the BWQMR does not appear to address the review comment that requested the submission of revision to the appropriate sub-section of the BWQMR document to provide an evaluation of the adequacy of the ground water monitoring frequency based on site conditions [Rule 62-701.510(9)(b)8, F.A.C.]. It does not appear that Section 4 of the BWQMR was revised to address this review comment. Please review this apparent omission and submit revisions to the BWQMR, as appropriate.

s. The indication in ¶2 of this item in the response letter that water level drawdown observed during purging at well MW-6 caused the water level surface to intercept the well screen at the time of sampling is noted. It does not appear that ¶1 of this item in the response letter provided a similar evaluation regarding the appropriateness of the screened interval at well MW-2. Furthermore, it is unclear if ¶3 of this item in the response letter was intended to indicate that background conditions would be adequately monitored by wells MW-3 and MW-7, and that well MW-2 could be deleted from the monitoring plan. Please submit clarifications regarding the appropriateness of the construction details for well MW-2 and/or the intention to maintain/eliminate this location from the monitoring plan. In the event that a replacement for well MW-2 is proposed, or deletion of this location from the monitoring plan is proposed, please include these modifications in the new monitoring plan referenced in comment #1.n., above.

t. The indication in the response letter that estimated concentrations of vinyl chloride [at levels below the ground water standard] were reported for the samples collected from wells MW-13 and MW-15 during the January 2010 sampling event is noted. **No additional information is requested.**

This staff assessment is preliminary and is designed to assist in the review of the application prior to final agency action. The comments provided herein are not the final position of the Department and may be subject to revision pursuant to additional information for further review.

I can be contacted at 813-632-7600, extension 336, to discuss these comments.

jrm

Attachment – Table entitled "Summary of Selected Field Measurements Conducted During Ground Water Sampling Events at Citrus Central Landfill, Citrus County"

Table A - Summary of Selected Field Measurements Conducted During Ground Water Sampling Events at Citrus Central Landfill, Citrus County

Parameter/ Sampling Event	Purging Criterion	Monitor Well Identification Number												
		MW-1R B/F	MW-2 B/F	MW-3 B/F	MW-7 B/F	MW-10 C/F	MW-11 C/F	MW-12 C/F	MW-13 C/F	MW-14 C/F	MW-15 C/F	MW-17 C/F	MW-18 A/F	MW-19 A/F
Dissolved oxygen (mg/L)														
Nov-05	2					1.01	0.4	0.38	0.38	0.36	0.35	0.61		
Jan-06	2										0.66			MW-15 resampled
Jan-06	2										0.29			MW-15 resampled
Jan-06	2													
Jul-06	2	3.01	6.78	4.04	0.71	0.81	1.34	0.46	1.21	0.78	1.22	1.18		
Aug-06	2					0.31								
Jan-07	2	3.68	5.87	4.72	0.25	0.21	0.96	0.1	0.2	0.24	0.14	0.11		
Feb-07	2	3.57				0.23								
Jul-07	2	2.58	1.52	4.07	0.22	0.34	1.2	0.18	0.44	0.36	0.11	0.09	1.61	5.41
Jan-08	2	3.68	5.08	5	0.2	0.17	0.87	0.11	0.15	0.2	0.18	0.22	0.52	5.75
Jul-08	2	3.99	4.95	5.88	0.57	0.19	1.11	0.2	0.24	0.24	0.15	0.16	1.47	5.11
Jan-09	2	5.05	5.21	3.83	1.12	0.41	1.13	0.45	0.32	0.5	0.24	0.42	2.13	5.51
Apr-09	2					1.68	3.45	1.24						MW-10, -11, -13 resampled
Jul-09	2	4.25	5.74	3.39	0.26	0.43	1.18	0.31	0.57	0.17	0.24	0.21	2.05	5.23
Aug-09	2					2.13			2.25		0.87			MW-10, -13, -15 resampled
Jan-10	2	4.12	4.39	3.79	0.39	1.16	0.67	3.12	2.78	1.93	5	5.11	1.25	4.15
	2													
MAXIMUM		5.05	6.78	5.88	1.12	2.13	3.45	3.12	2.78	1.93	5	5.11	2.13	5.75
MINIMUM		2.58	1.52	3.39	0.2	0.17	0.4	0.1	0.15	0.17	0.11	0.09	0.52	0.99

Turbidity (NTU)						4.07	0.54	2.18	2.7	2.14	3.04	2.48		
Nov-05	20													
Jan-06	20										9.85			MW-15 resampled
Jan-06	20										2.38			MW-15 resampled
Jul-06	20	1.69	0.37	1.02	0.93	20.7	0.56	4.87	2.8	1.69	4.37	4.23		
Aug-06	20					24.1								MW-10 resampled
Jan-07	20	0.53	0.2	0.63	0.85	7.64	0.34	2.65	2.26	1.57	3.53	4.9		
Feb-07	20	0.57				11.7								
Jul-07	20	0.43	0.27	0.19	1.45	2.27	2.06	3.23	4.9	2.19	1.25	4.28	53.5	0.99
Jan-08	20	0.36	0.22	0.41	2.87	51.4	1.18	4.31	4.05	0.76	3.31	4.33	45	4.1
Jul-08	20	0.31	0.29	0.89	1.85	4.88	1.75	2.25	4.57	3.37	2.78	4.9	14.2	11.5
Jan-09	20	1.42	0.6	0.42	2.13	1000	4.2	4.65	8.31	3.56	1.98	10.8	92	8.4
Apr-09	20					8.84	0.95	4.45						6.04
Jul-09	20	2.55	3.73	4.06	4.83	160	10.2	4.91	4.75	4.86	4.43	4.98	31.6	4.87
Aug-09	20					175			6.69		2.09			MW-10, -11, -13 resampled
Jan-10	20	0.51	1.09	1.14	4.47	83	3.93	4.82	4.9	4.86	2.68	8.48	31	MW-10, -13, -15 resampled
	20													
MAXIMUM		2.55	3.73	4.06	4.83	1000	10.2	4.91	8.31	4.86	9.85	10.8	92	11.5
MINIMUM		0.31	0.2	0.19	0.85	2.27	0.34	2.18	2.26	0.76	1.25	2.48	13.7	0.99

s_wjrm/citrus/xls/citontlgwd.co -- trends -- purging criteria

5/19/10